Volume I
DRAFT ENVIRONMENTAL IMPACT REPORT
State Clearinghouse No. 2009061113

LYTLE CREEK RANCH SPECIFIC PLAN

Lead Agency:
City of Rialto
Development Services Department – Planning Division
150 South Palm Avenue
Rialto, California 92376

March 2010

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LYTLE CREEK RANCH SPECIFIC PLAN

Annexation No. 170
General Plan Amendment No. 29
Specific Plan No. 12
Development Agreement
Vesting Tentative Tract Map No. 18767
Environmental Assessment Review No. 90-19

Lead Agency:
City of Rialto
Development Services Department - Planning Division
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March 2010

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EXECUTIVE SUMMARY

Introduction

This combined programmatic and project-level environmental impact report has been prepared in accordance with the provisions of the California Environmental Quality Act (CEQA), as codified in Sections 21000-21177 of the Public Resources Code (PRC), and the State of California's Guidelines for the Implementation of the California Environmental Quality Act (State CEQA Guidelines), as codified in Sections 15000-15387 in Title 14 of the California Code of Regulations (CCR), and describes and analyzes the significant environmental effects associated with the approval and implementation of the proposed "Lytle Creek Ranch Specific Plan"[1] (LCRSP), as submitted by Lytle Development Joint Venture III (Applicant), and discusses ways to mitigate or avoid those effects, including the identification of alternatives thereto.

The proposed project examined herein includes the annexation into the City of Rialto (City or Lead Agency) of certain lands located within the City's adopted Sphere of Influence, annexation and/or detachment of project lands into or from existing County of San Bernardino (County) special districts and service area, and associated reorganization of existing governmental services, including reorganization of existing County Service Area 70 and Improvement District GH (CSA 70-GH), detachment from the San Bernardino County Fire Protection District and its Valley Service Zone, and annexation into the West Valley Water District (WVWD or District). In addition, the proposed project includes, but is not limited to: (1) the adoption of the proposed LCRSP, inclusive of any and all amendments to the land-use and related plans and policies of the City and the County as may be associated with or logically follow that plan's adoption; (2) the development, redevelopment, and the conservation of that real property within the LCRSP boundaries and such off-site areas as may be reasonably associated therewith; (3) the construction, operation, and maintenance of those capital improvements, public works, public, semi-public, and private facilities, and infrastructure-related activities identified in the adopted LCRSP (if so adopted) and/or in the certified environmental impact report (if so certified); and (4) those construction, implementation, operation, use, occupancy, habitation, and maintenance activities that may be associated, either directly or indirectly, with those actions.

In compliance with Section 15123 of the State CEQA Guidelines, an environmental impact report (EIR) is required to include a brief summary of the proposed action(s) and its potential environmental consequence(s). The summary is required to identify the significant effects that have been identified, the mitigation measures now proposed in response to those impacts, the alternatives that have been formulated to reduce or avoid those effects, the areas of controversy known to the public agency preparing the EIR, and any issues that remain to be resolved. This executive summary, which is synoptic in nature, is presented in fulfillment of those requirements.

More detailed information concerning the proposed project, its potential environmental effects, the mitigation measures now being recommended by the City's Development Services Department (Department) in response to those impacts, and the range of alternatives now under consideration are presented under the corresponding sections of this programmatic and project-level EIR.

[1]/ Lytle Development Joint Venture III (KTGY Group, Inc.), Draft Lytle Creek Range Specific Plan, December 2008, as revised.

Project Description

Proposed is the adoption of the proposed LCRSP. The LCRSP, in combination with a development agreement/pre-annexation agreement between the City and the Applicant, will establish new land-use policies affecting the approximately 2,447.3-acre project site. The specific plan would authorizing the development of up to 8,407 dwelling units and 849,420 gross leasable square feet of general and specialty commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar uses (excluding institutional, educational, recreational, and infrastructure-related uses), allow for the retaining a substantial portion of the project site for open space and conservation purposes, create diverse opportunities for a range of public, semi-public, and private recreational facilities, and promote the development of associated public improvements, public works, and infrastructure facilities.

While assessed on an acreage-based and/or depicted and described bases, no maximum allowable square footages of institutional, educational, recreational, and infrastructure-related uses has been specified in the proposed LCRSP and/or in this EIR. As such, so as to allow the Lead Agency and other responsible agencies the ability and the flexibility to equate actual facility sizes with identified needs, design requirements, and other factors, the maximum square footage for those uses can exceed the 849,420 square foot limitation imposed on general and specialty commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar uses.

As proposed, once developed, the master planned community and its distinct visual elements will form the northern City-defining entranceway or "gateway." As described below, the overall community created through the implementation of the proposed LCRSP will consist of four separate and distinct "neighborhoods." The anticipated development within those neighborhoods at the project's build-out (2030) is summarized in Table ES-1 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary). Each of the four "neighborhoods" comprising the proposed LCRSP is briefly described below.

Table ES-1
LYTLE CREEK RANCH SPECIFIC PLAN - DETAILED STATISTICAL SUMMARY

Neighborhood[1]	Approximate Acreage	Estimated Average Product Density (DU/ac)	Dwelling Units	Square Footage	Assumptions
I	417.2	-	1,278	-	-
II	801.8	-	2,931	102,452	Active-Adult
III	968.8	-	3,329	566,279	-
IV	259.5	-	869	180,689	-
Total	2,447.3	3.44	8,407	849,420	-

Notes:
1. Each of the four "neighborhoods" include numerous smaller "planning areas" (PAs). Other than the "City of Rialto General Plan" (City General Plan) designation of "Specific Plan" that would encompassing the entire area located within the LCRSP's boundaries, no single land-use designation is proposed for an entire neighborhood. As proposed, each of the project's 103 PAs have area-specific residential, non-residential, and/or conservation-based land-use designations, defining the general nature and character of the use(s) authorized therein. Individual neighborhoods may, therefore, contain separate PAs with residential land-use designations ranging from "Single-Family Residential 1 (SFR-1) (2-5 dwelling units/acre" (SFR-1) to "High Density Residential (HDR) (25-35 dwelling units/acre)."

Source: Lytle Development Joint Venture III

- **Neighborhood I**. Neighborhood I will contain approximately 417.2 acres. A portion of this neighborhood, commonly referred to as "Sycamore Creek East" (Sycamore Flat) and "Sycamore Creek West" (Sycamore Canyon), is located within but extracted from the boundaries of the 3,400-acre County-approved "Glen Helen Specific Plan" (GHSP). The remaining land includes acreage located within but extracted from the boundaries of County-approved "Lytle Creek North Planned Development Project" (LCNPD or Tract 15900), currently being marketed as Rosena Ranch. Once approved, the LCRSP will supersede portions of the County-approved GHSP and LCNPD. As proposed, those planning areas (PAs) which will be removed from those County-approved plans include, but may not be limited to: (1) PAs 1-15, as illustrated in the proposed LCRSP; and (2) PAs 1-7, 14, and a portion of PA 13, as illustrated in the approved LCNPD. In addition to open space, the primary land use in Neighborhood I is single-family residential. A portion of Neighborhood I contains a "General Warehousing Overlay" (GW Overlay). In lieu of the underlying land-use designation, authorized land uses allowable in an overlay district may be developed in those PAs possessing that designation.

- **Neighborhood II**. Neighborhood II is planned as a gated, active-adult community on approximately 801.8 acres and will include the entire 221-acre City-approved "El Rancho Verde Specific Plan" (ERVSP) area and the El Rancho Verde Royal Vista Golf Course. If approved, the land-use and related plans and policies presented in the LCRSP will supersede those contained in the ERVSP. Areas to be removed from the adopted ERVSP include a portion of PA 95 and all of PAs 96-103 of the proposed LCRSP. In addition to open space, the primary land uses in this neighborhood are single-family residential, multi-family residential, and commercial. Portions of Neighborhood II contain a "Single Family Residential Overlay" (SFR Overlay), "High Density Residential Overlay" (HDR Overlay), and "Village Center Commercial Overlay" (VC Overlay). In lieu of the underlying land use designation, authorized land uses allowable in an overlay district may be developed in those PAs possessing that designation.

- **Neighborhood III**. Neighborhood III is located south of the I-15 Freeway and will primarily include a mix of single-family and multi-family residential uses, school sites, and commercial development on approximately 968.8 acres. Portions of Neighborhood III contain a GW Overlay, SRF Overlay, HDR Overlay, VC Overlay, and Park Overlay. In lieu of the underlying land-use designation, authorized land uses allowable in an overlay district may be developed in those PAs possessing that designation.

- **Neighborhood IV**. Neighborhood IV will consist primarily of multi-family residential and commercial development on 259.5 acres located north of the I-15 Freeway. A portion of Neighborhood IV contains a GW Overlay. In lieu of the underlying land use designation, authorized land uses allowable in an overlay district may be developed in those PAs possessing that designation.

Three of the proposed neighborhoods (Neighborhoods I, III, and IV) will including housing designed to attract a variety of households, preferences, and lifestyles. The fourth neighborhood (Neighborhood II) will be built as a gated, age-qualified community for residents age 55 and older. More than half of the entire project area will be preserved or retained as open space.

In order to allow for future land-use variations to occur, as part of this environmental assessment, the proposed LCRSP includes the concept of a "trip budget" as the basis for allowing needed development flexibility within the specific plan area while, at the same time,

ensuring that the resulting development does not exceed the assumptions upon which this environmental analysis is based. The trip budget establishes an overall trip cap (i.e., net increase in vehicle trips) which offers both the Applicant and local officials the flexibility to determine specific land uses, within the limits of that budget, and allows market forces to dictate how and where the trips would ultimately be utilized. As specified in the proposed LCRSP, overall development is allowed to occur, within the parameters of the allowable land uses, as long as the cumulative traffic volumes (measured as AM plus PM peak-hour trips) generated by development activities within each traffic analysis zone and throughout the entirety of the specific plan area does not exceed the specified total budget.

As authorized under the proposed LCRSP, transfers of dwelling units and non-residential square footages shall be permitted within and between any of the planning areas within Neighborhoods I and IV (except for PAs designated "Open Space"), provided that the total number of projected morning (AM) plus evening (PM) vehicle trips per day for Neighborhoods I and IV not exceed a combined total of 3,853 projected AM plus PM trips. In addition, transfers of dwelling units and non-residential square footages shall be permitted within and between any of the planning areas in Neighborhoods II and III (except for PAs designated "Open Space"), provided that the total number of projected AM plus PM vehicle trips per day for Neighborhoods II and III not exceed a combined total of 12,483 projected AM and PM trips.

Additional Off-Site Areas

For the purpose of CEQA compliance, this EIR also analyzes certain "off-site" areas, defined as lands located outside the boundaries of the proposed LCRSP and not subject to the land-use provisions of that specific plan, if subsequently adopted by the City. Off-site acreage includes those areas associated with any off-site infrastructure and related improvements that may be directly required for the project's implementation. Additional off-site areas addressed in this EIR, totaling approximately 19.9 acres, which are located outside the boundaries of the proposed LCRSP but are nonetheless included herein and made a part of this EIR include:

- Utility easement within County-owned property located adjacent to Neighborhood I totaling approximately 3.6 acres;
- An approximately 20-foot wide improved roadway owned by the County extending from the northeast portion of Neighborhood II to a connection to Highland Street that will provide an interim, secondary point of access to Neighborhood II during construction, totaling about 2.6 acres;
- Road easement extending beneath the I-15 Freeway, totaling about 2.3 acres;
- Levee improvements extending approximately 2,000 linear feet on property owned by Cemex USA Construction Materials, Inc.[2] (Cemex USA) and consisting of about 10.1 acres between Neighborhoods II and III;
- Additional levee improvements north of Neighborhoods II and IV with a combined acreage of approximately 0.6 acres; and
- Drainage improvements in the vicinity of Neighborhood IV, totaling about 0.7 acres.

[2]/ Other references to the underlying ownership interest refer to "Cemex Construction Materials Pacific, LLC." Because ownership interests and corporate identities routinely change, all references to Cemex USA herein are intended to refer to the owner and operator of that sand and gravel quarry located between Neighborhoods II and III of the proposed LCRSP. Names used herein are for convenience purposes only and are not intended to create or infer legal interests where no such interests now exist.

Discretionary Permits and Approvals

The adoption of the proposed LCRSP and the implementation of those development-related, infrastructure-related, conservation-related, and other activities that follow that action will necessitate a number of discretionary permits and approvals from the City. Unless subsequent or supplemental analysis or an addendum to this EIR is deemed required by the Lead Agency or by another responsible, trustee, or federal agency, it is the purpose and intent of this EIR to serve as the environmental basis, under CEQA, for each of those actions and activities, whether explicitly identified herein or identified following the certification of this EIR.

Permits and approval associated with the proposed project include, but may not be limited to: (1) amendments to the "City of Rialto General Plan" (City General Plan), including its Land Use Element, Circulation Element, Open Space Element; (2) amendments to the San Bernardino Local Agency Formation Commission (LAFCO) approved and City-adopted Sphere of influence; (3) amendments to the City's Official Land Use Zoning Map; (4) text and map revisions to the "City of Rialto Municipal Code" (City Municipal Code); (5) adoption by ordinance of the "Lytle Creek Ranch Specific Plan"; (6) approval of vesting and non-vesting tentative subdivision maps, street and utility easements, and other subdivision activities, including an "A" level map for financing purposes only; (7) approval of a pre-annexation development agreement with the Applicant that will become a development agreement pursuant to Section 65864 *et seq*. of the CGC upon annexation of the project site to the City; and (8) changes of organization and reorganizations, including, but not limited to, annexation or phased annexation of those portions of the LCRSP area currently in the County to the City, annexation and/or detachment of project lands into or from existing County districts and service area, and associated reorganization of existing governmental services, including reorganization of existing County Service Area 70 and Improvement District GH (CSA 70-GH), detachment from the San Bernardino County Fire Protection District and its Valley Service Zone, and annexation into the WVWD.

In addition to the discretionary approvals identified above, this EIR may be used by the City for the following permits and approvals which include, but are not limited to: (1) approval of other implementing agreements, as may be determined necessary by the City and the Applicant; (2) approval, funding, construction, and acceptance of infrastructure improvements, public works projects, and other public facilities; (3) real property conveyances whether to or from the City, the County, other public or quasi-public entities, and private parties; (4) approval of site development and design reviews; (5) issuance of conditional use permits (CUP) as authorized under the LCRSP; (6) issuance of encroachment, excavation, grading, building, and other associated permits and approvals, if considered by the City to be discretionary in nature; (7) establishment of one or more Mello-Roos districts, inclusive of the formulation of community facility districts and the construction and operation of each of the qualifying facilities included therein; and (8) such other actions as may be reasonably associated with the approval and implementation of the proposed LCRSP, inclusive of all uses, buildings, structures, facilities, public works, infrastructure improvements, and associated activities identified therein.

In addition to those entitlements required from the City, additional permits and approval will or may be required from a number of other responsible, trustee, and federal agencies. Those agencies likely include: (1) United States Army Corps of Engineers (USACE); (2) United States Fish and Wildlife Service (USFWS); (3) Federal Emergency Management Agency (FEMA); (4) California Department of Fish and Game (CDFG); (5) California Department of Transportation (Caltrans); (6) Regional Water Quality Control Board, Santa Ana Region (SARWQCB); (7) State Historic Preservation Office (SHPO); (8) San Bernardino Local Agency Formation Commission

(LAFCO); (9) County of San Bernardino (County); (10) West Valley Water District (WVWD or District); (11) Rialto Unified School District (RUSD); (12) Fontana Unified School District (FUSD); (13) San Bernardino City Unified School District (SBCUSD); and (14) such other agencies from whom discretionary permits and approvals may be required.

Subsequent to the certification of the EIR by the Lead Agency, if so certified, this EIR may be used by those responsible, trustee, and federal agencies from whom permits, approvals, and other entitlements may be identified. Those agencies are authorized to utilize the Lead Agency's CEQA documentation as the environmental basis for any and all such permits, approvals, and entitlements, whether explicitly identified herein or identified by those agencies following the certification of this EIR. The City's failure to identify those agencies and/or those entitlements herein does not preclude those agencies from using this EIR as the environmental basis for those later actions.

Biological Resource Assessment

The "LCRSP study area" supports 38 distinct plant communities and/or associations. Five of these communities are considered rare or warranting consideration by the California Natural Diversity Database (CNDDB). The predominant sensitive community is Riversidean alluvial fan sage scrub (RAFSS) and its various sub-associations, which, in aggregate, account for approximately 1,143.7 acres (46 percent) of the LCRSP study area. Other sensitive communities of more limited extent in the LCRSP study area include: (1) 1.2 acres of white sage scrub; (2) 19.4 acres of southern willow scrub; (3) 0.3 acre of California sycamore alliance; and (4) 1.7 acres of southern cottonwood willow riparian. In addition, two sensitive plant species have been detected within the LCRSP study area: Plummer's mariposa lily (*Calochortus plummerae*) and Parry's spineflower (*Chorizanthe parryi* var. *parryi*). The Plummer's mariposa lily is a California Native Plant Society (CNPS) List 1B.2 species. Over 127,200 Plummer's mariposa lilies were mapped in 2005, primarily within portions of the LCRSP study area proposed as permanent open space. The Parry's spineflower is a CNPS List 1B.1 species.

The slender-horned spineflower (*Dodecahema leptoceras*), a State and federally-listed endangered and CNPS List 1B.1 species, was historically seen and documented in the LCRSP study area in 1994. This species was not, however, observed during focused surveys conducted in 2004, 2005, 2006, and 2007 and is now considered absent from the LCRSP study area.

A woollystar (*Eriastrum densifolium*), a taxon with both a common (*Eriastrum densifolium* ssp. *elongatum*) and a federally-listed (*Eriastrum densifolium* ssp. *sanctorum*) subspecies, has also been detected within the LCRSP study area. In order to determine the subspecies occurring in the LCRSP study area, a study was conducted in 2006 that sampled corolla length, which is considered a key method of differentiating between the two subspecies. The results of this study indicated that the woollystars found in the LCRSP study area belong to the common subspecies *elongatum*.

Eighteen sensitive wildlife species have been documented to have been observed in the LCRSP study area. Of these, the following three species are either federally-listed or State-listed (or both) as either threatened or endangered:

- **San Bernardino kangaroo rat**. The San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR), a federally-listed endangered species, occurs within the LCRSP study area. Occupied habitat for this species was determined based on the results of small

mammal trapping studies within all suitable habitats for this species conducted in 2005, 2006, and 2007. SBKR were captured within 702.7 acres (696.8 "on-site" acres and 5.9 "off-site" acres) of the LCRSP study area during at least one year of these trapping studies. These 702.7 acres have been designated as "occupied habitat" for this species within the LCRSP study area and sets the baseline for evaluation of direct impacts to SBKR. These 702.7 acres include 51.0 "on-site" acres that are occupied on an ephemeral basis due to physical and hydrologic isolation.

- **Least Bell's vireo**. The least Bell's vireo (*Vireo bellii pusillus*) (LBV), a federally-listed endangered species, was detected in the LCRSP study area in 2006 when two pairs were observed in the Sycamore Flat riparian corridor in Neighborhood I and an individual was repeatedly observed in a narrow riparian corridor along the western portion of Neighborhood II. Protocol surveys in 2007 detected one LBV pair in the Sycamore Flat riparian corridor and none in Neighborhood II. Protocol surveys in 2008 did not detect the LBV within the LCRSP study area.

- **Willow flycatcher**. The willow flycatcher (*Empidonax trailli*), a State-listed endangered species, was detected as a transient in the LCRSP study area during the migration period in 2006, 2007, and 2008. Focused surveys were conducted for the southwestern willow flycatcher (*Empidonax trailli extimus*) (SWWF), a State and federally-listed endangered subspecies, in 2006, 2007, and 2008. No federally-listed SWWF were detected during the protocol surveys.

Other sensitive species identified as occurring within the LCRSP study area include the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) (LAPM) and the burrowing owl (*Athene cunicularia*) (BUOW), both California Species of Concern (CSC). The LAPM was detected during trapping for the SBKR. This species occupies approximately 397.8 on-site acres within Neighborhoods III and IV. The BUOW was incidentally observed within the LCRSP study area but outside the development footprint in the SBKR Conservation Area in September 2006 and in February 2007 during trapping for the SBKR and again in January 2009. Protocol surveys conducted in 2006 and 2007 did not detect this species within the development portion of the LCRSP study area. Focused protocol surveys performed in 2005, 2006, and 2007 for the coastal California gnatcatcher (*Polioptila californica californica*) (CAGN), a federally-listed threatened species, did not detect this species within the LCRSP study area.

Various plant and wildlife surveys were not conducted consecutively through 2008. The average number of consecutive surveys years for any one species was three years. For Plummer's mariposa lily, slender-horned spineflower, woollystar, SBKR, and CAGN, consecutive surveys through 2008 were not deemed necessary by the Applicant for one or more of the following reasons: (1) previous consecutive years surveys were repeatedly negative and the target species was concluded to be absent; (2) focused plant surveys were completed under optimal environmental conditions where presence would have been captured, if present; (3) external sources determined the potential for the species to be present in the vicinity was not likely; and (4) multiple years of wildlife trapping allowed researcher to accurately identified all occupied habitat.

Based on this analysis, the proposed project would have the following potentially significant direct and indirect effects on biological resources in the LCRSP study area:

- **Sensitive vegetation communities**. Impacts to sensitive plant communities include approximately 478.0 (476.2 on-site and 1.8 off-site) acres of permanent impacts and

41.6 (35.7 on-site and 5.9 off-site) acres of temporary impacts to RAFSS (where RAFSS is the only or primary community). This includes approximately 56.2 (54.6 on-site and 1.6 off-site) acres of permanent impacts and 21.4 (17.2 on-site and 4.2 off-site) acres of temporary impacts to pioneer RAFSS, 213.2 (213.0 on-site and 0.2 off-site) acres of permanent impacts and 18.1 (16.5 on-site and 1.6 off-site) acres of temporary impacts to intermediate RAFSS, and 208.6 on-site acres of permanent impacts and 2.1 (2.0 on-site and 0.1 off-site) acres of temporary impacts to mature RAFSS stands. In addition, 1.7 on-site acres of southern cottonwood willow riparian and 0.2 on-site acre of California sycamore alliance will be permanently impacted. Impacts to California sycamore alliance have not been determined to be significant; project-related impacts are considered significant prior to proposed mitigation measures as they may have a substantial adverse affect on a sensitive natural community.

- **San Bernardino kangaroo rat**. Of the total approximately 702.7 (696.8 on-site and 5.9 off-site) acres of occupied habitat that exists in the LCRSP study area, approximately 140.6 (139.2 on-site and 1.4 off-site) acres, or about 20 percent, will be directly and permanently removed by the proposed project. These impacts include approximately 51.0 on-site acres that are outside the 100-year floodplain and hydrologically disconnected due to past levee construction and past and on-going mining activities. As these isolated 51.0 on-site acres are no longer subject to flooding that would help maintain open habitat conditions suitable for the species, preservation of these areas are not part of a viable long-term strategy for the recovery or conservation of the SBKR in Lytle Creek. In addition to the approximately 140.6 acres to be permanently removed by the project, about 41.0 acres (35.8 on-site and 5.2 off-site acres) of occupied habitat will be temporarily impacted within the 80-foot-wide levee construction zones. These direct and temporary impacts to occupied SBKR habitat are deemed to be significant prior to the implementation of any proposed mitigation measures. Indirect impacts to SBKR, including loss of suitable and currently unoccupied habitat and the loss of unoccupied habitat that contain primary constituent elements for critical habitat have been addressed in this analysis. Indirect impacts to the species associated with suitable and currently unoccupied habitat will be offset by mitigations for direct losses, such that the existing population of SBKR in the LCRSP study area will remain at current or increased levels in the long term.

- **Least Bell's vireo**. The proposed project will directly and permanently impact marginally suitable habitat within Neighborhood II that was occupied by a presumably transient LBV during focused surveys in 2006 but not occupied during focused surveys in 2007 and 2008. Potential indirect impacts to the LBV include noise impacts from adjacent construction and predation by pets associated with nearby human habitat. Direct and indirect impacts to this species are considered significant prior to the implementation of proposed mitigation measures.

The proposed project's contribution to cumulative effects on RAFSS and SBKR is deemed to be cumulatively considerable. Based upon the results of the regional analysis of remaining RAFSS, on the order of 10,638 acres of RAFSS remain within the southwestern San Bernardino County region. Of these, approximately 1,098 acres (10 percent) are within the borders of approved, planned, or foreseeable projects, including approximately 519.6 acres (478.0 acres permanently impacted and 41.6 acres temporarily impacted) within the LCRSP study area. Based on the unique assemblage of plant and animal species associated with RAFSS, its limited distribution, and susceptibility to edge effects due to its high perimeter to area ratio,

cumulative impacts to 10 percent of RAFSS within the southwestern San Bernardino County region is deemed to be significant absent mitigation.

A total of 10 percent (1,098 acres out of 10,638 acres) of RAFSS will be cumulatively impacted within the region. However, for the purposes of this assessment, as an approach to identifying potentially suitable habitat for the SBKR, it is meaningful to consider only RAFSS that is both within active hydrological regimes and viable in the long-term and pioneer RAFSS. These categories total approximately 7,530 acres within the defined region. Of these, about 769 acres (10 percent) will be cumulatively impacted by approved, planned, or foreseeable projects. On a regional basis, the level of potential cumulative loss is significant in the absence of mitigation.

The following mitigation measures have been identified which would reduce the project's impacts on biological resources to a less-than-significant level. The proposed project has not, however, been reviewed under a formal Section 7 consultation. Further refinement of mitigation measures is likely through the Section 7 consultation process with the USACE and USFWS.

- **Mitigation for significant impacts to SBKR**. Mitigation for direct removal of occupied SBKR habitat includes the following avoidance measures: (1) trapping and removal of SBKR prior to any ground disturbances; (2) avoidance and minimization of direct individual SBKR mortality during construction; and (3) management programs to assure the ability to sustain on-site SBKR populations in the long term and preservation of occupied habitat areas on and off the site. Indirect effects due to edge effects will be mitigated through implementation of design elements intended to buffer and avoid human-wildlife conflicts. Indirect effects due to loss of unoccupied habitat will be mitigated through the measures imposed to mitigate direct impacts.

  Cumulative impacts to SBKR have been calculated based on a regional study area. The proposed project, inclusive of final mitigations, would provide suitable mitigation to offset all potentially significant direct, indirect, or cumulative impacts on SBKR under CEQA.

  The on-site and off-site preservation and creation of habitat for the SBKR will provide pioneer and intermediate phases of RAFSS for the species of at least equivalent habitat value to the value that will be lost. Sufficient mature RAFSS (as upland refugia) will allow for recolonization of the wash area following catastrophic flood events. On-site restoration and management will include approximately 34.5 acres of chamise chaparral within Neighborhood III immediately downstream of and adjacent to the SBKR Conservation Area. Another 40 off-site acres of publicly or privately owned conservation land in the vicinity of the LCRSP study area will be enhanced and/or restored and managed for the species in perpetuity.

- **Mitigation for significant impacts to LBV**. Mitigation for impacts to 2.9 acres of LBV habitat will include on-site enhancement, restoration, and preservation of at least 5.2 acres within the Sycamore Flat riparian corridor within Neighborhood I (at a minimum 2:1 ratio). A total of 18.9 acres of existing riparian habitat within the on-site Sycamore Flat area are within the open space portion of the proposed project and available for mitigation opportunities. Mitigation measures during construction activities will be employed to minimize indirect impacts to this species.

- **Mitigation for significant impacts to sensitive riparian communities**. Mitigation for impacts to 1.7 acres of southern cottonwood willow riparian will include preservation,

enhancement, and restoration of 3.4 acres of existing southern willow scrub riparian habitat within the Sycamore Flat riparian corridor (at a minimum 2:1 ratio). This mitigation will also count towards the mitigation of impacts to the LBV. A total of 18.9 acres of existing riparian habitat within the on-site Sycamore Flat area are within the open space portion of the proposed project and available for mitigation opportunities.

- **Mitigation for significant impacts to RAFSS**. Based on an analysis of regional mitigation opportunities, the Applicant has identified various areas which may provide RAFSS mitigation; however, the precise mitigation areas have not been provided herein. The Applicant has proposed that the extent and location of mitigation lands be determined based on a set mitigation ratio and/or a "habitat equivalency analysis" (HEA) that would balance affected and preserved habitat values of RAFSS with consideration of sensitive species. The latter method allows for mitigation strategy to focus on habitat values. It may be that some combination of these alternative methods will be used to provide appropriate mitigation for impacts to RAFSS. Both methods would incorporate preservation of lands and long-term management to ensure the replacement of habitat values to be maintained in-perpetuity. Vegetation removal and grading for the proposed project would not proceed until precise mitigation areas have been identified and preserved to the satisfaction of the City. The two alternative methods for determining the extent and location of mitigation lands are described below:

  - ◊ **In-kind preservation and habitat creation based on a defined ratio**. Many habitat mitigation proposals that are implemented under CEQA are based on a preservation of a specific ratio of habitat preserved to habitat impacted. For RAFSS, a mitigation ratio of 2:1 represents an appropriate threshold to mitigate impacts to a less-than-significant level. Under this scenario, mitigation for significant impacts to RAFSS communities within the LCRSP study area will compensate for the approximately 519.6 acres (478 acres permanently impacted and 41.6 acres temporarily impacted) of RAFSS removed by the proposed project with 1,039.2 acres and will include both on-site and off-site preservation.

    Off-site opportunities were examined through a regional inventory of RAFSS habitats, their ownerships, and acres of potential off-site acquisition and preservation by the Applicant. This analysis identified a total of approximately 16,770 acres of alluvial fan sage scrub remaining in the region (of which 15,634 acres is outside of the LCRSP study area), as defined by Holland's California floristic province for southern California. Of the remaining alluvial fan sage scrub existing today, only about 1,624 acres (10 percent) are within private ownership and the feasibility of acquisition those lands has not been determined. The remaining 14,010 acres (90 percent) are publicly owned and, although not available for acquisition, some of this habitat may be available to be enhanced or restored for mitigation credit.

    Under this scenario, proposed mitigation for the SBKR would be included within on-site and off-site restoration and management of the RAFSS community. Within the LCRSP study area, approximately 34.5 acres of chamise chaparral will be restored to RAFSS immediately adjacent to the "SBKR Conservation Area" within Neighborhood III. Another 40 acres of chamise chaparral will be restored or enhanced to RAFSS habitat and managed in an off-site conservation area in the vicinity of the confluence of Lytle and Cajon Creeks. If the proposed project

is able to mitigate at a 2:1 ratio (using habitat restoration, enhancement, and/or creation on public lands; restoration, enhancement and/or creation on private lands that are assured for preservation as open space; acquisition and protection of habitat on private lands; and/or some combination of all three of these options), the impacts to this plant community can be reduced to a less-than-significant level under CEQA.

◊ **Habitat equivalency analysis**. An alternative method for determining the extent and location of mitigation lands for impacts to alluvial fan sage scrub associated with the proposed project is to conduct an HEA of baseline conditions, impacts, and proposed mitigation areas. The principle concept underlying the HEA approach is that adequate compensation for losses of habitat can be achieved by providing net gains in habitat value at designated mitigation sites. Recognizing that alluvial fan sage scrub is a habitat of concern that possesses value to a unique assemblage of plant and animal species, HEA provides a consistent basis for off-setting project impacts based on habitat quality and quantity not based on application of a strict ratio. The HEA method has been shown to be effective and applicable in a wide variety of circumstances and settings where appropriately-scaled mitigation is being sought for biological impacts.

Inclusive of project-related proposed mitigation measures, no significant unavoidable adverse impacts (direct, indirect, or cumulative) on identified biological resources would remain.

Significant Environmental Impacts

Table ES-3 (Summary of Environmental Impacts) summarizes the environmental impacts, the recommended mitigation measures, and the identified level of significance of each of the environmental effects examined in this EIR both prior to and following the implementation of the recommended mitigation measures. Notwithstanding the implementation of all feasible mitigation measures, the following project-related and cumulative environmental impacts are likely to remain significant and cannot be feasibly mitigated to below a level of significance. The numbers assigned to each of the identified impacts refer to those environmental impacts identified in Table ES-3 (Summary of Environmental Impacts) and the corresponding technical analysis presented in the EIR.[3]

- **Air quality** (Impacts 7-1, 7-2, 7-4, and 7-7 through 7-10). Based on the size of the proposed project and the development phasing plan now proposed, other than through a substantial reduction in the size of the project or the imposition of severe constraints on the number of acres to be grading during any single daily period, the number of dwelling units and non-residential space to be painted, and the square footage of areas that could be paved on a daily basis, no feasible mitigation measures exist to reduce construction-term air emissions to below a level of significance. All feasible mitigation measures have been included herein. Those measures will reduce but will not result in an avoidance of those construction-term air quality impacts. Similarly, during the project's operations, based on the number of vehicle trips generated by each of the proposed on-site residential and non-residential land uses, mobile source emissions will remain significant.

[3]/ Numbering assigned by the Lead Agency to topical issues, environmental impacts, and mitigation measures is presented for convenience purposes only (e.g., to facilitate reference thereto) and is not intended to indicate any prioritization or hierarchy as to those issues, impacts, and/or measures.

With respect to potential impacts to on-site residential uses from off-site sources of toxic air contaminants, although mitigation is recommenced which would substantially reduce exposure by on-site receptors to carcinogenic, air quality impacts would, however, remain significant and unavoidable.

The project's recommended mitigation measures will not adequately mitigate for the project's projected exceedance of the SCAQMD's suggested threshold of significance standards for construction-term carbon monoxide (CO), oxides of nitrogen (NO_X), particulate matter less than 10 microns (PM_{10}), particulate matter less than 10 microns ($PM_{2.5}$), and volatile organic compound (VOC) emissions. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. In addition, the project's recommended mitigation measures will not adequately mitigate for the project's projected exceedance of the SCAQMD's suggested threshold of significance standards for operational VOC, CO, PM_{10}, $PM_{2.5}$, and NO_X emissions. Because the South Coast Air Basin is currently classified as non-attainment for ozone (O_3) PM_{10}, and $PM_{2.5}$, the proposed project, in combination with other related projects, could contribute to an existing or projected air quality exceedance within the air basin.

Localized modeling shows that site construction would result in a substantial increase in certain criteria pollutants (≥10.4 micrograms per cubic meter [$\mu g/m^3$] of PM_{10} and $PM_{2.5}$ averaged over a 24-hour period). In accordance with the SCAQMD's "Final Localized Significance Threshold Methodology" (SCAQMD, June 2003), emission levels attributable to the proposed project's construction would not appear to comply with the "Final 2007 Air Quality Management Plan" (SCAQMD, June 2007) (2007 AQMP). Based on the identified threshold of significance criteria, non-compliance with the 2007 AQMP would be deemed a significant environmental effect.

- **Noise** (Impacts 8-2 and 8-6). With respect to off-site traffic, the project would contribute a maximum noise level increase of 4.4 dBA along roadway segments adjacent to the project site. Mitigation is recommended to reduce the off-site traffic noise to new developments along most roadway segments adjacent to the project site to a less-than-significant level. Because of driveway configuration and orientation of existing residences, in combination with existing legal constraints, there are no feasible mitigation measures for sensitive receptors located along Riverside Avenue (between Alder Avenue and Locust Avenue) and along Country Club Drive (north of Riverside Avenue). Off-site traffic noise levels would, therefore, result in a significant and unavoidable impact for the existing residents located along those roadway segments.

  In addition, because the project's contribution exceeds 3.0 dBA community noise equivalency level (CNEL), off-site traffic noise levels would result in significant and unavoidable cumulative impacts for sensitive receptors located along Riverside Avenue (between Alder Avenue and Locust Avenue) and along Country Club Drive (north of Riverside Drive).

- **Growth inducement** (Impact 15-1). Growth in an area may result from the removal of physical impediments or restrictions to growth, as well as the removal of planning impediments resulting from land-use plans and policies. Planning impediments may include restrictive zoning or general plan designations.

The proposed changes in jurisdictional authority and land-use regulations will result in an intensification of uses within the City beyond those which would otherwise be anticipated in the absence of those discretionary actions contemplated herein. Under existing land-use policies and based on prior discretionary approvals, independent of any actions that the Lead Agency may take with regards to the proposed LCRSP, portions of the project site would likely undergo development. Based on those existing zoning designations, a total of 2,215 single-family dwelling units and 1,097,418 square feet of commercial and light industrial development would be constructed, primarily in Neighborhoods II and III. In contrast, under the proposed LCRSP, a total of 8,407 units and 849,420 square feet of non-residential development, in combination with other public facilities (e.g., new school sites), would be authorized.

When viewed simplistically, when proposed land-use policies are compared to what might otherwise be allowable under existing City and County zoning, those differences translate into approximately 6,192 additional dwelling units and 247,998 fewer square feet of non-residential use beyond those levels that would otherwise occur in the absent the proposed LCRSP. Assuming an average size of 3.896 individuals per household and a jobs rate of one new primary job for each 250 square feet of non-residential development, when compared to existing zoning designations, the proposed LCRSP would foster a population increase of about 24,124 persons and result in a reduction of approximately 992 primary jobs.[4]

Although the term “substantial” is not defined under CEQA, it can be reasonably construed that the land-use policy changes described herein would contribute, either directly or indirectly, to substantial population growth in the general project area. As a result, this growth-inducing impact is deemed to be significant; however, CEQA notes that “[i]t must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment” (14 CCR 15126.2[d]).

As indicated in the EIR, each of the above described environmental impacts cannot be feasibly mitigated to below a level of significance. In addition to those unavoidable adverse impacts, the EIR identifies other potentially significant environmental effects which, in the judgment of the Department, can be mitigated to a less-than-significant level through the adoption and implementation of certain mitigation measures. Those potentially significant impacts include: (1) land use (Impacts 1-1 through 1-5, 1-7, and 1-8); (2) geology and soils (Impacts 3-1, 3-2, 3-4, and 3-6); (3) hydrology and water quality (Impacts 4-4 through 4-7); (4) biological resources (Impacts 5-1, 5-4, and 5-7 through 5-10); (5) transportation and traffic (Impacts 6-1 through 6-4); (6) noise (Impacts 8-3 and 8-4); (7) public services and recreation (Impacts 9-5, 9-7, 9-8, 9-11, and 9-12); (8) utilities and service systems (Impacts 10-1 and 10-5); (9) hazards and hazardous materials (Impacts 11-3 and 11-5); (10) cultural resources (Impacts 12-1 and 12-2); and (11) aesthetics (Impacts 13-1 and 13-3). Because the certainty of the Lead Agency’s adoption of the recommended mitigation measures cannot be determined prior to consideration by the Lead Agency’s decision-making body,[5] as optional means of avoiding or substantially reducing the

[4]/ When the proposed LCRSP is examined in isolations, assuming one new primary job for every 250 square feet of non-residential development, the project’s 848,420 square feet of non-residential land uses would generate a total of about 3,398 new primary jobs. Independent of the project type, assuming 3.892 persons per household and a zero percent vacancy rate, the project’s 8,407 dwelling units would yield a total of about 32,720 residents. Other assumptions and analyses yield different on-site employment and population estimates.

[5]/ Referencing Kings County Farm Bureau v. City of Hansford (Fifth District, 1990): "State agencies are required to certify the completion of an EIR 'on any project they propose to carry out or approve.' (§ 21100.) As a matter of logic, the EIR must be prepared before the decision to approve the project. Not until project approval does

those potentially significant impacts, the Lead Agency is authorized to consider mitigation measures or alternatives in response to those environmental effects.[6] As a result, one or more of the alternatives identified herein have been formulated in response to one or more of those potentially significant environmental effects.

Project Alternatives

In addition to an analysis of the proposed project, one of the primary purposes of an EIR is to provide public agencies and other parties with an analysis of a reasonable range of alternatives to the proposed action. The State CEQA Guidelines specify that the range of potential alternatives include those that would feasibly accomplish most of the basic objectives of the project while avoiding or substantially lessening one or more of the significant effects. Based on that regulatory requirement, a relationship exists between the proposed project's stated objectives, the presence of one or more significant or potentially significant environmental effects, and the range of alternatives formulated in response to those impacts.[7] In addition, in order to assist in placing a project's effects in an appropriate environmental context, EIRs are specifically required to include and examine a "no project" alternative.[8]

As more thoroughly described in Section 7.0 (Alternatives Analysis) of the EIR, the project's stated objectives include both those identified by the Lead Agency and those identified by the Applicant. Based on those objectives and in fulfillment of those CEQA requirements, examined herein is the "no project/no development" alternative and five additional development-related scenarios, including: (1) a "no project/existing zoning designations" alternative; (2) three "habitat avoidance" alternatives; and (3) a "reduced residential/increased commercial" alternative. Each of those alternatives is briefly described below.

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the agency determine whether to impose any mitigation measures on the project. [Citation.] One cannot be certain until then what the exact mitigation measures will be, much less whether and to what degree they will minimize environmental effects."

[6]/ The EIR identifies a number of environmental effects which the Lead Agency has deemed to be significant but which could be mitigated to a less-than-significant level through the imposition of specified mitigation measures. Relying on the word "or" in Section 21002 and 21002.1 of CEQA ("agencies should not approve projects as approved if there are feasible alternatives or feasible mitigation measures") and understanding the requirement to be disjunctive so that agencies need only adopt mitigation measures or alternatives but not both, the courts have stated that agencies need not even consider the feasibility of project alternatives if they adopt mitigation measures that "substantially lessen or avoid" projects' significant adverse impacts (Laurel Hills Homeowners Association v. City Council [Second District, 1978]). The EIR must "contain a meaningful discussion of both alternatives and mitigation measures. . . Therefore, we conclude if there is evidence of one or more potentially significant impacts, the report must contain a meaningful analysis of alternatives or mitigation measures which would avoid or lessen such impacts" (Kings County Farm Bureau v. City of Hanford [Fifth District, 1990]).

[7]/ The EIR identifies a number of environmental effects which the Lead Agency has deemed to be significant but which could be mitigated to a less-than-significant level through the imposition of specified mitigation measures. Relying on the word "or" in Section 21002 and 21002.1 of CEQA ("agencies should not approve projects as approved if there are feasible alternatives or feasible mitigation measures") and understanding the requirement to be disjunctive so that agencies need only adopt mitigation measures or alternatives but not both, the courts have stated that agencies need not even consider the feasibility of project alternatives if they adopt mitigation measures that "substantially lessen or avoid" projects' significant adverse impacts (Laurel Hills Homeowners Association v. City Council [Second District, 1978]). The EIR must "contain a meaningful discussion of both alternatives and mitigation measures. . . Therefore, we conclude if there is evidence of one or more potentially significant impacts, the report must contain a meaningful analysis of alternatives or mitigation measures which would avoid or lessen such impacts" (Kings County Farm Bureau v. City of Hanford [Fifth District, 1990]).

[8]/ Section 15126.6(e) of the State CEQA Guidelines states, in part, that the "specific alternative of 'no project' shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project."

- **"No Project/No Development" Alternative**. A "no project" alternative serves as an environmental baseline against which all other development options can be compared. The "no project" alternative generally reflects the conditions and associated environmental impacts that would predictably occur should the Lead Agency elect to either deny the proposed project or elect not to take any affirmative action thereupon, resulting in, at least, the short-term retention of the project site in its existing condition. For the purpose of environmental review, under this alternative, no physical change to the project site is anticipated to occur. At least for the time being, the site is assumed to remain undeveloped. Since neither the denial of the current application nor the cessation of the current entitlement process would preclude the submission of a subsequent development application, this alternative cannot be assumed to constitute a feasible alternative for the site's long-term use.

  Under the "no project/no development" alternative, no new land uses, additional areas of physical disturbance, Applicant-initiated infrastructure improvements, new residential dwellings, additional non-residential square footage, and/or additional vehicle trips would predictably occur. Operational activities associated with existing land uses could, however, expand or contrast based on market demands for and the continued operation of those uses. Selection of the "no project/no development" alternative would result in the avoidance of the significant project-related impacts attributable to the LCRSP.

- **"No Project/Existing Zoning Designations" Alternative**.[9] This alternative represents a variation of the "no project" alternative in that it assumes that the Lead Agency either denies or takes no action with regards to the proposed project. Notwithstanding the likely need for corresponding discretionary actions that might be required to effectuate this alternative, this alternative assumes the continuation of existing plans, policies, and existing facility operations into the future.

  As proposed, the LCRSP project will necessitate revisions to the City General Plan and County General Plan, as well as concurrent revisions to the City Municipal Code and County Development Code. In lieu of those changes and revisions as may be required for the adoption and implementation of the proposed project, development of the project site (inclusive of both those areas now located in the City and those areas located in County unincorporated areas) could proceed based on the land-use and development policies currently contained in those planning and regulatory documents. In the absence of the requested general plan and municipal code amendments, the nature and intensity of development within the project boundaries would differ from that now proposed. Based on existing land-use policies, development activities could nonetheless proceed over a substantial portion of the project site.

  Under the "no project/existing zoning designations" alternative, a total of 2,215 dwelling units and 1,097,418 square feet of commercial and light industrial development could be constructed on the project site, primarily in Neighborhoods II and III. Separate and apart

[9]/ Although existing general plans, specific plans, planned developments, and zoning ordinances outline the nature and intensity of future land uses envisioned by the corresponding permitting agencies, no vested rights to any definitive use(s) has been established since no development agreements have been executed between the Applicant and those agencies, no vesting subdivision maps have been recorded, no building permits have been issued, and no construction activities are underway. Any references to "existing entitlements" herein is intended to describe not a vested development right but a general description of the land uses that might predictably occur on the subject property based on the designations and development standards outlined in existing general plans, specific plans, planned developments, and applicable zoning ordinance provisions.

from those organization and reorganization changes that would be required to provide needed public services, no annexation activities would occur and development would proceed under the authority of the applicable land-use entity.

- **"Habitat Avoidance" Alternatives**. As proposed, implementation of the LCRSP would result in direct potentially significant impacts to RAFSS and southern willow scrub habitat. Within the study area, the RAFSS supports the federally endangered SBKR while southern willow scrub supports the LBV. In addition, the proposed project will result in direct potentially significant impacts to on-site jurisdictional waters, as well as the plant communities and habitat areas those jurisdictional waters support. As an alternative to or in addition to those mitigation measures identified in the EIR, the objective of this alternative is to avoid or substantially reduce significant or potentially significant project-related impacts affecting sensitive on-site biological resources.[10],[11]

  This alternative considers three "habitat avoidance" scenarios, each of which is directed towards minimizing habitat disturbance for specific species. The first habitat avoidance scenario ("avoidance of SBKR-LBV-occupied areas" alternative) would avoid development in areas occupied by SBKR and LBV. The objective of this alternative is to avoid or substantially reduce significant project-related impacts affecting on-site biological resources, specifically potential impacts upon listed wildlife species including, but not limited to, the San Bernardino kangaroo rat (SBKR) and the least Bell's vireo (LBV). Both the SBKR and LBV are federally listed species under the FESA and have been observed in the study area.

  Under this "avoidance of SBKR-LBV-occupied areas" alternative, development activities would be confined to an approximately 1072.9-acre portion of the project site. A total of 7,484 dwelling units and 829,540 square feet of commercial and light industrial uses would be constructed, primarily in Neighborhoods II and III.

  The second habitat avoidance scenario ("avoidance of RAFSS areas" alternative) would locate all development behind the FEMA 100-year floodplain line and minimize development in areas identified as RAFSS. The objective of this alternative is to avoid or substantially reduce significant project-related impacts affecting on-site biological resources, specifically impacts to RAFSS habitat located on the project site. In order to accommodate that objective, this alternative, unlike the other alternatives examined herein, does not include extension of the proposed levee to the existing Cemex USA levee. The location of the levee in Neighborhood IV will not affect the hydrology needed to sustain RAFSS on the site.

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[10]/ Referencing Kings County Farm Bureau v. City of Hansford (Fifth District, 1990): "State agencies are required to certify the completion of an EIR 'on any project they propose to carry out or approve.' (§ 21100.) As a matter of logic, the EIR must be prepared before the decision to approve the project. Not until project approval does the agency determine whether to impose any mitigation measures on the project. [Citation.] One cannot be certain until then what the exact mitigation measures will be, much less whether and to what degree they will minimize environmental effects."

[11]/ This alternative has been formulated in response to the Lead Agency's identification of a number of potentially significant biological resource impacts. Those impacts include, but may not be limited to, project-related impacts on: (1) sensitive wildlife species (Impacts 5-1 and 5-7); (2) sensitive plant species (Impacts 5-1 and 5-10); and (3) jurisdictional waters (Impact 5-4). Although the EIR indicates that each of those potentially significant impacts can be mitigated to a less-than-significant level through the implementation of specified mitigation measures. Prior to consideration of this EIR and those mitigation measures by the Lead Agency's decision-making body, the Department has sought to explore whether there may also exist project alternative that might also reduce those impacts to below a level of significance.

Under this "avoidance of RAFSS areas" alternative, development activities would be confined to an approximately 740.1-acre portion of the project site. A total of 4,873 dwelling units and 602,827 square feet of commercial and light industrial uses would be constructed, primarily in Neighborhoods II and III.

The third habitat avoidance scenario ("avoidance of jurisdictional waters" alternative) would minimize impacts to jurisdictional waters, defined as those waters under the jurisdiction of the United States Army Corps of Engineers (USACE) and the California Department of Fish and Game (CDF&G) (pursuant to the CF&GC). The objective of this alternative is to avoid or substantially reduce significant project-related impacts affecting on-site waters of the United States under the jurisdiction of the USACE and waters of the State under the jurisdiction of the CDF&G.

Under this "avoidance of jurisdictional waters" alternative, development activities would be confined to an approximately 854.9-acre portion of the project site. A total of 5,846 dwelling units and 730,893 square feet of commercial and light industrial uses would be constructed, primarily in Neighborhoods II and III.

- **"Reduced Residential/Increased Commercial" Alternative**. Although the possible regional benefits of this alternative may not be perceptible based on a project-level analysis, the objective of this alternative is to promote a reduction in the number of vehicle trips, vehicle miles traveled (VMT), and traffic congestion through the promotion of additional employment opportunities within the City. By promoting a jobs-housing balance, this alternative seeks to avoid or substantially reduce significant or potentially significant impacts associated with a regional or subregional jobs-housing imbalance, including those potential traffic and air quality impacts associated therewith.[12]

  As indicated, in part, in Section 65890.1 of the CGC, the State Legislature finds and declares that: (1) State land-use patterns should be encouraged that balance the location of employment-generating uses with residential uses so that employment-related commuting is minimized; (2) local agencies and State agencies should cooperate to facilitate the balancing of employment-generating land uses and residential land uses and provisions of transportation to serve these uses; and (3) that it is the intent of the State Legislature to move toward the goal that every California worker have available the opportunity to reside close to their jobsite.

  In furtherance of that objective, the Lead Agency has formulated an alternative that seeks to balance the provision of new housing and job creation. Although proximity between housing and employment does not ensure that worker commutes are reduced, housing consumers and workers are afforded the opportunity to base their housing and job choices, in part, upon the relationship between those two uses.

[12]/ This alternative has been formulated in response to the Lead Agency's identification of a number of significant and potentially significant transportation, traffic, and air quality impacts. Those impacts include, but may not be limited to, project-related impacts on: (1) transportation and traffic (Impacts 6-3 and 6-4); and (2) air quality (Impacts 7-4 and 7-10). With regards to transportation and traffic impacts, the EIR indicates that each of those potentially significant impacts can be mitigated to a less-than-significant level through the implementation of specified mitigation measures. Prior to consideration of this EIR and those mitigation measures by the Lead Agency's decision-making body, the Department has sought to explore whether there may also exist project alternative that might also reduce those impacts to below a level of significance.

Under this alternative, within a development footprint of approximately 1,202.1 acres, the total number of dwelling units authorized on the project site decreases from 8,407 to 6,090 units and the total square footage of commercial and light industrial uses increases from 849,420 to 7,037,118 square feet.

A number of other alternatives were considered by the Lead Agency but subsequently rejected and were not subjected to detailed environmental analysis. Those alternatives and the Lead Agency's rationale for their rejection are presented in Section 7.0 (Alternatives Analysis) herein.

Environmentally Superior Alternative

The goal of this alternatives analysis has been to identify and examine a range of reasonable alternatives that would potentially avoid or substantially lessen one or more of the significant environmental effects associated with the approval, construction, and operation of the proposed project. In formulating the alternatives examined herein, it has been the Lead Agency's intent to assess whether alternatives to the proposed project could result in the avoidance or substantial reduction of one or more of the significant effects of the proposed project and to evaluate the comparative merits of the alternatives.

The Lead Agency's conducted an assessment of each alternative's comparative ability to reduce or substantially avoid those unavoidable, adverse, significant or potentially significant environmental impacts. As indicated in the EIR, the "environmentally superior" alternative is the "no project/no development" alternative. Pursuant to the State CEQA Guidelines (14 CCR 15126.6[e][2]) if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives.

Excluding the "no project/no development" alternative, the "no project/existing zoning designations" alternative was determined by the Lead Agency to be "environmentally superior" as compared with the other Lead Agency identified alternatives; however, implementation of that alternative would not result in the elimination of all significant or potentially significant impacts and would continue to necessitate the incorporation of mitigation measures similar to those associated with the proposed project. Although deemed "environmentally superior" to the proposed project, the "no project/existing zoning designations" alternative fails to allow for the attainment of certain stated Lead Agency and Applicant objectives upon which the proposed project is derived.

Areas of Controversy

Based on comments received by the Lead Agency following the release of the "Notice of Preparation" (NOP) and the Lead Agency's independent analysis of the proposed project, no "areas of controversy" have been identified by the Lead Agency. Issues raised in response to the release of the NOP, including comments received during the noticed scoping meeting conducted by the Lead Agency on July 28, 2009, have been addressed under the corresponding section(s) of this EIR deemed most applicable to those issues. Except where otherwise noted, since most comments included requests that specific information or analysis be included in the EIR, none of the issues raised are considered "areas of controversy" by the Lead Agency.

Although it may not elevate to an actual "areas of controversy," one item has arisen where conflicting or potentially conflicting viewpoints have been expressed by the Applicant and by a

commenting agency. While the City's Development Services Department (Department) would anticipate that the following item can be addressed administratively, that item is outlined below and is further addressed in Section 4.1 (Land Use and Planning) herein.

- **Annexation of non-contiguous territory**. In recognition of potential conflicts between issues raised by the San Bernardino Local Agency Formation Commission and the Applicant's proposed project, certain issues concerning the annexation of real property into the City could be identified."[13,14]

  Proposed is the annexation of that approximately 1,753.1-acre portion of the project site presently located in unincorporated County jurisdiction into the City.[15] All lands proposed for annexation are uninhabited (less than 12 registered voters) and are located in the City-adopted and LAFCO-approved northern Sphere of Influence. The Lead Agency acknowledges that the area proposed for annexation is not inclusive of the totality of all County unincorporated lands located in the City's northern Sphere of Influence area. Unincorporated areas not proposed for annexation include, but are not limited to, the area comprising the County-approved LCNPD (Rosena Ranch), the existing neighborhood of Country Club Estates, lands owned and operated by Cemex USA and the Vulcan Materials Company (formally CalMat), and an existing West Valley Water District reservoir site located along the north side of Lytle Creek Road.

  At the Lead Agency's scoping meeting and in subsequent correspondence submitted to the Lead Agency, LAFCO[16] raised a number of issues concerning items for which LAFCO may have jurisdictional authority, including issues regards identified "exclusion areas" (i.e., real property not included within the area of proposed annexation). LAFCO asserts that certain lands (which are neither included in the proposed LCRSP nor identified as "off-site" areas beyond the boundaries of the proposed specific plan but nonetheless included in the EIR) need to be included in order to allow the annexation of

[13]/ Annexation issues raised by LAFCO could also be categorized as "issues to be resolved" and included in the following section. Because the Applicant and LAFCO have a difference of opinion as with regards to the inclusion or exclusion of specific geographic areas in the annexation request, those differences are identified as an "area of controversy" herein although any such controversy may be subsequently resolved through separate discussions between the Applicant and LAFCO or through the CEQA process.

[14]/ In addition to those annexation issues specifically discussed below, LAFCO also raised the following additional annexation-related issues: (1) since only a portion of the area being annexed into the City is to be annexed into the West Valley Water District (WVWD), although a water district can annex non-contiguous areas, it is LAFCO's policy that City and water district boundaries be coterminous; and (2) unless there are parcel changes, such as splits and mergers, which are completed prior to annexation, the annexation boundaries must conform to existing lines of parcel assessment or ownership. Since LAFCO acknowledges that City and WVWD boundaries do not need to be coterminous and since lot splits can be eliminated through traditional Subdivision Map Act and subdivision ordinance authorized actions, neither of these issues is raises to an "area of controversy" herein.

[15]/ Annexation is subject to approval of a property tax exchange agreement in compliance with Section 99 of the Revenue and Taxation Code. The agreement must be approved by the City Council and the County Board of Supervisors and must be submitted prior to LAFCO's acceptance of the application for the proposed annexation (Section 99[b][6], Revenue and Taxation Code). Because the property tax exchange agreement raises economic rather than environmental issues, it is not further addressed herein.

[16]/ The San Bernardino Local Agency Formation Commission is a separate governmental entity and operates independently of the county or cities which it serves. Its purpose, inter alia, is to review and approve or disapprove proposed annexation of territory to cities (Section 56375, California Government Code [CGC]). In reaching its decision, LAFCO is required to consider a number of factors relative to the annexation. Included is the effect of the proposed action, as well as alternatives thereto, on the cost and adequacy of services and controls in the area and adjacent areas on mutual social and economic interests and on the local government structure of the county (Section 56668, CGC).

contiguous lands[17] to proceed and/or to avoid the creation of unincorporated "County islands" or "County pockets."[18] Those areas include, but may not be limited to, that real property: (1) bordering Neighborhoods III and IV along and inclusive of the I-15 Freeway right-of-way (ROW) between Sierra Avenue/Riverside Avenue and Sycamore Creek Drive (I-15 Freeway ROW Southern Exclusion); (2) bordering Neighborhoods I and IV and separating PAs 13 and 15 from PAs 17, 18, and 22 (Sycamore Creek Drive ROW Exclusion); and (3) abutting Neighborhood I and bordered on the north by PAs 4 and 5, on the west by PA 15, on the south by PA 6, and on the east by County-owned lands, inclusive of the I-15 Freeway right-of-way (I-15 Freeway ROW Northern Exclusion). In addition, although not a part of the proposed LCRSP (with the exception of the "off-site" SoCalGas easement), LAFCO states that the County-owned parcel (County Parcel) located to the east of PA 6 and extending to the north of Glen Helen Parkway and to the south of Clearwater Parkway, inclusive of the I-15 Freeway right-of-way, needs to be included in order to eliminate the creation of an unincorporated "island."[19]

With the exception of the "off-site" SoCalGas easement, the four geographic areas described above have not been included within this EIR, no land-use designation for those areas is provided in the proposed LCRSP, and annexation has not been proposed by the Applicant. Because the I-15 Freeway ROW North Exclusion, the I-15 Freeway ROW South Exclusion, and the Sycamore Creek Drive ROW Exclusion are each comprised of highly disturbed lands primarily consisting of existing road pavement, the inclusion of those lands into the project area would not be expected to result in the introduction of any new significant environmental impacts and/or increase the severity of those existing environmental effects identified herein. Similarly, since the County Parcel constitutes a County-owned open space area and since no project-related changes or improvements to that property are proposed therein, excluding those related project improvements within the SoCalGas easement, the inclusion of the County Parcel would not be expected to result in the introduction of any new significant environmental impacts and/or increase the severity of those existing environmental effects identified herein.

LAFCO states that, as presently outlined, "Neighborhood 4 cannot be annexed since it will not be contiguous to the City unless the freeway areas [I-15 Freeway ROW Southern Exclusion] between Neighborhood[s] 3 and 4 is included as part of the annexation to the City. Likewise, Neighborhood 1 would not be considered to be a part of the annexation

[17]/ As defined in Section 56031 of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKHLGRA), codified in Title 5, Division 3, Part 2 (Section 56000, *et seq.*) of the California Government Code: "(a) 'Contiguous' means both of the following: (1) In the case of annexation, territory adjacent to, or territory adjoining territory within, the local agency to which annexation is proposed. (2) In the case of consolidation, territory of a local agency or agencies which is adjacent to, or adjoining the territory of, the consolidating local agency or to the territory of another local agency which is contiguous to the consolidating local agency and to be consolidated with the consolidating local agency. (b) Territory is not contiguous if the only contiguity is based upon a strip of land more than 300 feet long and less that 200 feet wide, that width to be exclusive of highways." As further indicated, in part, in Section 56741 therein: "Unless otherwise provided in this division, territory may not be annexed to a city unless it is contiguous to the city at the time the proposal is initiated pursuant to this part." It is noted that the term "highway" is not specifically defined in the CKHLGRA.

[18]/ As indicated under Section 56744 of the CGC: "Unless otherwise determined by the commission pursuant to subdivision (m) of Section 56375, territory shall not be incorporated into, or annexed to, a city pursuant to this division if, as a result of that incorporation or annexation, unincorporated territory is completely surrounded by the city or the territory of that city on one or more sides and the Pacific Ocean on the remaining sides."

[19]/ It is noted that this County-owned property, which is neither a part of the proposed LCRSP nor part of the proposed annexation, would still remain contiguous with County unincorporated lands to the north and east should the annexation of Neighborhood I occur. As such, although LAFCO might recommend its inclusion as part of any annexation proposal, any inference that the property would become a County "island" is a misnomer.

to the City unless the right-of-way area along Sycamore Creek Road between Neighborhood 1 and 4 [Sycamore Creek Drive ROW Exclusion] is included as part of the annexation."[20] To the extent that inclusion of those lands into any subsequent annexation proceeding is required by LAFCO for all or portions of Neighborhood I and/or Neighborhood IV and to the extent that LAFCO determines that additional lands located in the City's northern Sphere of Influence but not included in the proposed LCRSP and/or in this EIR need to be included as part of any proposed annexation request, unless otherwise determined or unless applicable Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKHLGRA) provisions were to be waived by LAFCO, additional CEQA documentation (beyond that presented herein) may be independently required by LAFCO prior to any LAFCO-authorized actions.

Conversely, the Applicant asserts that annexation of those properties identified by LAFCO is neither required nor should the exclusion of those lands from the current project negate the ability of LAFCO to approve and the City to annex the area proposed by the Applicant and encompassed by the proposed LCRSP. Should LAFCO reject the Applicant's position, LAFCO would likely deny the Applicant's annexation request for Neighborhood I and/or Neighborhood IV based on the non-contiguous nature of those neighborhoods absent the inclusion of one or more of the excluded areas.

Since LAFCO asserts that additional lands, beyond those analyzed herein, would need to be included in the Applicant's annexation request in order to allow annexation to proceed, unresolved is the ability of the Lead Agency to pursue annexation of those unexamined lands absent further environmental review.

The analysis presented herein, including the precise language of many of the mitigation measures and the monitoring obligations associated therewith, is based on the assumption that the totality of the Applicant-proposed 1,753.1-acre area be annexed into and subsequently fall under the jurisdiction of the City. Should annexation not occur in the manner assumed herein and/or should portions of the project site remain under the jurisdiction of the County (e.g., Neighborhoods I and IV), additional environmental notice scoping and supplemental technical analysis may be required by the County or by other responsible agencies to refocus this document so as to examine the proposed project from the County's rather than the City's perspective and to identify any corresponding changes to or any augmentation of this CEQA analysis that may be necessary to the environmental analyses and/or to those mitigation measures recommended herein in order to recognize the County's retained jurisdictional responsibility over those portions of the project site not then annexed.

Issues to be Resolved

As indicated below, there exists or there may exist a number of environmental-related "issues to be resolved" that will or that may need to be addressed as part of the Lead Agency's and responsible agencies' deliberations.[21] Based on comments received by the City following the

[20]/ Letter from Kathleen Rollings-McDonald, Executive Officer, San Bernardino County Local Agency Formation Commission (Re: Notice of Preparation of a Draft Environmental Impact Report for the Lytle Creek Ranch Specific Plan) to Gina Gibson, Senior Planner, City of Rialto, Development Services Department, July 31, 2009, p. 5.

[21]/ In addition to those environmental-related "issues" identified herein and/or raised elsewhere in this EIR, there may also exist other unresolved financial, administrative, procedural, and design and engineering-related items that relate, either directly or indirectly, to the proposed LCRSP which may need to be addressed by the City's

release of the NOP and noticed scoping meeting, and the Lead Agency's independent analysis of the proposed project, the following "issues to be resolved" have been identified. Of these issues, a number are unique to the proposed project, while other issues represent the type of considerations that are applicable to all projects that are subject to the provisions of CEQA and its implementing guidelines.

The order in which these issues are listed is not intended to establish either a prioritization or to suggest that a specific issue may have more weight, value, or importance that another. The categorization of issues as "CEQA-related," "land-use-related," "open space and conservation-related," and "other" represent generalities and that categorization is not intended to limit the interpretation, application, and/or resolution of the issues raised herein.

- **CEQA-related issues**. The following CEQA-related issues have been identified:

  - ◊ **Sufficiency of environmental analysis**. CEQA requires that EIRs be prepared with a sufficient level of detail to provide disclosure of the project's potential environmental effects, including the identification of available mitigation measures and discussion of project alternatives. The City's advisory and decision-making bodies, the public, and other responsible agencies must independently determine whether the level of analysis presented herein is sufficient to fulfill that purpose and whether the Lead Agency and other responsible agencies are provided with sufficient information to make an informed decision concerning the proposed project and its potential environmental consequences.[22] The certification of the EIR by the Lead Agency constitutes evidence of the Lead Agency's independent determination of the sufficiency of the project's environmental analysis.

  - ◊ **Appropriateness of threshold standards**. As indicated in Section 15064(b) of the State CEQA Guidelines, "[d]etermination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data." This EIR identifies those candidate threshold standards nominated for use in determining the level of significance of the environmental effects identified herein. Selection of an alternative set of threshold standards may alter the Lead Agency's preliminary findings and either increase or decrease the resulting level of significance of those effects. As a result, the Lead Agency must determine whether the threshold standards utilized herein are reasonable or whether other environmental standards should be considered and applied to the project's environmental assessment.[23] The certification of the EIR by the Lead Agency

advisory and decision-making bodies. As such, the list of issues presented in this EIR is not intended to be inclusive of all items pending before the Lead Agency and other responsible agencies.

[22]/ CEQA is not concerned with the ultimate decision reached by the agency on a proposed project, only the content of the EIR. Whether right or wrong, the ultimate decision of the agency "is a nullity if based upon an EIR that does not provide the decision-makers, and the public, with the information about the project that is required by CEQA" (Santiago County Water Dist. v. County of Orange [1981]).

[23]/ The courts, in Protect the Historic Amador Waterways v. Amador Water Agency (2004) have stated that "in preparing an EIR, the agency must determine whether any of the possible significant environmental impacts of the project will, in fact, be significant. In this determination, thresholds of significance can once again play a role. . .[T]he fact that a particular environmental effect meets a particular threshold cannot be used as an automatic determinant that the effect is or is not significant. To paraphrase our decision in Communities for a Better Environment [v. California Resources Agency (2002)], a threshold of significance cannot be applied in a way that would foreclose the

constitutes evidence of the Lead Agency's independent determination of the appropriateness of the identified threshold standards.

◊ **Efficacy of mitigation measures**. Although the Lead Agency has diligently attempted to identify all feasible mitigation measures available to reduce, avoid, rectify, or compensate for project-related and cumulative impacts, there may exist other or alternative mitigation measures that should be considered by the Lead Agency or by other responsible agencies for adoption as conditions of project approval should the City and should those responsible agencies elect to approve or conditionally approve the proposed project. Similarly, the Lead Agency's preliminary findings regarding the post-mitigated level of significance of the project's environmental effects are based, in part, on the City's preliminary conclusions concerning the efficacy of those mitigation measures now recommended in response to the project's identified significant or potentially significant environmental effects. Should those measures fail to produce the effects anticipated, the level of significance of the post-mitigated environment may be greater than assumed herein. As a result, the Lead Agency must determine whether the recommended mitigation measures will produce their stated and desired results. The certification of the EIR by the Lead Agency constitutes evidence of the Lead Agency's independent determination of the efficacy of the adopted mitigation measures.

◊ **Selection between the proposed project and other alternatives**. This document provides the City and other responsible agencies with an analysis of a reasonable range of alternatives, including the "no project" alternative. In recognition of the inclusion of those alternatives herein, the Lead Agency may select and subsequently adopt an alternative to the Applicant-proposed LCRSP. Additionally, the City's advisory and decision-making bodies could identify additional alternatives, beyond those addressed herein, or modify, in whole or in part, those alternatives examined in this EIR. The certification of the EIR by the Lead Agency constitutes evidence of the Lead Agency's independent determination regarding both the selected alternative and the adequacy of the alternative's analysis.

◊ **Reliance upon this EIR as the environmental basis for subsequent actions**. To the extent authorized under CEQA and the State CEQA Guidelines and subject to the precise nature of later site-specific and project-specific applications that might follow the City's adoption of the proposed LCRSP, if so adopted, the Lead Agency may seek to utilize this EIR, in whole or in part, as the environmental basis for subsequent discretionary actions that follow its certification that are deemed by the Lead Agency to be consistent with the adopted LCRSP and which occur within the project's boundaries.[24] Many of the

consideration of other substantial evidence tending to show the environmental effect to which the threshold relates might be significant."

[24]/ As indicated in Section 21666 of CEQA: "When an environmental impact report has been prepared for a project pursuant to this division, no subsequent or supplemental environmental impact report shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs: (a) Substantial changes are proposed in the project which require major revisions of the environmental impact report. (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report. (c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available." As further

measures identified herein are intended to serve as project-specific conditions and, when implemented, would serve to mitigate the potential impacts of those later site-specific actions. Since this EIR provides a detailed assessment of potential cumulative impacts, further analysis of cumulative impacts in subsequent CEQA compliance documents may not be warranted.[25]

The proposed LCRSP states that "[b]ecause a Project EIR will be certified by the City in conjunction with approval of this Specific Plan, no further environmental studies shall be required for implementing projects." Although the Lead Agency may elect to utilize this EIR as the environmental basis for later entitlements, each such later project will need to be independently examined and a project-level determination make at the time that separate entitlements are being requested for those later actions and activities. For each such project, the Lead Agency will made an independent determination as to that project's consistency with the adopted LCRSP, the adequacy of this EIR, once certified, to serve as the environmental basis for that action, and whether and to what extent additional environmental documentation may be required.

- **Land use-related issues**. The following land use-related issues have been identified:

indicated in Section 15162(a) of the State CEQA Guidelines: "When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following: (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following: (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration; (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR; (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative."

In Bowman v. City of Petaluma, the courts have interpreted Section 21666 of CEQA to uphold an agency's decision not to prepare a subsequent EIR if any "substantial evidence" supports such decisions. In Bowman v. Petaluma, the court made a clear distinction between the requirement for a subsequent EIR and threshold required for initial EIR preparation, stating "whereas §15064 (§21151 PRC) requires an EIR if the initial project may have a significant effect on the environment, §15162 (§21166 PRC) indicates a quite different intent, namely, to restrict the powers of agencies by prohibiting them from requiring a subsequent or supplemental EIR unless 'substantial changes' in the project or its circumstances will require major revisions to the EIR."

[25]/ As authorized under Section 15130(d) and (e) of the State CEQA Guidelines: "Previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or areawide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan. . .If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section 15183(j)."

◊ **Timing of general and specialty commercial development**. No sequencing of development is outlined in the LCRSP to ensure that locally available neighborhood-serving general and specialty commercial uses and other services would be available in a timeframe designed to best accommodate the site-specific needs of project residents. Unless retailers recognize a current market need, when left to a free-market system, sufficient localized demand would likely need to first exist in order to induce private investment in neighborhood-serving facilities. The certification of the EIR by the Lead Agency and the approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination with regards to the timing of general and specialty commercial development.

◊ **"Industrial," "manufacturing," and "heavy commercial" uses**. As authorized under the proposed LCRSP, certain types of "industrial," "manufacturing," and "heavy commercial" uses would be permitted or conditionally permitted within the "Village Center Commercial (VC)" and/or "General Warehousing Overlay." The terms "industrial," "manufacturing," and "heavy commercial" are not, however, specifically defined in either the City Municipal Code or the proposed LCRSP, other than through a listing of those permitted, conditionally permitted, or prohibited uses. Any short listing of select land uses cannot, however, be construed as being inclusive of all uses that could potentially be so categorized.

Additionally, by referring to a use as "heavy," by inference, other undefined uses could then be categorized as "light" or "medium." Since the proposed LCRSP also conditionally authorizes unspecified "other principal, accessory or temporary use[s]," the absence of any clear definitions as to the categorization of broad categories of land uses makes ambiguous the full extent of those uses and potentially creates, over the life of the project, subjectivity in the plan's implementation. The Lead Agency will need to determine whether the lack of those definitions and/or the types and categorization of permitted, conditionally permitted, and prohibited land uses authorized under or prohibited by the proposed LCRSP allows for reasonable or excessive flexibility in the City's interpretation, administration, and enforcement of the proposed specific plan. The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the inclusion or exclusion of industrial, manufacturing, and heavy commercial uses.

◊ **Retention of opportunities for general and specialty commercial uses**. With regards to retail commercial development, available information would appear to support a conversion of some lands designated "Village Center Commercial (VC)" to an alternative land use. Recent studies suggest that the Lytle Creek planned community will support about 332,900 square feet of commercial/neighborhood freestanding retail space and 69,800 square feet of grocery store space. The planned community generates an additional 170,500 square feet of regional/lifestyle and big box space. The regional/lifestyle portion of this demand would be difficult to capture given the community's location and area demographics. Assuming a major portion of the total acreage is developed as retail, demand from the community alone is insufficient to support the full extent of "Village Center Commercial (VC)" acreage and allowable square

footage. Given the planned community's location, most retail tenants will be cautious about locating in non-freeway sites until population levels have increased in the area nearest the community.[26]

When considered in combination with Rosena Ranch (Tract No. 15900) and existing populations located within a two-mile trade area, projections for retail commercial absorption improve. That larger primary trade area will support approximately 635,500 square feet of community/neighborhood and freestanding commercial retail space, including 136,500 square feet of grocery store space, as well as an additional 335,900 square feet of regional/lifestyle and big box space. These projections reflect potential market demand and not necessarily actual opportunities and/or interest.[27]

As proposed, a "General Warehousing Overlay" (GW Overlay) has been superimposed on a number of underlying planning areas (PAs 3, 4, 11, 13, 15, 20, and 78). The GW Overlay allows for general warehousing, distribution center, storage and self-storage, light industrial, manufacturing, heavy commercial, and other similar types of uses. As proposed, other than the total 849,420 square feet of non-residential development authorized under the proposed LCRSP (excluding institutional, educational, recreational, and infrastructure-related uses), no limitations are presently established with regards to: (1) the total maximum on-site square footage of allowable general warehousing, distribution center, storage and self-storage, light industrial, manufacturing, and heavy commercial uses that could be developed on the project site; (2) the total maximum on-site square footage of allowable office and business park, and other similar uses; and/or (3) the total minimum on-site square footage of required general and specialty commercial and other similar neighborhood-serving uses that would need to be developed on the project site.

For every square foot of warehousing, distribution center, storage and self storage, light industrial, manufacturing, heavy commercial, office, business park uses, and other similar uses developed on the project site, one less square foot of general and specialty commercial, and other similar neighborhood-serving uses could then be developed thereupon under the authority of this EIR.

Although office and business park may be less problematic because they increases employment opportunities for near-site residents and would not be expected to be of size that would monopoly the prospects for the retention of other non-residential land uses, nothing in the proposed LCRSP would preclude the entire 849,420 square feet of allowable non-residential uses (excluding institutional, educational, recreational, and infrastructure-related uses) from being developed as general warehousing, distribution center, light industrial, manufacturing, and heavy commercial uses. Should the supply of on-site and near-site general commercial and service-oriented uses fall substantially below the projected on-site demand for those same uses, project residents would then logically need to travel greater distances (to off-site alternatives) for those same

[26]/ Stoffel & Associates, Analysis of Retail Demand and Opportunities for the Lytle Creek Planned Community, Rialto, CA, October 2008 Update p. 19.

[27]/ *Op. Cit.*, Analysis of Retail Demand and Opportunities for the Lytle Creek Planned Community, Rialto, CA, p. 20.

commodities and services. Similarly, with the conversion from a retail-based to a warehousing-type land use, the nature of use-generated traffic, including the types and numbers of vehicles and the travel distances of those vehicles would be expected to change.

In order to ensure the available of sufficient on-site neighborhood-servicing commercial opportunities over the life of the project, the total inventory of warehousing, distribution center, light industrial, manufacturing, heavy commercial and other similar uses may need to be limited to ensure the availability or future availability of general commercial and service-oriented uses. Because it reduces the flexibility now proposed under the Applicant-submitted specific plan, the project's decision makers should determine whether such an action is warranted. The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the retention of opportunities for general and specialty commercial development.

◊ **Additional institutional, education, recreational, and infrastructure-related square footage**. The 849,420 square footage of general and specialty commercial, office, business park, warehousing, distribution center, storage and self storage, light industrial, manufacturing, heavy commercial, and other similar permitted and conditionally permitted uses under the "Village Center Commercial (VC)" district, the "Village Center Commercial Overlay," and/or the "General Warehousing Overlay" is not inclusive of additional non-residential development and other improvements that may be associated with other public, semi-public, and/or private institutional use (e.g., schools and churches), infrastructure improvements (e.g., lift stations), and public, semi-public, and/or private recreational facilities (e.g., recreational centers and golf course clubhouse) that would be authorized on the project site in accordance with the proposed LCRSP.

Although no square footages have been explicitly assigned either by the Applicant or the Lead Agency, institutional, educational, recreational and infrastructure-related uses are addressed either through the assignment of acreages to those uses and/or through the depiction of those facilities and improvements in the proposed LCRSP. The potential environmental impacts attributable to those acreage-based uses and illustrated or described facilities and improvements are addressed in this EIR.

As a result, with regards to those uses, the 849,420 square feet does not constitute an overall "cap" upon all institutional, recreational, and infrastructure-related uses that could be developed on the project site. Since limitations have not been established for the size of school buildings, community and recreational centers, churches, infrastructure improvements, and other public, semi-public, and private facilities, unless otherwise imposed by the Lead Agency, with regards to those uses, facilities, public works, and other improvements, total maximum allowable non-residential square footages for those uses is not established under the proposed LCRSP.

To the extent that procedural and/or environmental issues later arise when certain site user (e.g., churches, educational institutions, and other community

facilities) seek site-specific and use-specific entitlements as to whether those uses are constrained by the 849,420 square foot limitations authorized within the proposed LCRSP, the City's Development Services Director will review each such development proposal on a case-by-case basis and assess conformity to the adopted specific plan and its accompanying CEQA documentation.

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding additional institutional, recreational, and infrastructure-related square footage.

◊ **Alternative equivalent compliance and transfer of development rights**. The proposed LCRSP incorporates built-in flexibility, subject to reasonable regulatory and environmental controls, allowing both internal "transfer of development rights" and "alternative equivalent compliance" and establishing opportunities for and a mechanism to implement land-use variations beyond the strict confines otherwise created through a static planning document.

Should residential development in a specified planning area may not occur with regards to either the number of dwelling units or the residential density assumed, rather than forfeiting the unrealized housing opportunities, from a housing supply perspective, a regional benefit could be realized if provisions were put in place allowing the on-site transference of those unrealized dwelling unit to another on-site planning area that might be better able to physically and realistically accommodate the additional unrealized density.

Under the Applicant's proposed "transfer of development rights" and "alternative equivalent compliance" concepts, subject to the limitations specified in the proposed LCRSP, dwelling units and non-residential (e.g., general and specialty commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar permitted and conditionally permitted uses) square footage could be transferred within and between any planning area in Neighborhoods II and III, provided that the total number of projected AM plus PM daily vehicle trips for Neighborhoods II and III combined do not exceed 12,483 projected vehicle trips. Any transference between neighborhoods and planning areas would need to conform to the following additional standards: (1) grading and landform alteration would substantially comply with that previously approved for the LCRSP; and (2) no new significant environmental impacts, not previously assessed in the EIR would, result from the transfer. Transfer of dwelling units or non-residential square footage within or between neighborhoods and planning areas, when conducted in accordance to the provisions of the LCRSP, would not constitute or require a specific plan amendment.

Similarly, subject to the limitations specified in the proposed LCRSP, dwelling units and non-residential (e.g., general and specialty commercial, office, business park, warehousing, distribution center, storage and self storage, light industrial, and manufacturing, heavy commercial, and other similar permitted and conditionally permitted uses) square footage could be transferred within and between any planning area in Neighborhoods I and IV provided that the total number of projected AM plus PM daily vehicle trips for Neighborhoods I and IV

combined do not exceed 3,853 projected trips. In addition, any transference between neighborhoods and PAs would need to conform to the following additional standards: (1) dwelling units may be transferred between any residentially-designed planning areas in Neighborhoods I and IV; (2) dwelling units may be transferred between any residentially-designated planning areas and any planning area with a "Single-Family Residential Overlay" and/or "High Density Residential Overlay" in Neighborhoods I and IV; (3) square footage may be transferred between any "Village Center Commercial (VC)" district in Neighborhoods I and IV; and (4) square footage may be transferred between any "Village Center Commercial (VC)" district in Neighborhoods I and IV and any planning area in Neighborhoods I and IV with a Village Center Commercial Overlay" or "General Warehousing Overlay."

While representing a reasonable approach to accommodate authorized development, encourage sound site planning, allow for creativity and innovation in design, and ensure that environmental parameters are not exceeded, appropriate implementing and development monitoring mechanisms need to be put into place so that the stated criteria and required standards are fully satisfied and that appropriate records are maintained so that any resulting changes in the current plan of development are fully accounted for and considered as development proceeds. Although the proposed LCRSP outlines a broad mechanism for implementation, the City's decision makers and administrators need to ensure that procedures are in place prior to any requests for "transfer of development rights" and/or "alternative equivalent compliance."

Although those mechanisms are administrative in nature and outside the CEQA process, general information concerning the implementation of those actions is outlined in Appendix II-A (Traffic Impact Analysis) herein. The City will need to determine whether the approach outlined therein or an alternative set of procedures would need to be developed to allow for the implementation of any such transfer. Once finalized, those implementation procedures will likely be incorporated into the adopted LCRSP and/or become a component of the Lead Agency's adopted "mitigation monitoring and reporting program" (MRMP).

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the application of the proposed "transfer of development rights" and "alternative equivalent compliance" concepts.

◊ **Forfeiture of underlying land uses**. As indicated in the proposed LCRSP, the following overlay districts would be created, "Single Family Residential Overlay" (SRF Overlay), "High Density Residential Overlay" (HDR Overlay), "Village Center Commercial Overlay" (VC Overlay), "General Warehousing Overlay" (GW Overlay), and "Park Overlay" (PA 72 only).[28] In lieu of the underlying land-use designation, authorized land uses allowable in an overlay district may be

[28]/ Although each of the five overlay districts encompass entire planning areas, to the extent that a subsequent "B" level subdivision map were to create separate parcels and assign each a separate land-use designation, unless otherwise precluded by the Lead Agency, there is nothing in the proposed LCRSP that would preclude an overlay from encompassing only a portion of an assigned planning areas, such that multiple (albeit geographically separated) uses could be developed therein.

developed in those planning areas possessing an overlay designation. From an environmental perspective, with the possible exception of the proposed recreational opportunities identified as an underlying (not overtopping) land use, the resulting land-use changes can be addressed through the imposition of those mitigation measures identified herein.

With regards to the potential forfeiture of existing and proposed on-site recreational opportunities, including the El Rancho Verde Royal Vista Golf Course (PAs 87, 95, 99, and 101), the "active-adult recreational center" (PA 86) in Neighborhood II, and a "private recreational center" (PA 40) and a portion of the "Grand Paseo" area (PA 37) in Neighborhood III, unless otherwise conditioned, there exists no assurance that the underlying land use constitutes the use which will be actually developed.[29]

In addition, PA 72 contains a "Park Overlay." This land may be developed with a mixture of community and neighborhood park elements. Because the land-use plan designates this area as an "overlay" rather than the underlying land use, unless otherwise specified in the project's development agreement and/or included in the subsequent "B" level subdivision map, there exists no assurance that a 35.7-acres community park will be developed within PA 72. If so developed, unknown are the implications of that development on the Applicant's provision of other neighborhood parks and/or other recreational facilities within the proposed LCRSP.

Although not included as a mitigation measure herein because the potential impact does not elevate to a level of significance based on the identified threshold criteria and because "parks, paseos, greenbelts and playgrounds" and "tennis clubs, golf courses, and similar recreational uses" are listed as permitted use in all but "Open Space (OS)" districts, to the extent that the on-site need for recreational opportunities is not diminished by the implementation of the overlay, has not been already fulfilled through the dedication of real property and/or the payment of park in-lieu fees, and/or is not concurrently proposed to be provided at an alternative site, the Lead Agency has the ability to condition the development of any planning area possessing an "Open Space/Recreation (OS/R)" or "Open Space/Joint Use (OS/JU)" designation, in accordance with the alternative provisions of any overlay district, upon the Applicant's demonstration that existing, planned, or proposed recreational opportunities within the affected neighborhood will not be substantially reduced and/or will be accommodated elsewhere within that neighborhood. The certification of the EIR by the Lead Agency and the approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the need for additional mitigation measures and/or conditions of approval to preserve and/or retain any underlying land use.

[29]/ The Lead Agency acknowledges that general plan and specific plan policies and zoning regulations do not constitute assurances that any designated or described land use will actually be developed. Other factors, including market demands and economic and financing conditions, play significant roles relative to whether any project will actually be built. Adoption of the proposed specific plan or any alternatives therein does not constitute assurance that the development plan formulated by the Applicant and/or approved by the Lead Agency will come to fruition.

- **Open space and conservation-related issues**. The following open space and conservation-related issues have been identified:

  - ◊ **Eligibility of "private open space" to receive Quimby Act credit**. As indicated in the proposed LCRSP: (1) private recreation centers will be constructed in portions of PAs 40, 53, and 64 for use by Neighborhood III residents; these recreation centers are planned to be privately owned and maintained by a homeowners' association (HOA) or other entity acceptable to the City; (2) residents of Neighborhood II will have their own recreational facilities designed specifically for active-adult users; the active-adult recreation center (PA 86) is planned to be privately owned and maintained by a HOA or other entity acceptable to the City; and (3) at the discretion of the Applicant, small, private recreation centers (consisting of a swimming pool, restrooms, drinking fountain, and/or other recreational amenities) may be constructed; if provided, these recreation centers shall be privately owned and maintained by a HOA or other entity acceptable to the City.

    The Quimby Act does not mandate that the City grant open space credit for "private open space" in common interest developments. It is within the discretion of the City to determine whether or not or under what circumstances credit should be given (Branciforte Heights LLC v. City of Santa Cruz [2006]). At its discretion, the City will need to determine whether the proposed "active-adult recreation center" (PA 86) and/or the "private recreational centers" (PAs 40, 53, and 64) may or may not be eligible for Quimby Act "credit."

    Section 17.23.140 (Credit for Special Facilities) in Chapter 17.23 (Park and Recreation Facilities Dedication) in the City Municipal Code contains certain provisions allowing for the receipt of partial "credit" for special facilities (e.g., golf course, lake, or the like). Although the El Rancho Verde Royal Vista Golf Course constitutes an existing facility, under the proposed LCRSP, the Applicant intends to reconfigure and enlarge that existing facility from approximately 183 to 207 acres. At the City's discretion, as authorized under Section 17.23.140 (Credit for Special Facilities), the additional approximately 24 acres of expanded golf course-related use may be eligible to receive a 50 percent Quimby Act "credit" of about 12 acres.

    Additionally, the City will need to determine whether those planning areas proposed as "Open Space/Recreation (OS/R)" which are located within the SCE right-of-way and beneath the 500-kV transmission line (PAs 32, 34, and 26) are eligible for and should receive Quimby Act "credit" and whether all or a portion of the reconfigured El Rancho Verde Royal Vista Golf Course (PAs 87, 95, 97, 99, 101) and, if so, to what extent (Section 17.23.140, City Municipal Code). The certification of the EIR by the Lead Agency and the approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding Quimby Act compliance.

  - ◊ **Ownership, management, and maintenance of mitigation lands**. In recognition of project-related impacts upon sensitive plant communities and protected wildlife species, a number of mitigation measures have been nominated by the Applicant and/or formulated by the Lead Agency specifying that

compensatory acreage be set-aside, acquired, dedicated, enhanced, and/or restored for habitat conservation purposes. Although the Applicant remains responsible for those actions, mitigation measures and/or conditions of approval have not specified the party or parties that will hold title to or be responsible for the long-term maintenance and management of those lands.

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the ownership, management, and maintenance of mitigation lands.

◊ **Preservation of open space lands**. As proposed, in the vicinity of Lytle Creek, the project would retain and contribute an additional 612.5 acres of natural open space to be preserved in perpetuity. Of that, 444.8 acres are immediately adjacent to the existing 216.7-acre "SBKR Conservation Area." The proposed LCRSP does not definitively specify the party or parties that would hold title to these open space lands and does not indicate what form of instrumentation will be used to ensure that open space lands are, in fact, so preserved.

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the preservation of open space lands.

◊ **Schools and adjoining joint-use sites and facilities**. Within Neighborhood III, a future elementary school site (PA 49) and a combined elementary/middle school site (PA 69) have been proposed. As proposed, under the terms and provisions of a school facilities funding and mitigation agreement, the two sites would be dedicated to the Rialto Unified School District (RUSD) for school purposes. The City has, however, neither been provided any evidence of the RUSD's conditional acceptance of those sites nor received evidence that the number, size, configuration, and location of those future school sites conforms to school district siting criteria.

In addition, within Neighborhood III (PAs 48 and 74), two "joint-use" school and park facilities are proposed, linking public park areas to proposed adjoining school sites. These joint-use areas are anticipated to contain athletic fields, playgrounds, and informal play areas which will be available to the general public when school is not in session. The size of these areas, the precise nature of the proposed improvements, and the operational parameters governing each site's joint use will be determined in consultation with the Applicant, the City, the RUSD[30] and, to the extent applicable, with the San Bernardino City Unified School District (SBCUSD) and/or the Fontana Unified School District (FUSD).

Should the RUSD independently determine that one or both of the two proposed future school sites is inadequately size to accommodate an appropriately size school, the planning areas comprising the school site would need to increase,

[30]/ Under the proposed LCRSP, the Applicant retains the right and ability to develop all or portions of the joint-use sites in accordance with the proposed "Single-Family Density Residential 1, 2, and 3 (SDF-1, 2, 3)" standards should the RUSD or another benefiting school district elect to reduce the amount of land required for the joint-use park or should the RUSD elect not to construct the adjacent school site.

with a corresponding decrease in the size of either the adjoining "joint-use" area or other abutting planning area. As a result, issues to be resolved include, but may not be limited to: (1) adequacy of one of both of the two proposed school sites to physically and spatially accommodate new schools; (2) minimum acreage requirements for those school sites if developed on the project site (PAs 46 and 69) and any corresponding impacts on the acreage of the adjoining "joint-use" areas (PAs 48 and 74) and/or other abutting planning areas; (3) nature of any joint-use agreement between the City and the RUSD; (4) nature and timing of the provision of those community recreational facilities to be constructed with those "joint-use" areas which will be subject to the joint-use agreement; and (5) applicability of joint-use facilities to satisfy the Applicant's Quimby Act and/or school impact fee requirements and the manner in which such facilities are accounted for in the quantification and satisfaction of those obligations.

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding schools and joint-use sites and facilities.

- **Infrastructure-related issues**. The following infrastructure-related issues have been identified:

  - ◊ **Phasing of infrastructure improvements**. With regards to those infrastructure systems identified in the proposed LCRSP or described in this EIR where improvements are required or proposed, the Applicant has outlined a phasing plan for the construction of those facilities. Generally, except where otherwise noted, the Applicant proposes to initiate each requisite or proposed improvement at the time the underlying "B" level tentative subdivision map is approved and implemented, as dictated by the City-imposed conditions of approval for those underlying tentative maps. Certain infrastructure improvements may be required prior to that time and may need to proceed independent of the approval of later subdivision maps. Additionally, the City may desire certain infrastructure improvements to be constructed and in-place as a precursor to the approval of individual "B" level subdivision maps. As a result, with regards to the infrastructure phasing plan, the Lead Agency may require a greater level of certainty than that presently outlined in the proposed LCRSP.

    At the specific plan level, the infrastructure systems identified in the proposed LCRSP are intended to be conceptual in nature and may be subject to change and refinement as those development activities contemplated in the proposed LCRSP proceed. At the project-level, the Lead Agency will determine whether individual infrastructure systems and/or components to those systems are consistent with the conceptual plans presented therein.

    The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the phasing of infrastructure improvements.

  - ◊ **Provision of fire services to portions of Neighborhood I**.[31] The Rialto Fire Department notes that the area comprising Neighborhood I is a potential concern

[31]/ This "issue" may also be applicable to or could be extended to encompass Neighborhood IV.

for emergency response time and coverage. A plan for fire protection and services has not been developed by the RFD and the RFD and the SBCFD have not met to formalize and finalize plans and/or agreements for fire service delivery to that area. In discussions between the Applicant and representatives of the RFP, four potential options have been identified with regards to the provision of fire protection and paramedic services to the project site. Each of those options is briefly described below.

- **Option 1 (Full annexation and City provides fire protection services)**. Under this option, the geographic area comprising the proposed LCRSP would be annexed into the City and the RFP would provide fire protection services for the full development. The RFP has indicated that an additional Engine Company and Medic Ambulance would be required. In addition, a new fire station or alternative RFP-accepted facility would be needed to serve the area.

- **Option 2 (Full annexation and City and County share fire protection services)**. Under this option, the geographic area comprising the proposed LCRSP would be annexed into the City, the County would provide fire protection services to that portion of Neighborhoods I and IV located to the north of the I-15 Freeway from a new fire station planned in that area (i.e., County Fire Station No. 81), and the City would provide fire protection services for the remainder of the proposed LCRSP. Under this option, the SBCFD would need to be reimbursed by the City for their estimated operations and maintenance costs (or prorated portion thereof) for providing fire protection services to Neighborhoods I and IV. In this case, the RFD has identified a need for an additional Medic Ambulance that would operate out of City Fire Station No. 4. In lieu of the additional Medic Ambulance, other comparable improvements may also exist and may be subsequently identified by the RFD.

- **Option 3 (Partial annexation and City and County provide fire protection service within their respective jurisdictions)**. Under this option, the area located to the north of the I-15 Freeway would not be annexed into the City and the City and the County would provide fire protection services for their respective jurisdictions. Under this option, the SBCFD would not need to be reimbursed by the City for their estimated operations and maintenance costs (or prorated portion thereof) for providing fire protection services to those areas. Since Neighborhoods I and IV would not be annexed to the City, there would be no transfer of the underlying fire protection fire protection property tax to the Lead Agency. In this case, the RFD has identified a need for an additional Medic Ambulance that would operate out of City Fire Station No. 4.[32] In lieu of the additional Medic Ambulance, other comparable improvements may also exist and may be subsequently identified by the RFD.

[32]/ Memorandum from Stan Hoffman, President, Stanley R. Hoffman Associates to Jim Bruce, Deputy Fire Chief, City of Rialto Fire Department (Subject: Lytle Creek Annexation Fire Protection Service Alternatives), June 12, 2008, p. 2.

- **Option 4 (Pay per call plan)**. Under this option, the RFD would maintain primary service to Neighborhoods I and IV and would develop a pay per call plan for reimbursement to the County for fire protection services provided to those neighborhoods.

Since each of these options would allow for the provision of fire protection services to Neighborhoods I and IV, from an environmental perspective, any of the three alternatives could be implemented and, in combination with other mitigation measures identified herein, reduce fire protection and emergency service impacts to a less-than-significant level. However, since each option bears separate capital, operational, and maintenance costs and may require the execution of a memorandum of understanding and cooperative fire operations agreement or similar instrument between the City and the County, the CEQA process, of which this EIR is a part, provides an opportunity to bring the parties together, solicit input from stakeholders, and assess the merits, costs, and feasibility of each service option. The certification of the EIR by the Lead Agency and the approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination with regards to the provision of fire protection and emergency services to those portions of the project site not presently served by the RFD.

◊ **San Bernardino County Fire Department Station No. 81**. From existing City and County facilities, the existing emergency response times to Neighborhoods I and IV are greater than the planning standards utilized by either the City or the County for effective fire and emergency medical response. As conditioned by the County, the developers of the "Lytle Creek North Planned Development Project" (LCNPD or Tract 15900), now Rosena Ranch, located in unincorporated San Bernardino County, are required to construct San Bernardino County Fire Department (SBCFD) Station 81, to be built adjacent to Glen Helen Parkway prior to the "issuance of a certificate of occupancy for the 1000th detached single family residential unit in the [LCNPD] project."

Since the County-approved LCNPD constitutes an independent project, the timing of which cannot be determined, the proposed project's need for SBCFD Station 81 could predate the separate development of that facility (under the provisions of the LCNPD). Should the RFD and/or the SBCFD determine that Station 81 needs to be operational prior to the time that would otherwise occur in conformance with the conditions of approval for the LCNPD, the Applicant may need to: (1) accept responsibility for the construction of that new fire station and advance its construction and operation; (2) delay or restrict development of the proposed LCRSP pending the construction and operation of that facility by others; and/or (3) identify and implement an alternative means of satisfactorily addressing any fire safety concerns raised by the RFD and/or SBCFD.

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the need for, timing of, and construction of County Fire Station No 81.

◊ **Public streets in gated communities**. As proposed, Neighborhood II would be constructed as a gated, age-restricted community. Access restrictions would logically limit public accessibility to that neighborhood and any "public streets" located therein. The Applicant has indicated that none of the streets proposed within the LCRSP boundaries, including those in Neighborhood II, will be constructed as "private streets."

As authorized under Section 37359 of the California Government Code: "Unless otherwise provided by law, the legislative body having control of any property owned or controlled by the city may at any time withdraw the property from the personal access and use of members of the public, or limit the access or use in area or time or in any other reasonable manner deemed necessary."

The courts (Citizens Against Gated Enclaves v. Whitley Heights Civic Assn.) have, however, identified specific policy reasons why public streets cannot be closed, stating that "streets of a city belong to the people of the state, and every citizen of the state has a right to the use thereof, subject to legislative control." The courts found that it is the state which has "sovereign power" over streets, even though a municipality make may "reasonable regulations" concerning traffic on the streets. The court explained that, if the streets are "public," it makes no sense to classify them as public when it comes to the expenditure of public funds, but classify them as private when it comes to public use. The above cited case is identified for informational purposes only and is not assumed to be presumptive of the Lead Agency's ability to create public streets or other public facilities within a gated community and/or other access-restricted area.

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding public streets in gated communities.

▪ **Other issues**. The following additional issues have been identified:

◊ **Annexation, reorganization, changes in service areas and organizations**. The annexation or phased annexation of the project site to the City will result in certain changes to existing service areas and the agencies that both now and in the future will provide necessary services to the subject property (e.g., police and fire protection). Resulting changes to existing service areas either increase or decrease the cost of providing services to the affected organization. This EIR does not include a fiscal impact analysis relative to the cost and revenue implications of the proposed project on the City, the County, or the service providers operating therein.[33] The implications of the project site's annexation, including any gained, lost, or deferred revenues to individual taxing entities likely

[33]/ The courts, in Sierra Club v. County of Napa (2004), have concluded that CEQA does not require that an EIR evaluate economic feasibility. In that case, the court held that, when agency decision makers decide whether to approve a project, the decision makers are entitled to weigh economic information about the feasibility of alternatives and mitigation measures that is noted anywhere in the record, and such information is not required to be included in the EIR. The court allowed economic feasibility determinations to be based on the entire record. This case also affirms that an EIR evaluates alternatives that are initially determined to be "potentially feasible." Later on, when the project comes before the decision makers, the ultimate determination of what is feasible is based on the entire record and decision makers may reject as infeasible alternatives that were earlier determined to be potentially feasible.

constitute a non-environmental issue to be addressed and resolved by those parties independent of the CEQA process.

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the annexation, reorganization, and changes in service areas and organizations.

◊ **Application of specific City Municipal Code standards**. As stated, in part, in Section 18.59.030 (Design Standards) of the City Municipal Code, specified transportation control measures (TCMs) shall be incorporated into all new and revised non-residential and multi-family developments of ten or more units. As indicated therein, new residential development of 500 or more units shall provide telecommuting facilities or contribute toward development of a telecommuting center. As proposed, only three planning areas (PAs 20, 83, and 93) include 500 or more dwelling units. However, because the proposed project collectively includes a total of 8,407 dwelling units, this code provision could be interpreted as applicable to the LCRSP. Currently, no telecommuting facilities have been specifically identified on the project site and no Citywide plans have been formulated for the development of one or more telecommuting centers within the City.

The Lead Agency's certification of the EIR and approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the application of specific City Municipal Code standards.

◊ **"Affordable housing" requirements**. Under CEQA, economic or social effects of a proposed project shall not be treated as significant effects on the environment (14 CCR 15131). Additionally, under CEQA, the construction, conversion, or use of "lower-income housing projects" consisting of not more than 45 dwelling units are deemed to be "statutorily exempt" when the project is consistent with the local jurisdiction's general plan (14 CCR 15280). As such, from a CEQA perspective, the existence of or the planned development of housing, not its cost or the income-strata of its occupants, constitute an appropriate environmentally-based area of inquiry. Although "affordable housing" is discussed herein, neither the proposed LCRSP nor this EIR imposes specific obligations upon the Applicant with regards to the cost or affordability of housing to be constructed within the proposed LCRSP boundaries. Additionally, this EIR does not link the cost of housing and/or the income levels of project residents with either an increased or decreased demand on transportation and/or on other public services and facilities.

The adoption of the proposed LCRSP, if so adopted, would not preclude the Applicant from seeking "regulatory concessions and incentives to significantly reduce housing development costs and thereby facilitate the development of affordable housing, including housing for elderly persons and families, as defined by Section 50067 of the Health and Safety Code" (Section 65913[a], California Government Code). The certification of the EIR by the Lead Agency and the approval or conditional approval of the proposed project, if so adopted,

constitutes evidence of the Lead Agency's independent determination with regards to affordable housing requirements.

◊ **Inclusion of off-site properties and participation of off-site property owners**. With regards to the geographic area examined in this EIR, in addition to those "on-site" areas within the boundaries of the proposed LCRSP are other "off-site" areas that may be directly or indirectly impacted by the proposed project but which would not be subject to proposed LCRSP and which are included herein. Those "off-site property owners" listed in Table ES-2 (Agencies and Organizations Associated with the Proposed Project) are, to the best of the Lead Agency's knowledge, the owners of those "off-site" properties. None of those "off-site property owners" are signatories to those development applications which have been submitted to the Lead Agency by the Applicant. Although the Lead Agency has reasonable assurance that each of the identified parties have received notice of the proposed action, the Lead Agency cannot attest to either their consent in the inclusion of their properties herein and/or any contemplated use of those properties by the Applicant. Because the City would not exercise eminent domain authority to secure those properties, to the extent that a voluntary agreement cannot be negotiated between those owners and the Applicant, no contemplated use would likely come to fruition. Similarly, any actions by the Lead Agency with regards to those "off-site" properties may not be binding on those parties based on their involuntary participation. The certification of the EIR by the Lead Agency and the approval or conditional approval of the proposed project, if so adopted, constitutes evidence of the Lead Agency's independent determination regarding the potential inclusion of and possible project-related use of those properties.

The following additional items do not constitute "issues to be resolved" but are nonetheless presented herein for informational purposes only. Based on local, regional, and national economic conditions, including the condition of existing financial markets, even in the event that the proposed LCRSP were to be approved, it is uncertain whether the project could proceed and, if it were to proceed, whether the Applicant's schedule is both realistic and attainable. It is likely that residential market demand is less robust than the Applicant may assume and/or that financing for construction and/or home purchase may not be readily available. Similarly, notwithstanding the Applicant's intent, absent any existing commitments from end users and Lead Agency-imposed conditions, the marketplace will dictate the ultimate nature of the non-residential (including general and specialty commercial, office and business park, warehousing and distribution center, light industrial and manufacturing, and heavy commercial) land uses that will or will not be developed on the project site.

Should the proposed project's implementation schedule be extended beyond a 20-year horizon period, the Lead Agency would not anticipated that identified environmental impacts would be substantially greater than assumed herein, impacts determined to be less than significant would then elevate to a level of significance, and/or new significant environmental impacts would likely manifest from an elongated development schedule.

Although not consequential to this environmental analysis, the ultimate builder/developer(s) of the project site is likely unknown and, in all probability, will include parties separate and distinct

from the Applicant.[34] As such, the term "Applicant," as used herein, is intended to be inclusive of the current project proponent, as well as the contractors and subcontractors required for the construction of the proposed project and subsequent holders of real property interests in the subject property, other than the owners of those residential and non-residential properties that are now planned on the project site and those governmental agencies that presently own or may become subsequent holders of real property interests to properties located on the project site in the future. Where applicable and unless otherwise specified, the mitigation measures recommended herein are intended to be binding and enforceable on each of those parties.

Agencies/Organizations Associated with the Proposed Project

Presented in Table ES-2 (Agencies and Organizations Associated with the Proposed Project) is a listing of those agencies, organizations, and individuals associated with the proposed project including, but not limited to: (1) the Lead Agency and the Applicant; (2) State, regional, and local responsible agencies that will or that may be required to take one or more discretionary actions concerning the proposed project and who may be required to utilize the Lead Agency's CEQA documentation as part of their own independent deliberations; (3) trustee agencies having jurisdiction by law over those natural resources affected by the proposed project[35]; and (4) federal agencies from whom discretionary permits or approval will or may be required and who will or may elect to utilize the Lead Agency's CEQA documentation as the environmental basis for those discretionary actions.

Summary of Impacts and Mitigation Measures

Presented in Table ES-3 (Summary of Environmental Impacts and Level of Significance) is a summary of each of the environmental impacts identified by the Lead Agency, a listing of those mitigation measures recommended by the Lead Agency in response to the identified environmental effects, and the Lead Agency's preliminary conclusions regarding both the pre-mitigated and post-mitigated level of significance of each of the identified environmental effects.[36]

Draft Mitigation Reporting and Monitoring Program

The mitigation measures identified in this EIR and referenced in Table ES-3 (Summary of Environmental Impacts) are listed in Table ES-4 (Draft Mitigation Reporting and Monitoring Program). Presented therein is a draft mitigation reporting and monitoring program (MRMP) demonstrating the manner in which each of those recommended mitigation measures would, if

[34]/ Should the proposed LCRSP proceed in a manner similar to the County-approved LCNPD, once entitled, the Lead Agency would anticipate that the project proponent would convey some or all of the project proponent's interests in the project to one or more master builders and/or convey some or all of the project proponent's interests to individual planning areas, as created through the recordation of the proposed "A" level subdivision map and/or later "B" level subdivision maps, to one or more merchant builders. That conveyance, should it occur, would neither materially alter the proposed project nor introduce new significant environmental impacts not otherwise addressed herein since applicable development standards contained in the proposed LCRSP and applicable mitigation measures recommended herein would become binding obligations on subsequent holders of real property interests.

[35]/ As defined in Section 21070 of the PRC: "'Trustee agency' means a State agency that has jurisdiction by law over natural resources affected by a project, that are held in trust for the people of the State of California."

[36]/ Referencing Kings County Farm Bureau v. City of Hansford (Fifth District, 1990): "Although the lead agency has the authority to employ a private entity to prepare an environmental impact report, and those entities or persons may perform the functions necessary to meet the requirements of CEQA [Citation], the decisionmaking body, not the report's preparer, is ultimately responsible for determining whether the proposed project will have a significant impact upon the local environment."

so adopted, be implemented. The recommended mitigation measures and the Lead Agency's draft MRMP remain subject to change based on comments received on the EIR and the further technical analysis of the Lead Agency.

Table ES-2
AGENCIES AND ORGANIZATIONS ASSOCIATED WITH THE PROPOSED PROJECT

Association	Contact
Lead Agency	City of Rialto - Development Services Department Attn: Mike Story, Director Gina Gibson, Senior Planner 150 South Palm Avenue Rialto, California 92376 (909) 421-7246
State Clearinghouse	Governor's Office of Planning and Research - State Clearinghouse Attn: Terry Roberts, State Clearinghouse Director 1400 Tenth Street, Room 222 (P.O. Box 3044) Sacramento, California 95814 (Sacramento, California 95812-3044) (916) 445-0613
Applicant	Lytle Development Joint Venture III Attn: Kevin Lynch, Project Manager 2050 Main Street, Suite 252 Irvine, California 92614 (949) 313-5800
Potential Responsible Agencies	Local Agency Formation Commission, San Bernardino County Attn: Kathleen Rollings-McDonald, Executive Officer 175 West Fifth Street, Second Floor San Bernardino, California 92415-0490 (909) 387-5866
	California Department of Transportation Local Development-Intergovernmental Review Attn: Terri Pencovic, LD-IGR Program Manager 1120 N Street, MS-32 (PO Box 942874, MS-32) Sacramento, California 95814 (Sacramento, California 94274-0001) (916) 653-1067
	California Department of Transportation, District 8 Office of LD-IGR/CEQA Review Attn: Dan Kopulsky, Chief 464 West Fourth Street, Sixth Floor, MS 722 San Bernardino, California 92401-1400 (909) 383-4557
	California Department of Fish and Game Inland Deserts Region, Region 6 Attn: Curt Taucher, Regional Manager 3602 Inland Empire Boulevard, Suite C-220 Ontario, California 91764 (562) 596-4212
	State Water Resources Control Board Attn: Dorothy Rice, Executive Director 1001 I Street Sacramento, California 95814 (916) 341-5250
	Regional Water Quality Control Board, Santa Ana Region (8) Attn: Gerald J. Thibeault, Executive Officer 3737 Main Street, Suite 500 Riverside, California 92501-3339 (951) 782-4130

Table ES-2 (Continued)
AGENCIES AND ORGANIZATIONS ASSOCIATED WITH THE PROPOSED PROJECT

Association	Contact
Potential Responsible Agencies (Continued)	California Department of Conservation Attn: Bridgett Luther, Director 801 K Street, MS 24-01 Sacramento, California 95814 (916) 322-1080
	California Department of Parks and Recreation Office of Historic Preservation Attn: Milford Wayne Donaldson, State Historic Preservation Officer 1416 9th Street, Room 1442 Sacramento, California 95814 (916) 653-6624
	California Public Utilities Commission Attn: Steve Larson, Executive Director 505 Van Ness Avenue San Francisco, California 94102 (415) 703-2782
	South Coast Air Quality Management District Attn: Barry R. Wallerstein, Executive Officer 21865 Copley Drive Diamond Bar, California 91765 (909) 396-2000
	County of San Bernardino - Land Use Services Department Attn: Julie Rynerson Rock, Director 385 N. Arrowhead Avenue, Third Floor San Bernardino, California 92415-0182 (909) 387-3223
	County of San Bernardino – Department of Public Works Attn: Mazin Kasey, Deputy Director 825 E. Third Street San Bernardino, California 92415 (909) 387-7916
	West Valley Water District Attn: Anthony W. Araiza, General Manager 855 W. Baseline Rialto, California 92377 (909) 875-1804
	Rialto Unified School District Attn: Edna D. Herring, Superintendent 182 East Walnut Avenue Rialto, California 92376-3598 (909) 820-7700
	San Bernardino City Unified School District Attn: Dr. Arturo Delgado, Superintendent 777 North F Street San Bernardino, California 92410 (909) 381-1240
	Fontana Unified School District Attn: Jane D. Smith, Superintendent of Schools 9680 Citrus Avenue Fontana, California 92335 (909) 357-5000

Table ES-2 (Continued)
AGENCIES AND ORGANIZATIONS ASSOCIATED WITH THE PROPOSED PROJECT

Association	Contact
Potential Federal Agencies	United States Army Corps of Engineers, Los Angeles District Office Attn: Col. Alex C. Dornstauder, District Commander P.O. Box 532711 Los Angeles, California 90053-2325 (213) 452-3908
	United States Fish and Wildlife Service Carlsbad Fish & Wildlife Office Attn: Jim Bartel, Field Supervisor 6010 Hidden Valley Road, Suite 101 Carlsbad, California 92011 (760) 930-0168
	United States Department of Agriculture United States Forest Service Angeles National Forest - Supervisor's Office Attn: Jody Noiron, Forest Supervisor 701 N. Santa Anita Avenue Arcadia, California 91006 (626) 574-5200
	Federal Emergency Management Agency Office of the Director Attn: Nancy Ward, Acting Administrator 500 C Street S.W. Washington, D.C. 20472 (202) 646-2500
Transportation Planning Organizations	Southern California Association of Governments (Main Office) Attn: IGR Office 818 W. Seventh Street, 12th Floor Los Angeles, California 90017 (213) 236-1800
	Southern California Association of Governments (Inland Office) Attn: IGR Office 3600 Lime Street, Suite 216 Riverside, California 92501 (951) 784-1513
	San Bernardino Associated Governments Attn: Deborah Robinson Barmack, Executive Director 1170 W. 3rd Street, 2nd Floor San Bernardino, California 92410-1715 (909) 884-8276
Potential Trustee Agency	California Department of Fish and Game Inland Deserts Region, Region 6 Attn: Curt Taucher, Regional Manager 3602 Inland Empire Boulevard, Suite C-220 Ontario, California 91764 (562) 596-4212
	California State Lands Commission Attn: Paul D. Thayer, Executive Officer 100 Howe Avenue, Suite 100 South Sacramento, California 95825-8202 (916) 574-1800

Table ES-2 (Continued)
AGENCIES AND ORGANIZATIONS ASSOCIATED WITH THE PROPOSED PROJECT

Association	Contact
Notification Requirements	Native American Heritage Commission Attn: Larry Myers, Executive Secretary 915 Capitol Mall, Room 364 Sacramento, California 95814 (916) 653-4082
	State Mining and Geology Board Attn: Stephen M. Testa, Executive Officer 801 K Street, Suite 2015 Sacramento, California 95814 (916) 322-1082
Tribal Organizations	San Manuel Band of Mission Indians Attn: Henry Duro, Chairperson 26569 Community Center Drive Highland, California 92346 (909) 864-8933
	San Manuel Band of Mission Indians Attn: Ann Brierty, Environmental Department 101 Pure Water Lane Highland, California 92346 (909) 863-5899
	Morongo Band of Mission Indians Attn: Britt W. Wilson, Cultural Resource Coordinator 11581 Potrero Road Banning, California 92220 (951) 849-8807
	Chemehuevi Reservation Attn: Charles Wood, Chairperson P.O. Box 1976 Chemehuevi Valley, California 92363 (760) 858-4301
	Fort Mojave Indian Tribe Attn: Nora McDowell, Chairperson 500 Merriman Avenue Needles, California 92363 (760) 629-4591
	Fort Mojave Indian Tribe Attn: Esadora Evanston, Environmental Coordinator 500 Merriman Avenue Needles, California 92363 (760) 326-1112
	San Fernando Band of Mission Indians Attn: John Valenzuela, Chairperson P.O. Box 221838 Newhall, California 91322 (661) 753-9833
	Serrano Band of Indians Attn: Goldie Walker 6588 Valeria Drive Highland, California 92346 (909) 862-9883

Table ES-2 (Continued)
AGENCIES AND ORGANIZATIONS ASSOCIATED WITH THE PROPOSED PROJECT

Association	Contact
On-Site Property/Easement Owners[1]	California Department of Transportation, District 8 Office of LD-IGR/CEQA Review Attn: Dan Kopulsky, Chief 464 West Fourth Street, Sixth Floor, MS 722 San Bernardino, California 92401-1400 (909) 383-4557
	Calnev Pipeline Company Attn: Mark Jensen 1100 Town and Country Road Orange, California 92868
	Southern California Edison Company Attn: Regulatory Affairs 2244 Walnut Grove Avenue Rosemead, California 91770
	Southern California Gas Company Attn: Richard Moeder, Geographic Services Manager 555 W. 5th Street, GT10G2 Los Angeles, California 90013
Off-Site Property Owners[1]	California, Department of Transportation, District 8 Attn: Raymond W. Wolfe, District Director 464 W. 4th Street San Bernardino, California 92402 (909) 383-4055
	County of San Bernardino - Division of Public Works/Flood Control Attn: Vana Olson, Director 825 E. 3rd Street San Bernardino, California 92415 (909) 387-7906
	Sunbelt Acquisitions Attn: General Manager P.O. Box 4120 Ontario, California 91761
	Storkson Family Trust Attn: Trustee 2828 Lytle Creek Road Fontana, California 92335
	BBC Properties, LLC Attn: General Manager 3075 Cranbrook Court La Jolla, California 92037

Notes:
1. Included in this EIR are those "on-site" lands owned or controlled by the Applicant, by public utilities, by public agencies, or by private parties and included within the boundaries of the proposed LCRSP and additional "off-site" areas which are included within the geographic area examined in this EIR because those areas may be directly or indirectly impacted by the proposed project's construction and/or operation but which would not be subject to proposed LCRSP. Those "off-site property owners" identified herein are, to the best of the Lead Agency's knowledge, the owners of those "off-site" properties. Although not subject to the proposed LCRSP, those parties nonetheless may have a material interest in the proposed project and the information presented in this EIR.

Source: City of Rialto

Table ES-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Land Use			
Impact 1-1. The project will involve a variety of residential, non-residential, commercial/institutional, and open space uses. Based on operational differences, the on-site placement of residential units adjacent to other non-residential uses could result in land-use compatibility conflicts resulting in significant air quality, noise, and traffic impacts affecting local residents.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 1-1	Less than Significant
Impact 1-2. The project site presently contains a number of natural gas and liquid fuel transmission pipelines. Damage to those transmission pipelines and/or the release of their contents, whether through natural events or other circumstances, could cause or contribute to public health and safety hazards and thereby create land-use compatibility conflicts with proximal land uses and near-site receptors.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 1-2 through 1-5	Less than Significant
Impact 1-3. Project implementation could impact the continuing operation of existing proximal land uses and/or impede the ability of the Cities of Fontana and Rialto and/or the County of San Bernardino to proceed with, if public, or to approve, if private, future land uses through the introduction of encroaching development constraints that do not presently exist in the area of those facilities or, if evident, do no exist at levels that presently constrain the development or continuing operation of those uses. Similarly, based on their operational characteristics, existing off-site uses, now operating within the general project area could impact planned or permitted land uses that may occur on the project site.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 1-1, 1-6, 1-7, and 1-8	Less than Significant
Impact 1-4. Proposed development activities upon the LCRSP property will be phased with project build-out estimated to occur by 2030 or as required by an approved development agreement. It is estimated that construction will begin in Neighborhood I, followed by development in Neighborhoods II, III, and IV. Unless requisite infrastructure systems are sized to accommodate overall demand and operational prior to the commencement of each phase, infrastructure constraints and/or other unplanned environmental consequences may arise.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 1-9	Less than Significant
Impact 1-5. To the extent that land-use policies have been promulgated in recognition of the environmental effects of pre-existing uses and/or in response to recognized environmental constraints and hazards, revisions to those policies that neglect and/or fail to appropriately respond to the existence of those effects, constraints, and hazards could place persons and property at substantial risk.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 1-10	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Land Use (Continued)			
Impact 1-6. Beyond the local level, regional plans have been formulated by regional planning organizations to guide development within the larger metropolitan area. Regional plans provide, if not a broader, a higher-tiered approach to addressing those environmental issues that extend beyond and across municipal boundaries. Local projects that are inconsistent with regional plans can thwart or otherwise hinder the attainment of certain environmental goals and produce impacts extending beyond individual corporate limits.	Less than Significant	None Required or Recommended	Less than Significant
Impact 1-7. Implementation of the project's land-use overlay districts, in lieu of the underlying land-use designation, could change the character of the proposed development, introduce new environmental impacts, and/or increase the severity of those environmental efforts anticipated as a result of the development of the underlying zone.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 1-1 and 1-11	Less than Significant
Impact 1-8. Proposed is the annexation of that approximately 1,753.1-acre portion of the project site presently located in unincorporated County into the City. To the extent that the proposed annexation failed to conform to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, annexation may be denied or delayed.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 1-12	Less than Significant
Impact 1-9. Implementation of the proposed project in combination with those other related projects identified herein will result in the further urbanization of the general project area, including the conversion of vacant or under-developed properties to higher-intensity land uses.	Less than Significant	None Required or Recommended	Less than Significant
Population and Housing			
Impact 2-1. During the build-out period of the proposed project, an estimated 5,588 new on-site construction jobs would be created.	Less than Significant	None Required or Recommended	Less than Significant
Impact 2-2. Project implementation will increase the City's population and housing inventory and add new employment opportunities within the City. At build-out, an estimated 32,720 individuals may reside on the site in 8,407 dwelling units. Excluding on-site schools, recreational facilities, and any indirect or induced (secondary) jobs, proposed non-residential development may result in an estimated 3,398 primary, on-site employment opportunities.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Population and Housing (Continued)			
Impact 2-3. If not adequately considered in the derivation of existing regional plans, project-related increases in population, housing, and/or employment could impede the attainment of regional objectives by introducing additional unplanned growth which has not sufficiently accounted for in the formulation of the implementation strategies presented in those plans.	Less than Significant	None Required or Recommended	Less than Significant
Impact 2-4. Local land-use decisions can either positively or adversely influence the ability of public agencies to promote the attainment of the State's goal of a suitable living environment and decent housing for all Californians.	Less than Significant	None Required or Recommended	Less than Significant
Impact 2-5. By increasing the City's housing stock, absence a corresponding and proportional increase in long-term employment opportunities, project implementation, in combination with cumulative development, could contribute to a jobs-housing imbalance.	Less than Significant	None Required or Recommended	Less than Significant
Geology and Soils			
Impact 3-1. The project site contains State-designated Alquist-Priolo Fault-Rupture Hazard Zones. Seismic events occurring along these active fault zones, as well as other seismic events reasonably predictable throughout the area and over the life of the project, will expose people and property to potential surface rupture, ground shaking, and other seismic risks.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 3-1 through 3-3	Less than Significant
Impact 3-2. Project implementation will involve extensive earthwork. Unless conducted in a manner in keeping with the existing characteristics of the site and in light of the nature of the proposed development, soil conditions could result in stability problems that would adversely impact the structural integrity of proposed improvements.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 3-1 through 3-3	Less than Significant
Impact 3-3. On-site grading operations will disrupt surface soils and increase the potential for air and water-borne erosion.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Geology and Soils (Continued)			
Impact 3-4. Liquefaction susceptibility within the proposed development area is classified as non-susceptible and highly susceptible in Neighborhoods I and II, non-susceptible to highly susceptible in Neighborhood III, and non-susceptible and medium to highly susceptible in Neighborhood IV.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 3-1 through 3-3	Less than Significant
Impact 3-5. A substantial portion of the project site is designated MRZ-2, indicating that the project site contains aggregate resources of regional significance. The proposed project will impact the MRZ-2 classified resources by less than one (0.4) percent. This resource elimination will not affect other available resources in the region. As such, the project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.	Less than Significant	None Required or Recommended	Less than Significant
Impact 3-6. During the life of the project, lands and structures within the project site will be subject to periodic seismic events from localized and regional earthquake faults, producing the potential for damage to property, to the improvements located thereupon, and resulting in health and safety risks to site occupants.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 3-1, 3-2, 3-3, and 3-4	Less than Significant
Impact 3-7. Other projects located within proximity of the proposed development will be subjected to similar seismic forces and their associated hazards, subjecting those structures, improvements, and site occupants to potential seismic risks.	Less than Significant	None Required or Recommended	Less than Significant
Impact 3-8. With increased urbanization, the inventory of recoverable sand and gravel resources within the San Bernardino Production-Consumption Region diminishes; however, the resource elimination that will occur as a result of the proposed project will impact the MRZ-2 classified resource by less than one percent and remaining available resources in the SBPC Region exceed the projected 50-year aggregated demand.	Less than Significant	None Required or Recommended	Less than Significant
Hydrology and Water Quality			
Impact 4-1. The project site contains areas designated as being located within the 100-year floodplain. Site development could, therefore, result in the introduction of residential and non-residential land uses within those areas and/or expose site users to potential flood hazards.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Hydrology and Water Quality (Continued)			
Impact 4-2. Proposed drainage improvements have the potential to adversely impact the operation of those existing facilities now located within the Lytle Creek channel, including the I-15 Freeway bridge and those existing high-pressure pipelines that now traverse the wash.	Less than Significant	None Required or Recommended	Less than Significant
Impact 4-3. Construction activities may increase sediment discharge and/or result in the introduction of hazardous materials, petroleum products, or other waste discharges that could impact the quality of the area's surface and groundwater resources if discharged to those waters.	Less than Significant	None Required or Recommended	Less than Significant
Impact 4-4. The introduction of standing water on the project site, including those waters associated with the project's drainage facilities and BMPs, have the potential to introduce vector breeding habitat and harborage.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 4-1	Less than Significant
Impact 4-5. Storm water and non-storm water runoff have the potential to impair downstream receiving waters, particularly in Lytle and/or Sycamore Creeks.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 4-1 and 4-2	Less than Significant
Impact 4-6. Project plans include the construction of new levee systems adjacent to Lytle Creek. In addition, project implementation will result in the introduction of impervious surfaces and, as a result of the impedance of opportunities for absorption and infiltration of those waters, has the potential to increase the quantity, velocity, and duration of storm waters discharged from the project site.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 4-4	Less than Significant
Impact 4-7. Four groundwater infiltration ponds, used by the Fontana Water District, are presently located in Neighborhood II (PAs 82, 91 and 92). The areas where those ponds are located are proposed for "Single-Family Residential 3 (SFR-2) (8-14 du/ac)," High Density Residential (HDR) (25-35 du/ac)," and "Village Center Commercial (VC)" development. The existing infiltration ponds will be relocated and incorporated into the design of Neighborhood II.	Less than Significant	None Required or Recommended	Less than Significant
Impact 4.8. Development of the project, in conjunction with other foreseeable related projects, will collectively contribute to surface flows within the Lytle and Sycamore Creek areas and will result in the introduction of additional urban pollutants that could affect the beneficial uses of existing surface and groundwater resources.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Biological Resources			
Impact 5-1. Grading and grubbing activities will result in direct impacts to approximately 1,374.7 (1,368.0 on-site and 6.7 off-site) acres, resulting in the direct removal of existing vegetation within those areas. Temporary impacts include approximately 49.7 (40.8 on-site and 8.9 off-site) acres which will occur within temporary construction zones associated with the levee construction. With regards to non-sensitive plant species, project implementation will result in direct impacts to approximately 894.8 (889.9 on-site and 4.9 off-site) acres of non-sensitive plant communities. Temporary impacts to approximately 8.1 (5.1 on-site and 3.0 off-site) acres of non-sensitive plant communities will occur within temporary construction zones associated with the levee construction and the construction of a road under the I-15 Freeway. With regards to sensitive plant species, project implementation will result in direct impacts to approximately 478.0 (476.2 on-site and 1.8 off-site) acres of RAFSS (where RAFSS is the only or the primary community). Temporary impacts to 41.6 (35.7 on-site and 5.9 off-site) acres of RAFSS which will occur within temporary construction zones associated with the levee construction. Permanent impacts to sensitive plant communities include approximately 1.7 on-site acres of southern cottonwood willow riparian and 0.2 on-site acre of California sycamore alliance.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 5-1 and 5-2	Less than Significant
Impact 5-2. Common Plant Species. Project implementation would result in the direct removal of numerous native and non-native common plant species.	Less than Significant	None Required or Recommended	Less than Significant
Impact 5-3. Common Wildlife Species. In the short-term, project implementation would result in direct removal of wildlife habitat and the potential mortality of common wildlife species existing within the area of disturbance. Long-term indirect impacts include increased human-related disruption (such as an increase in nighttime lighting, noise, road kills, and the presence of domestic pets) which may result in additional mortality of native wildlife species.	Less than Significant	None Required or Recommended	Less than Significant
Impact 5-4. The proposed project will permanently impact approximately 43,741 (42,709 on-site and 1,032 off-site) linear feet and 58.02 (57.42 on-site and 0.60 off-site) acres of USACE non-wetland waters. [CONTINUED]	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 5-3	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Biological Resources (Continued)			
Impact 5-4 (Continued). In addition, the proposed project will permanently impact 60,894 (59,086 on-site and 1,808 off-site) linear feet and 93.98 (92.76 on-site and 1.22 off-site) acres of CDFG streambed (2.38 on-site acres consists of vegetated riparian habitat). The proposed project will temporarily impact approximately 8,852 (8,577 on-site and 275 off-site) linear feet and 26.73 (24.33 on-site and 2.40 off-site) acres of USACE non-wetland waters. In addition, the proposed project will temporarily impact 9,981 (9,706 on-site and 275 off-site) linear feet and 32.00 (27.73 on-site and 4.27 off-site) acres of CDFG streambed. Impacts may result in substantial changes to the bed, channel, and/or bank of jurisdictional waters.			
Impact 5-5. Project implementation has the potential to impede existing wildlife movement patterns across the project site, resulting in a potential fragmentation of habitat areas upon and surrounding the project site.	Less than Significant	None Required or Recommended	Less than Significant
Impact 5-6. Sensitive Plant Species and CNPS List 3 and List 4 Plant Species. Construction will result in the loss of an unknown number of Plummer's Mariposa lily (CNPS List 1B.1 species) and an unknown number of Parry's spineflower (CNPS List 1B.1 species). In addition, construction will result in the loss of one southern California black walnut (CNPS List 4.2 species).	Less than Significant	None Required or Recommended	Less than Significant
Impact 5-7. Sensitive Wildlife Species. Numerous sensitive wildlife species have been observed within the LCRSP study area or have the potential to occur therein. Project development, through direct loss or fragmentation of existing habitat and through the introduction of indirect exogenous effects, will reduce existing sensitive species populations and impact the existing biodiversity of the LCRSP study area.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 5-4 through 5-7	Less than Significant
Impact 5-8. Invasive Plant Species. Project development has the potential to result in the introduction of invasive non-native plants that could spread to retained on-site open space areas and/or adjoining off-site areas, potentially reducing the propensity of native species to succeed in the general project area.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 5-8	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Biological Resources (Continued)			
Impact 5-9. Project implementation will result in the introduction of additional indirect or secondary effects that could adversely impact the viability of on-site and off-site open space areas to serve a continuing viable habitat function.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 5-4 and 5-7	Less than Significant
Impact 5-10. Implementation of the proposed project, in combination with other reasonably foreseeable future projects, will contribute incrementally to the continuing reduction in relatively natural, undisturbed open space areas found within the general project area and contribute to the progressive fragmentation of habitat areas and decline in species diversity throughout the region.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 5-1 and 5-7	Less than Significant
Transportation and Traffic			
Impact 6-1. Based on the construction of new roadways and other infrastructure improvements, the project could substantially increase hazards due to a traffic-related design features.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 6-1 and 6-2	Less than Significant
Impact 6-2. Based on individual project-level schedules formulated by the developers of each planning area, construction activities may be occurring adjacent to occupied properties. Construction vehicles may, therefore, transport equipment, building materials, and hauling debris along local and collector streets within and adjacent to established residential areas and other areas where people congregate. In addition, project construction will result in the introduction of construction vehicles and equipment and could result in the release of soil and other debris onto public roadways.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 6-3	Less than Significant
Impact 6-3. Project operations could cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 6-4, 6-5, and 6-6	Less than Significant
Impact 6-4. As a result of both ambient growth and other areawide development activities, the project's operations could cumulatively exceed the LOS standard established by the County Congestion Management Agency for designed roads and highways.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 6-4, 6-5, and 6-6	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Air Quality			
Impact 7-1. During construction, with regards to criteria pollutants, the projected maximum daily emissions of carbon monoxide (CO), oxides of nitrogen (NO_X), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and volatile organic compounds (VOC) could exceed SCAQMD recommended threshold standards.	**Significant**	Mitigation Measures 7-1 thru 7-9	**Significant**
Impact 7-2. Maximum PM_{10} and $PM_{2.5}$ concentrations, as primarily associated with grading activities, are projected to be 80.2 µg/m^3 and 17.9 µg/m^3, respectively, and would occur in the vicinity of those residential areas located to the south of the project site. Substantially lower PM_{10} and $PM_{2.5}$ concentrations would occur in the vicinity of those residential areas located to the east of the project site.	**Significant**	Mitigation Measures 7-1 thru 7-9	**Significant**
Impact 7-3. Construction activities will yield a maximum incremental increase in off-site individual cancer risk of about 4.2 in one million over the duration of construction. The maximum impact occurs at residential uses south of the project site.	Less than Significant	None Required or Recommended	Less than Significant
Impact 7-4. The increase in daily emissions resulting from operation of the proposed project are expected to exceed the SCAQMD thresholds for VOC, CO, PM_{10}, $PM_{2.5}$, and NOx.	**Significant**	Mitigation Measures 7-10 through 7-14	**Significant**
Impact 7-5. Increased traffic along project area roadways has the potential to result in the creation of carbon monoxide (CO) "hot spots" at any intersections projected to operate at a LOS "D" or worse.	Less than Significant	None Required or Recommended	Less than Significant
Impact 7-6. The introduction of new retail commercial and other non-residential land uses in close proximity to existing and proposed residential areas could place odor-generating uses near odor-sensitive uses. Additionally, since new development will occur adjacent to existing land uses, new on-site receptors could be impacted by any off-site odors generated by those uses.	Less than Significant	None Required or Recommended	Less than Significant
Impact 7-7. The project will locate sensitive receptors within an area of localized cancer risk in excess of the SCAQMD significance threshold of 10 in one million (10×10^{-6}).	**Significant**	Mitigation Measures 7-15 though 7-18	**Significant**

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Air Quality			
Impact 7-8. Projects that exceed the assumptions in the AQMP, based on the year of the project's build-out, or fail to demonstrate compliance with the criteria outlined in the Guidance Document, could result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, and/or delay the attainment of State and federal air quality standards.	**Significant**	Mitigation Measures 1-1, 1-6, 7-4 through 7-8, 7-11, 7-13, 7-15 through 7-18	**Significant**
Impact 7-9. Since the project will exceed SCAQMD regional emission thresholds during construction, even with the incorporation of all feasible mitigation measures, the project will contribute to a significant cumulative air quality impact.	**Significant**	No Feasible Mitigation Measures Identified	**Significant**
Impact 7-10. The project area is out-of-attainment for both ozone (O_3) and particulate (PM_{10} and $PM_{2.5}$) emissions. Peak daily emissions of operation-related pollutants would exceed SCAQMD regional significance thresholds. By applying SCAQMD's cumulative air quality impact methodology, implementation of the proposed project would result in an addition of criteria pollutants such that cumulative impacts, in conjunction with related projects in the region, would occur. The emissions generated by project operation would be deemed cumulatively considerable.	**Significant**	No Feasible Mitigation Measures Identified	**Significant**
Impact 7-11. The proposed project will result in both one-time and annual GHG emissions that are expected to occur after build-out, producing an estimated 256,432 tonnes of CO_2e one-time GHG emissions and calculated annual emissions of 93,985 tonnes of CO_2e. If the one-time emissions were annualized, the total annual emissions from the proposed project would be approximately 100,396 tonnes per year.	Less than Significant	None Required or Recommended	Less than Significant
Noise			
Impact 8-1. Although all construction activities will fully comply with the City's Noise Ordinance, those activities (especially the use of heavy equipment) will result in short-term noise increases at individual construction sites and may be perceptible to near-site receptors.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Noise (Continued)			
Impact 8-2. Upon completion, vehicular traffic added to those off-site roadways within the general project area will introduce new mobile noise sources and may create a higher noise exposure to residents and other sensitive receptors beyond the noise levels currently experienced or otherwise predicted in the absence of the proposed project.	**Significant**	Mitigation Measure 8-1	**Significant**
Impact 8-3. At project build-out, traffic internal to the project site could expose proximal receptors to noise levels in excess of City residential standards.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 8-2, 8-3, and 8-4	Less than Significant
Impact 8-4. Residential and non-residential development would be exposed to noise levels that range from 65.2 dBA CNEL (at 25 feet distance) along Live Oak Avenue (new internal roadway) to 83.5 dBA CNEL along the I-15 Freeway, exceeding the City's exterior noise standard of 65 dBA CNEL for noise sensitive land uses.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 8,1, 8-2, 8-3, and 8-5	Less than significant
Impact 8-5. Existing sand and gravel mining operations in the vicinity of Neighborhoods II and III will continue in accordance with the terms and conditions of an existing surface mining permit. Those operations have the potential to generate operational noise levels adversely affecting proximal sensitive receptors.	Less than Significant	None Required or Recommended	Less than Significant
Impact 8-6. Areawide development activities will result in increased traffic along local roadways. With increased traffic volumes, additional mobile source noise generators are introduced into the project area which can impact those sensitive receptors located adjacent to those roadways.	**Significant**	Mitigation Measure 8-1	**Significant**
Public Services and Recreation			
Impact 9-1. Police Protection. During construction, heavy equipment, construction materials, and other items of value will be brought to the project site. As buildings are erected, prior to site occupancy, structures may remain unsecured and susceptible to unauthorized entry. The presence of an unsecured site and items of value could result in incidents of theft and vandalism that could increase demands upon the Rialto Police Department and other law enforcement agencies.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Public Services and Recreation (Continued)			
Impact 9-2. Fire Protection. Project implementation will result in the introduction of equipment, materials, and manpower into a designated fire hazard area prior to the provision of water system improvements designated to respond to on-site and near-site fire hazards.	Less than Significant	None Required or Recommended	Less than Significant
Impact 9-3. Public Schools. Based on the proposed dedication of a number of on-site school sites, project-specific construction activities could occur in close proximity to an existing school facility and prove to be disruptive to school activities and operations.	Less than Significant	None Required or Recommended (Mitigation Measures 6-2 and 6-3)	Less than Significant
Impact 9-4. Public Recreational Facilities. Construction activities will occur adjacent to existing recreational areas, including Glen Helen Regional Park and the San Bernardino National Forest, and could, during construction, impede access to or temporarily detract from the enjoyment of those areas and facilities.	Less than Significant	None Required or Recommended (Mitigation Measures 6-2 and 6-3)	Less than Significant
Impact 9-5. Police Protection. Based on the Rialto Police Department's (RPD) existing staffing ratios, at full project build-out, the projected population of approximately 32,720 persons would generate an additional staffing demand for about 39.6 sworn offices and 17.2 full-time and 5.2 part-time civilian employees. Additional unquantified demands upon the RPD would also result from the operation of commercial and other non-residential uses and the congregation of people in public places. Those RPD employees would have corresponding equipment and spatial requirements that would not likely be met with existing RPD resources.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 9-1 through 9-5	Less than Significant
Impact 9-6. Police Protection. Construction and occupancy of 8,407 dwelling units and 849,420 square feet of non-residential uses and the traffic those units and uses generate on Interstate freeway system and along roadways in County unincorporated areas will increase existing demands upon California Highway Patrol resource.	Less than Significant	None Required or Recommended	Less than Significant
Impact 9-7. Fire Protection. Based on the Rialto Fire Department's (RFD) existing staffing ratios, at full project build-out, the projected population of approximately 32,720 persons would generate an additional staffing demand for about 27.2 department personnel. Additional unquantified demands upon the RFD would also result from the operation of commercial and other non-residential uses and the congregation of people in public places. [CONTINUED]	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 9-4 and 9-5	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Public Services and Recreation (Continued)			
Impact 9-7. (Continued) Those RFD employees would have corresponding equipment and spatial requirements that would not likely be met with existing RFD resources.			
Impact 9-8. Public Schools. Project implementation will increase enrollment within the Rialto Unified School District, Fontana Unified School District, and/or San Bernardino City Unified School Districts, thus placing additional personnel, resource, and spatial demands on existing facilities located in the general project area, and/or predicating the need to construct, staff, and equip new elementary, middle, and/or high schools to serve increased attendance.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 9-6 and 9-7	Less than Significant
Impact 9-9. Public Libraries. Project implementation will increase the resident population of the City or Rialto, including the number of school-age children, incrementally increasing existing spatial and resource-related demands now being placed on the San Bernardino County Public Library, Rialto Branch.	Less than Significant	None Required or Recommended	Less than Significant
Impact 9-10. Public Recreational Facilities. As indicated in the City General Plan, Rialto has adopted a standard of three acres of parkland for each one thousand residents. As further specified in Section 17.23.030 of the City Municipal Code, for qualifying projects, 3.0 acres of property for each one thousand persons residing within the City shall be devoted to neighborhood and community parks.	Less than Significant	None Required or Recommended	Less than Significant
Impact 9-11. Public Recreational Facilities. Numerous regional hiking, bicycling, and equestrian trails are identified in planning documents illustrating the project site. Failure to identify, preserve, and construct specified trail segments in a manner and in a location consistent with regional trail plans could adversely affect the functionality of those trails.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 9-8	Less than Significant
Impact 9-12. Public Recreational Facilities. As proposed, a number of sites have been designated “Open Space/Joint Use” (OS/JU) and are intended for joint use by the Rialto Unified School District for recreational purposes associated with adjoining school sites and by the City of Rialto for general recreational use. Operational joint-use problems could be encountered based on the distinct needs of those two separate users groups.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 9-9 and 9-10	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Public Services and Recreation (Continued)			
Impact 9-13. The approval of other reasonably foreseeable future development projects within the general project area will increase existing demands on the San Bernardino County Sheriff's Department and Rialto Police Department law enforcement activities, San Bernardino County Fire Department and Rialto Fire Department fire protection and emergency services, increase the number of school-aged children served by the Rialto Unified School District, Fontana Unified School District, and San Bernardino City Unified School District, and increase the demand for park and recreational facilities within the County and throughout the City.	Less than Significant	None Required or Recommended	Less than Significant
Utilities and Service Systems			
Impact 10-1. Water Supply. During construction, water is required for a variety of purposes (e.g., dust palliation, fire suppression, human consumption). The on-site need for water may predate its availability and the provision of infrastructure systems necessary to supply those location-specific water needs.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 1-9 and 10-1 through 10-3	Less than Significant
Impact 10-2. Sewerage Disposal. During construction, the project's wastewater collection system may not be operational or accessible to workers. Temporary facilities may be required to ensure that construction sites are operated and maintained in a sanitary fashion.	Less than Significant	None Required or Recommended	Less than Significant
Impact 10-3. Solid Waste. Construction wastes will be generated during site clearing and grading, through the development of required infrastructure, during building construction, and through the installation of landscaping. These wastes can consume inordinate amounts of landfill capacity unless efforts are taken to reduce the quantity and volume of materials being landfilled.	Less than Significant	None Required or Recommended	Less than Significant
Impact 10-4. Water Supply. At build-out, residential and non-residential uses will generate a peak daily demand of about 18.17 million gallons of potable water, thus placing a long-term demand on available water resources.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Utilities and Service Systems (Continued)			
Impact 10-5. Sewerage Disposal. At build-out, residential and non-residential uses will generate an estimated 5.016 million gallons of wastewater per day (mgd), thus placing a long-term demand on available wastewater treatment facilities. Of that, an estimated 4.295 mgd (from Neighborhoods II, III, and IV) of average daily flow will be conveyed to the City of Rialto Wastewater Treatment Plant and an estimated 0.721 mdg (from Neighborhood I) of average daily flow will be conveyed to the Lytle Creek North Wastewater Recycling Facility for treatment. Insufficient sewerage treatment capacity presently exists at the City of Rialto Wastewater Treatment Plant to accommodate anticipated future year flows.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 1-9 and 10-4	Less than Significant
Impact 10-6. Solid Waste. At build-out, an estimated 80,143 tons of solid waste will be generated per year (220 tons/day), inclusive of both residential and non-residential waste streams. Based on current estimated diversion rates (45 percent), an estimated 44,078 tons of waste will require landfilling per year (121 tons/day).	Less than Significant	None Required or Recommended	Less than Significant
Impact 10-7. Implementation of the proposed project and other related projects would impose cumulative impacts on water services and supplies, wastewater collection and treatment facilities, and solid waste collection and disposal within the general project area.	Less than Significant	None Required or Recommended	Less than Significant
Hazards and Hazardous Materials			
Impact 11-1. Construction activities involving the transport, storage, use, and consumption of small quantities of flammable, corrosive, and/or explosive materials, including petroleum products, will occur in close proximity to existing residential areas and other sensitive receptors.	Less than Significant	None Required or Recommended	Less than Significant
Impact 11-2. Construction activities could result in damage to existing high priority subsurface installations and/or other facilities, resulting in the discharge of hazardous materials and petroleum products, creating a risk of fire, explosion, and electrocution, and disrupting the delivery of those products and commodities which are transported through those systems.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Hazards and Hazardous Materials (Continued)			
Impact 11-3. Excluding those exempt facilities that handle hazardous materials contained solely in a consumer product and pre-packaged for direct distribution to and for use by the general public (household hazardous wastes), certain permitted non-residential land uses may transport, store, use, and/or consume hazardous materials as part of their routine operation. In addition, the routine operation of certain permitted land uses may result in the release or potential release of toxic air contaminants (TACs). Since the specific plan allows for the proximal siting of residential and non-residential development and allows for a variety of land uses to occur therein, non-residential uses that utilize hazardous materials above household levels or emit TACs could be located in close proximity to homes and other sensitive receptors.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 1-1, 7-12, and 7-13	Less than Significant
Impact 11-4. An overhead lattice transmission tower, associated with SCE's Lugo-Mira Loma 500-kV Transmission Line, could fail or collapse as a result of wind, fatigue, liquefaction of the underlying materials, fire, or other causes.	Less than Significant	None Required or Recommended	Less than Significant
Impact 11-5. The failure of an existing natural gas transmission line or liquid petroleum pipeline could result in the discharge of hazardous and/or flammable materials that could prove hazardous to people and property located in proximity to a pipeline rupture or leak.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 1-1 thru 1-5	Less than Significant
Impact 11-6. Implementation of the proposed project, in combination with other related projects, will result in the exposure of an increasing number of individuals and property improvements to existing hazards, including increased health and safety risks associated with exposure to hazardous materials.	Less than Significant	None Required or Recommended	Less than Significant
Cultural Resources			
Impact 12-1. All site disturbance activities have the potential to adversely affect cultural resources located within the area of disturbance.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 12-1 through 12-3	Less than Significant
Impact 12-2. Ground disturbance activities could result in impacts to on-site paleontological resources that may potential exist in Pleistocene-age sediments.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 12-4	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Cultural Resources (Continued)			
Impact 12-3. Project development could impede the implementation of that on-site segment of the Old Spanish National Historic Trail that traverses the project site.	Less than Significant	None Required or Recommended	Less than Significant
Impact 12-4. Grading activities conducted on other sites located within the general project area could result in impacts to any prehistoric, historic, and paleontological resources that may be located thereupon.	Less than Significant	None Required or Recommended	Less than Significant
Aesthetics			
Impact 13-1. Construction activities, including grubbing, grading, and the construction of authorized facilities and improvements, will alter the site's existing visual character and will transform the site's visual character from that which might be generally characterized as a natural environment to that of a built environment, producing changes in landform, vegetation, water, color, lighting, adjacent scenery and through the introduction of hardscape and other cultural modifications to the existing landscape.	Potentially Significant unless Mitigation Incorporated	Mitigation Measures 13-1 through 13-5	Less than Significant
Impact 13-2. The project site is visible from adjacent areas, including those views afforded from adjoining public roadways and from private residences. Alterations to the site's visual character during the construction process could produce changes to the available field of view from a limited number of public and private vantage points. Due to the wide field of view that is available from theses areas, the project's development would not result in substantial coverage of the existing visual environment from these vantage points.	Less than Significant	None Required or Recommended	Less than Significant
Impact 13-3. Following the construction of individual planning areas and the project's build-out, those areas will continue to undergo physical changes affecting the site's evolving scenic qualities.	Potentially Significant unless Mitigation Incorporated	Mitigation Measure 13-6	Less than Significant
Impact 13-4. Following the completion of construction, the project site will remain visible from adjacent and proximal publicly-accessible areas located off the site. As site improvements are completed and occupancy, use, and habitation occurs, further physical changes could alter the site's scenic qualities as perceived from those public vantage points.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Aesthetics (Continued)			
Impact 13-5. A number of residential and institutionally-designated areas within Neighborhoods II, III, and IV will abut operating industrial-types uses, including the Cemex USA quarry, SCE transmission lines, and Monier Lifetile. The occupants of those properties may perceive those uses as visually incompatible with the aesthetic character of those residential and institutional uses.	Less than Significant	None Required or Recommended	Less than Significant
Impact 13-6. The southern California area is rapidly undergoing change. As development continues to occur both within the County and throughout the region, the visual character of the general project area and the region itself will increasingly become more urbanized.	Less than Significant	None Required or Recommended	Less than Significant
Energy Resources			
Impact 14-1. Construction activities will result in the consumption of petroleum products by gasoline and diesel-powered equipment and electricity for the operation of electric-powered equipment.	Less than Significant	None Required or Recommended (Mitigation Measure 7-4)	Less than Significant
Impact 14-2. At project build-out, on-site land uses are projected to consume approximately 55.47 megawatt hours of electricity per year.	Less than Significant	None Required or Recommended	Less than Significant
Impact 14-3. At project build-out, on-site land uses are projected to consume about 228,736 million British thermal units of natural gas per year.	Less than Significant	None Required or Recommended	Less than Significant
Impact 14-4. Although the proposed project will generate a total of 91,513 total trip ends, a number of those trips which stop at the project site are already on the street network, project implementation will result in an estimated 47,545 new regional trips, adding 498,387 added vehicle miles traveled and resulting in the annual average estimated consumption of approximately 21,754 gallons of gasoline daily.	Less than Significant	None Required or Recommended	Less than Significant
Impact 14-5. Additional areawide development will increase existing demands for electricity, natural gas, and petroleum products.	Less than Significant	None Required or Recommended	Less than Significant

Table ES-3 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND LEVEL OF SIGNIFICANCE

Environmental Effect	Level of Significance Before Mitigation	Recommended Mitigation Measures	Level of Significance After Mitigation
Growth Inducement			
Impact 15-1. Because the project's effectuation requires both a General Plan amendment and a zone change, as well as designated sphere of influence areas, the project may result in on-site development activities that exceed current development assumptions. Although the project area has been included in the master plan for services of water and other utilities and is surrounded by other already developed or entitled areas, the project will have growth-inducing effects with respect to sewer as it requires the provision of new facilities that provide additional capacity, thus permitting growth that can use the excess capacity.	**Significant**	No Feasible Mitigation Measures Identified	**Significant**
Impact 15-2. Project implementation will increase the City's population and add new employment opportunities within the City. At build-out, an estimated 32,720 individuals may reside on the project site. Excluding on-site schools, recreational facilities, and any indirect or induced jobs, proposed non-residential development may result in an estimated 3,398 permanent jobs. Localized increases in population and employment, including the infrastructure proposed to support project development, could contribute to growth beyond the project boundaries.	Less than Significant	None Required or Recommended	Less than Significant

Source: City of Rialto, Development Services Department

Table ES-4
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Land Use		
1-1	Unless otherwise waived by the City's Development Services Director (Director) on a case-by-case basis, development applications involving the construction of any of the permitted land uses identified in the specific plan and listed in the "General Land-Use Compatibility Matrix" (see Table 4.1-4 in the DEIR) shall be accompanied by the submittal to the Director of a site-specific and use-specific analysis that addresses the potential land-use conflicts identified therein and identifies the design measures (such as landscaping, screening, etc.), site planning measures (such as setbacks, massing), development standards in the LCRSP, and such other measures that will be employed to ensure compatibility among adjacent land uses. Upon acceptance and subject to the Director's discretion, should the resulting investigation indicate the absence of any significant environmental effects, the Director may administratively grant authorization for such use. All identified design measures, site planning measures, development standards, and other measures shall be imposed as subsequent conditions of approval for individual development projects. For the purpose of environmental compliance, "adjacent" shall be defined as directly abutting and shall not include uses separated by a street public or private right-of-way or designated open space area.	Development Services Director	Ongoing
1-2	No grading, landscape, and street improvement plans shall be approved or authorized within the recorded easements of Calnev Interstate Pipeline (Calnev) and Southern California Gas Company's (SoCalGas) natural gas transmission pipelines until approved by the City and the utility company and/or pipeline operator.	Development Services Director	Ongoing
1-3	The specific plan land-use map shall be modified to depict the existing alignment of the recorded easement for the Calnev Interstate Pipeline and Southern California Gas Company's natural gas transmission pipelines where they traverse the project site. No habitable structures or structures that would impede access to the pipeline easement shall be placed within the easement area, unless otherwise approved by SoCalGas or Calnev.	Development Services Director	Ongoing
1-4	With the exception of open space, prior to approving any land use within an area designated as a "high consequence area" pursuant to Title 49, Part 92, Subpart O of the Code of Federal Regulations (CFR) for covered pipeline segments (as defined in 49 CFR 192.903), if any, of the Calnev Interstate Pipeline and Southern California Gas Company's natural gas transmission pipelines located within the project boundaries, the Applicant shall provide to the City if available a copy of the pipeline integrity management plan, as prepared by the pipeline operator pursuant to 49 CFR 192.907. The submittal of the pipeline integrity management plan is intended for the purpose of public disclosure and informed decision making and is not determinant of any project-level entitlements with regards to those properties subject thereto.	Development Services Director	Ongoing

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Land Use (Continued)		
1-5	The "Lytle Creek Ranch Specific Plan" identifies two sites that are proposed as school sites for an elementary school and an elementary/middle school. Prior to the submittal of any "B" level tentative subdivision map (excluding any "A" level subdivision map for financing purposes only) designating a potential school site or joint-use site which is intended to be made available for use by a local school district, if required, the Applicant shall consult with the Rialto Unified School District (RUSD) regarding the RUSD's school site selection process and obtain the RUSD's consent to include a potential school site or joint-use site as part of the tentative subdivision map application. Prior to acquisition of the school site, the RUSD shall prepare an initial school site evaluation, in accordance with the California Department of Education's (CDE) School Facilities Planning Division's SFPD 4.0 (Initial School Site Evaluation) (CDE, Revised July 2009) which shall include a "school site pipeline risk analysis" in accordance with the CDE's "Guidance Protocol for School Site Pipeline Risk Analysis" (CDE, 2007) or such alternative analytical methodology as may be designated by the benefitting school district and acceptable to the CDE.	Development Services Director	Tentative "B" Map Approval
1-6	Prior to the approval of any tentative "B" level tentative subdivision map (excluding any "A" level subdivision map for financing purposes only) allowing for residential development or other sensitive land uses on lands abutting active mining areas, the Applicant shall delineate on the plan or map a buffer zone (which might be inclusive of road right-of-way) from the edge of those active mining areas of a width and configuration acceptable to the City and the Applicant shall incorporate within that buffer zone solid fencing, with a minimum height of not less than six feet above finish grade, and landscaping of a type and intensity acceptable to the City.	Development Services Director	Tentative "B" Map Approval
1-7	In order to avoid potential conflicts with the United States Forest Service's resource management plans, prior to the approval of any tentative tract map on lands abutting the National Forest, the Applicant shall prepare a land-line survey delineating the project's boundaries relative to boundaries of the San Bernardino National Forest. The Applicant shall avoid disturbance to all public land survey monuments, private property corners, and forest boundary markers. In the event that any such land markers or monuments on National Forest System lands are destroyed by an act or omission of the Applicant, depending on the type of monument destroyed, the Applicant shall reestablish or reference same in accordance with: (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States"; or (2) the specifications of the County Surveyor; or (3) the specifications of the Forest Service. Further, the Applicant shall ensure that any such official survey records affected are amended, as provided by law.	Development Services Director	Tentative "B" Map Approval
1-8	With the exception of Planning Area 15 which is subject to a 24-foot building setback requirements, unless otherwise approved by the responsible fire authority or a lesser setback is approved by the Director upon receipt of a use-specific application, design and development plans shall include a minimum 25-foot building setback from adjoining National Forest System lands. Landscape plans for the setback area shall, to the extent feasible, utilize plant materials indigenous to the San Bernardino National Forest.	Development Services Director	Ongoing

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Land Use (Continued)		
1-9	Prior to the approval of any tentative "B" level tentative subdivision map (excluding any "A" level subdivision map for financing purposes only), the Applicant shall submit documentation, acceptable to the City Engineer, demonstrating the availability of potable water supplies, the sufficiency of fire flow, and the capacity of wastewater conveyance and treatment systems to the area of and adequate to support the level of development that would be authorized within the tract map area and/or the Applicant's plans and performance schedule for the delivery, to the tract map area, of those requisite services and systems.	Development Services Director	Tentative "B" Map Approval
1-10	If, as a result of the implementation of the proposed flood control improvements or other Applicant-initiated actions, the boundaries of the 100-year flood zone are modified or would likely be modified as a result thereof, the Applicant shall prepare and submit to the Federal Emergency Management Agency (FEMA), with proof of delivery to the City Engineer, a letter of map amendment (LOMA), including appropriate mapping and hydrologic analyses, requesting that FEMA revise the designation of affected on-site and off-site areas.	City Engineer	Ongoing
1-11	When a warehousing or a distribution center is proposed within 1,000 feet of an existing on-site or off-site sensitive receptor or within 1,000 feet of an on-site planning area designated for residential, school-related, or recreational use, the Applicant shall submit and, when acceptable, the Director shall approve a "good neighbor" plan, including the minimization of cut-through traffic and on-street parking, detailing each project's site design elements, operational strategies, and other proposed actions to minimize potential land-use and associated impacts attribute to that use upon those receptors. Implementation of the "good neighbor" site design elements, operational strategies, and other proposed actions, as approved by the Director, shall be adopted as conditions of approval for the associated warehousing or distribution center.	Development Services Director	Building Permit Issuance
1-12	Prior to the recordation of any final subdivision map, including both "A" level and "B" level maps, for any portion of Neighborhoods I and IV, those areas shall be annexed into the City and such map shall not be effective until annexation of such property to the City has been completed to the satisfaction of the Director. If annexation has not been completed within one year of the approval of any tentative subdivision map for any portion of Neighborhoods I and IV, then the approval of such map shall be null and void. No subdivision of unincorporated lands shall be effected by approval of any map by the City unless annexation thereof to the City has been completed prior to the approval of the final map thereof.	Development Services Director	Final "A" and "B" Map Approval
	Geology and Soils		
3-1	Unless otherwise waived or superceded, all development activities conducted on the project site shall be consistent with the recommendations contained in the following studies: (1) "EIR Level Geotechnical Review, Lytle Creek Ranch Land Use Plan, City of Rialto, San Bernardino County, California" (GeoSoils, Inc., May 22, 2008) and "Updated Geological and Geotechnical EIR Level Review of Documents Pertaining to the Lytle Creek Ranch Land Use Plan, City of Rialto, County of San Bernardino, California" (Pacific Soils Engineering, Inc., September 3, 2008); or (2) such alternative recommendations as may be approved by the City Engineer based on the findings of a project-specific geologic and geotechnical investigation.	City Engineer	Ongoing

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Geology and Soils		
3-2	Prior to the approval of a tentative "B" level subdivision map for residential or commercial development (excluding any "A" level subdivision map for financing purposes only), a subsequent site-specific and design-specific geotechnical and geologic report shall be submitted to and, when acceptable, approved by the City Engineer documenting the feasibility of each proposed use and the appropriate geotechnical, geologic, and seismic conditions associated with that use. Unless otherwise modified, any conditions, recommendations, or mitigation measures contained therein, including the imposition of specified setback requirements for proposed development activities within Alquist-Priolo Earthquake Fault Zones, shall become conditions of approval for the requested use.	City Engineer	Tentative "B" Map Approval
3-3	In recognition of the potential lateral forces exerted by predicted seismic activities, no habitable structures that may be located on the project site and which are located within the defined Alquist-Priolo Fault-Rupture Hazard Zones shall be over two stories in height. Habitable structures of greater height within defined Alquist-Priolo Fault-Rupture Hazard Zones may only be authorized following the submittal of a subsequent site-specific and design-specific geotechnical and geologic report acceptable to the City Engineer and, at a minimum, the imposition of both the recommendations contained therein and such additional conditions as may be imposed by the City Engineer.	City Engineer	Ongoing
3-4	At a minimum, pending the development of seismic hazard zone maps encompassing the project site by the State Geologist under the Seismic Hazard Mapping Act (Sections 2690-2698.6, Public Resources Code), prospective purchasers of real property within the LCRSP shall be provided a copy of San Bernardino County General Plan – Hazard Overlay Map or similar information disclosing the potential presence of seismic hazards, including liquefaction susceptibility and earthquake-induced landslide susceptibility. This condition does not replace, negate, or otherwise alter any existing obligations between sellers, their agencies, and prospective purchases as may be established by the California Department of Real Estate or under State law.	Development Services Director	Ongoing
	Hydrology and Water Quality		
4-1	Prior to the approval of any subdivision map (except for an "A" level map for financing purposes only) in which dry extended detention basins or wet ponds are located, the Applicant shall prepare and, when acceptable, the City Engineer shall accept an inspection plan for each of the basins demonstrating that routine inspections for possible vector harborage will be performed monthly within 72 hours after a storm event or under such alternative inspection schedule as may be determined by the City Engineer.	City Engineer	Tentative "B" Map Approval

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Hydrology and Water Quality (Continued)		
4-2	Source Control BMPs. The following source control BMPs, or such other comparable measures as may be established by the City Engineer, shall be adopted as a condition of approval for subsequent tract maps approved by the City within the project boundaries. (1) The master homeowners' association (HOA) and/or property owners' association (POA) will be given a copy of the SWQMP. Annually, the representatives of the HOA/POA, their employees, landscapers, property managers, and other parties responsible for proper functioning of the BMPs shall receive verbal and written training regarding the function and maintenance of the project's BMPs. The homeowners will be provided annual notices of water quality issues through an association-published newsletter. (2) Vegetated buffer strips shall be properly maintained with vegetation but not overly fertilized. (3) Resident education and participation will be implemented to manage pollutants that contribute to biological oxygen demand. For example, residents shall be encouraged to keep pets on leashes and to remove feces in order to limit organic material in storm water runoff. Residents shall be further encouraged to irrigate their properties at certain times of the day in order to limit nuisance flow runoff carrying pesticides and other organic material. (4) Vehicle leak and spill control shall be implemented by educating and requiring vehicle and equipment maintenance, proper vehicle and maintenance fueling, and education of how to handle accidental spills. Stringent fines shall be applied to those who violate these requirements and participate in illegal dumping of hazardous material. Street and storm drain maintenance controls shall be put in place with signs posted prohibiting illegal dumping into street and storm drains. (5) Household hazardous waste collection facilities shall be put into place for proper disposal of fertilizers, pesticides, cleaning solutions, paint products, automotive products, and swimming pool chemicals. Proper material storage control shall be encouraged to keep materials from causing groundwater contamination, soil contamination, and storm water contamination.	City Engineer	Tentative "B" Map Approval
4-3	Water Quality Monitoring. Prior to the issuance of any grading permits, the Applicant shall submit, and when acceptable, the City Engineer shall approve, a long-term water monitoring program designed to ensure that the project's proposed BMPs meet or exceed applicable water quality standards established by the California Regional Water Quality Control Board, Santa Ana Region (SARWQCB) and contained in the then current NPDES Permit. In accordance with that program, the Applicant shall institute regularly testing of the water quality at the storm drainage outlets within Lytle and Sycamore Creeks. If the monitoring program's test results determine that the water quality standards established by the SARWQCB are not being met, corrective actions acceptable to the SARWQCB and the City Engineer shall be promptly taken to improve the quality of surface runoff discharged from the outlets to a level in compliance with the adopted SARWQCB standards.	City Engineer	Issuance of Grading Permit
4-4	Final Design Plans. Prior to the issuance of grading permits in Neighborhoods II, III, or IV, final design plans for the proposed Lytle Creek flood control revetment shall be submitted to, and when deemed acceptable, approved by the City Engineer. As determined by the City Engineer, the final design of the Lytle Creek flood control revetment shall provide adequate structural protection for affected I-15 Freeway bridge structures. Design for the toe-down of the Lytle Creek west bank revetment shall take into account the maximum scour potential that may occur at the I-15 Freeway bridge to ensure that adequate protection is provided for both adjacent on-site and off-site development area and the bridge structure.	City Engineer	Issuance of Grading Permit

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Biological Resources		
5-1	Riversidean Alluvial Fan Sage Scrub. Two alternative compensatory approaches to Riversidean alluvial fan sage scrub (RAFSS) mitigation have been identified and are described herein. The first approach is based on an "appropriately-scaled ratio" of acres to be preserved to acres to be impacted. The second approach is based on a "habitat equivalency analysis" (HEA) incorporating the measurement and comparative analysis of common ecological metrics (or indicators) between impacted sites and mitigation sites such that the functions and values between those areas can be demonstrated to be reasonably equivalent. Mitigation Based on Appropriately-Scaled Ratios. Impacts to 519.6 acres (478.0 acres of permanent and 41.6 acres of temporary impacts) of RAFSS may be mitigated at a minimum mitigation ratio of 2:1 (replacement:disturbance) through the preservation of 1,039.2 acres of alluvial fan sage scrub (AFSS) vegetation both on and off the project site. This shall be accomplished, in part, by the preservation of 395.4 acres of RAFSS on the site and the preservation of existing and/or the enhancement, restoration, or creation of AFSS off the site, on private and/or public lands. The Applicant's acquisition of qualifying off-site and/or dedication of qualifying on-site AFSS habitat and/or the Applicant's securing of appropriate rights and authorization allowing for the preservation, enhancement, restoration, and/or creation of protected habitat on public and/or private lands, together with adequate funding to achieve the necessary preservation, enhancement, restoration, and/or creation, shall be secured by the Applicant at a minimum ratio of 2:1 (replacement:disturbance) prior to directly impacting RAFSS habitat for grading, grubbing, construction, and/or fuel modification activities. Prior to the issuance of any permits and/or approvals that would result in the removal of RAFSS habitat, the Development Services Director (Director) shall verify that the Applicant has secured sufficient and appropriate AFSS habitat (whether on and/or off the site) to be preserved, enhanced, restored, and/or created to fulfill this 2:1 mitigation ratio, based on the amount of RAFSS habitat that would be removed under the then-issued grading, clearing, or grubbing permits, and has delivered to the City a binding instrument ensuring the implementation of the specified action. Mitigation Based on Habitat Equivalency Analysis. An alternative method for determining the extent and location of mitigation lands for impacts to RAFSS is to calculate the amount of compensatory acreage of RAFSS habitat to be provided based upon a "habitat equivalency analysis" (HEA). The basic steps that shall be used for implementation of the HEA approach are: (A) determine the extent of potential impact; (B) determine the value of candidate mitigation site(s); and (C) determine required mitigation. [CONTINUED]	Development Services Director	Issuance of Grading Permit

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Biological Resources (Continued)		
5-1 (Cont.)	Prior to issuance of any grading permit that would result in the removal of RAFSS, the Director shall verify that the Applicant has: (1) applied the HEA metrics to the acres of RAFSS to be removed; (2) determined the appropriate set of mitigation/conservation activities to apply to the mitigation lands (in accordance with the ecological currency established by the HEA metrics); and (3) has assured that the mitigation lands will serve as mitigation in perpetuity and assured that long-term management will be provided. The provision of compensatory resources and/or the acquisition of mitigation credits to offset impacts shall be secured by the Applicant prior to removing RAFSS for grading, grubbing, construction, and/or fuel modification activities. Prior to the issuance of any permits and/or approvals resulting in the removal of RAFSS, the Director shall verify that the Applicant has secured sufficient and appropriate RAFSS habitat conservation credits (whether on and/or off the site) based on the amount of RAFSS habitat that would be removed under the then-issued grading, clearing, or grubbing permit and has delivered to the City a binding instrument ensuring the implementation of the specified action. The Applicant shall assure, to the satisfaction of the Director, that the compensatory acreage and/or mitigation credits to serve as mitigation will be secured to serve its specified function and that the appropriate long-term management of this habitat will be provided. Such assurance shall include those performance measures and guarantees as may be reasonably required by the Director to ensure the fulfillment of the intent of this measure. At the Applicant's sole expense, the City may select and hire a qualified biologist(s) to provide technical consultation, third-party review, and independent oversight of specified biological mitigation. At its sole discretion, the City's acceptance of any Applicant-nominated compensatory resources and/or mitigation credits shall occur prior to the issuance of any permits and/or approvals resulting in direct impacts to RAFSS and any such permits or approvals shall be conditioned with the details of those actions which are to be implemented.		
5-2	Other Sensitive Riparian Communities. Mitigation for direct impacts to approximately 1.7 acres of southern cottonwood willow riparian shall include preservation, enhancement, and restoration of a minimum combined 3.4 acres within the existing and available mule fat scrub, southern willow scrub, and southern cottonwood willow riparian habitat within the Sycamore Flat East riparian corridor. This mitigation represents a minimum 2:1 (replacement:disturbance) mitigation ratio. Prior to issuance of any permits or approvals that would result in the removal of RAFSS, the Director shall verify that the Applicant has secured sufficient qualifying RAFSS habitat to be preserved, enhanced, restored, and/or created to conserve habitat functions and values equivalent to the functions and values of habitat that would be removed under the then-issued grading permits for the project, as determined through the HEA approach. [CONTINUED]	Development Services Director	Issuance of Grading Permit

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Biological Resources (Continued)		
5-2 (Cont.)	The Applicant's acquisition of qualifying off-site and/or dedication of qualifying on-site riparian habitat and/or the Applicant's securing of appropriate rights and authorization allowing for the preservation, enhancement, restoration, and/or creation of protected habitat on public and/or private lands, together with adequate funding to achieve the necessary preservation, enhancement, restoration, and/or creation, shall be secured by the Applicant at a minimum ratio of 2:1 prior to directly impacting southern cottonwood willow riparian habitat for grading, grubbing, construction, and/or fuel modification activities. Prior to the issuance of any permits and/or approvals resulting in the removal of southern cottonwood willow riparian habitat, the Director shall verify that the Applicant has secured sufficient and appropriate riparian habitat (whether on and/or off the site) to be preserved, enhanced, restored, and/or created to fulfill this 2:1 mitigation ratio, based on the amount of southern cottonwood willow riparian habitat that would be removed under the then-issued grading, clearing, or grubbing permit, and has delivered to the City a binding instrument ensuring the implementation of the specified action. The Applicant shall assure, to the satisfaction of the Director, that the compensatory acreage to serve as mitigation will be secured to serve its specified function and that this function will continue over the long term. Such assurance shall include those performance measures and guarantees as may be reasonably required by the Director to ensure the fulfillment of the intent of this measure.		
5-3	Jurisdictional Waters. Prior to the issuance of any grading permits affecting State and/or federal jurisdictional waters, the Applicant shall provide the Director with documentation, as may be deemed acceptable by the Director, demonstrating the Applicant's ability and binding commitment to provide the following compensatory resources: (1) the preservation, restoration, and/or enhancement (individually or in combination) of USACE jurisdictional waters on or off the site (within the watershed) at a ratio of no less than 1:1 (replacement:disturbance); and (2) preservation, restoration, and/or enhancement (individually or in combination) of CDFG jurisdictional areas on or off the site (within the watershed) at a ratio of no less than 1:1. Temporary impacts to jurisdictional waters may be mitigated through restoring affected areas to pre-project conditions, followed by hydroseeding with native plant species typical of the area. Prior to issuance of any grading permit for work in jurisdictional waters, as applicable, the Applicant shall provide the City with evidence of the Applicant's receipt of a Section 404 permit issued by the United States Army Corps of Engineers (USACE), a Section 1600 streambed alteration agreement with California Department of Fish and Game (or other evidence of compliance with Section 1600 et seq. of the California Fish and Game Code), Section 401 water quality certification issued by the Regional Water Quality Control Board, Santa Ana Region and shall provide the Director with an agency approved habitat mitigation and monitoring plan (HMMP), prepared pursuant to USACE guidelines.	Development Services Director	Issuance of Grading Permit

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Biological Resources (Continued)		
5-4	Least Bell's Vireo. Mitigation for direct impacts to approximately 2.9 acres of least Bell's vireo (LBV) habitat (including the loss of 1.2 acres of mule fat scrub and 1.7 acres of southern cottonwood willow riparian within Neighborhood II) shall include on-site preservation, restoration, and enhancement of southern willow scrub and adjacent mule fat scrub habitat at a minimum 2:1 (replacement:disturbance) ratio. Mitigation shall be accomplished through the enhancement and/or restoration of lands within the Sycamore Flat East riparian corridor. Mitigation shall include a combination of enhancement and restoration of approximately 5.8 acres within the existing Sycamore Flat East riparian corridor and adjacent floodplain to improve the quality of habitat for this species. Potential indirect impacts to LBV shall be mitigated by implementing the following measures during all construction activities within 300 feet of potential LBV habitat: (1) to the extent feasible, grading and other construction activities within 300 feet of potential LBV habitat should take place outside the breeding season (March 15 to September 15); if grading or construction activities occur during breeding season, the mitigation measures in items (8)-(11) below shall be implemented; (2) to the extent practicable, all potential LBV habitat to be removed by the project should be cleared outside the breeding season (March 15 to September 15); if grading or construction activities occur during breeding season, the mitigation measures in items (8)-(11) below shall be implemented; (3) construction limits in and around LBV potential habitat shall be delineated with flags and fencing prior to the initiation of any grading or construction activities; (4) prior to grading and construction a training program shall be developed and implemented to inform all workers on the project about listed species, sensitive habitats, and the importance of complying with avoidance and minimization measures; (5) all construction work shall occur during the daylight hours; (6) noise from construction activities shall be limited to the extent possible through the maximum use of technology available to reduce construction equipment noise; (7) two brown-headed cowbird traps shall be installed and maintained within the general vicinity (within 500 feet) of the habitat for five years. Additional measures shall be taken for all construction activities within 300 feet of potential LBV habitat during the breeding season (March 15 to September 15) and are set forth in items (8)-(11) herein; (8) pre-construction surveys shall be conducted within one week prior to initiation of construction activities and all results forwarded to the USFWS and CDFG; focused surveys shall be conducted for LBV during construction activities; (9) if at any time LBV are found to occur within 300 feet of construction areas, the monitoring biologist shall inform the appropriate construction supervisor to cease such work and shall consult with the USFWS and CDFG to determine if work shall commence or proceed during the breeding season; and, if work may proceed, what specific measures shall be taken to ensure LBV are not affected; (10) monitoring by a qualified acoustician shall be conducted as needed to verify noise levels are below 60 dBA required within identified, occupied LBV territories; if the 60 dBA requirement is exceeded, the acoustician shall make operational changes and/or install a barrier to alleviate noise levels during the breeding season; and (11) installation of any noise barriers and any other corrective actions taken to mitigate noise during the construction period shall be communicated to the USFWS and CDFG.	Development Services Director	Ongoing

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Biological Resources (Continued)		
5-5	Nesting Birds. To protect nesting birds regulated by the federal Migratory Bird Treaty Act, to the extent feasible, vegetation removal activities shall be scheduled between September 1 and February 14 to avoid the nesting bird season. If clearing and/or grading activities cannot be avoided during the nesting season, all suitable habitat will be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to removal. If any active nests are detected, the area will be flagged, along with a minimum 100-foot buffer (buffer may range between 100 and 300 feet as determined by the monitoring biologist) and will be avoided until the nesting cycle is complete or it is determined by the monitoring biologist that the nest has failed. A biologist will be present on the site to monitor any vegetation removal to ensure that nests not detected during the initial survey are not disturbed.	Development Services Director	Issuance of Grading Permit
5-6	Burrowing Owl. In order to avoid impacts to any burrowing owls that may colonize the development impact footprint prior to commencement of construction activities, a Phase III protocol survey shall be conducted within 30 days prior to commencement of any ground disturbance activities (California Burrowing Owl Consortium, 1993). This pre-construction survey would entail four separate days between two hours before sunset to one hour after or one hour before sunrise to two hours after. This survey applies during both the breeding season (February 1 through August 31) as well as the non-breeding season when wintering owls are most likely detected if present (December 1 through January 31). If burrowing owls are detected within the development impact footprint or within approximately 150 feet of the impact area, on-site passive relocation would be conducted during the non-breeding season in accordance with the established protocol (California Burrowing Owl Consortium, 1993).	Development Services Director	Issuance of Grading Permit
5-7	San Bernardino Kangaroo Rat. In order to effectively mitigate the project-related impacts to the San Bernardino kangaroo rat (SBKR), a combination of several measures shall be implemented including: (1) avoidance, preservation, and creation of on-site habitat; (2) preservation, creation, and connectivity of off-site habitat; (3) avoidance and minimization of direct individual SBKR mortality during construction; (4) minimization of indirect individual SBKR mortality through edge effects; and (5) management programs to assure the ability to sustain on-site and off-site SBKR populations in the long-term. Implementation of these measures shall result in the preservation of a minimum of 316.2 acres of occupied on-site habitat and the creation of a minimum of 75.0 additional acres of habitat for the species (approximately 34.5 acres upstream of and a minimum of 40.5 acres downstream of the Cemex USA quarry). On-site avoidance and preservation. On-site avoidance and preservation of occupied habitat shall contribute a total of approximately 316.2 acres to the existing 216.8-acre "SBKR Conservation Area." The acreage to be contributed shall support pioneer and intermediate RAFSS where SBKR populations are reported to reach their highest numbers and densities and mature RAFSS which are theorized to serve as refugia and sources for recolonization and repopulation following episodic flooding in active wash areas. [CONTINUED]	Development Services Director	Issuance of Grading Permit

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Biological Resources (Continued)		
5-7 (Cont.)	On-site mitigation shall include restoration, creation, and preservation of approximately 34.5 acres of chamise chaparral within Neighborhood II above the 100-year floodplain that is immediately downstream of, and contiguous with, the "SBKR Conservation Area." The Applicant shall remove the chamise and other species detrimental to the SBKR (such as non-native grasses) and manage these approximately 34.5 acres to supplement the already established founder population (that utilizes the habitat in the "SBKR Conservation Area") within the wash upstream of the Cemex USA quarry operation. Individual SBKR within the impact footprint shall be salvaged and translocated to unoccupied rehabilitated habitat within the mitigation area. Off-site preservation and connectivity. In order to achieve adequate mitigation for impacts to occupied habitat downstream of the Cemex USA quarry, the Applicant shall remove chamise from and manage a total of 40 acres within off-site areas offering refugia habitat downstream of the Cemex USA quarry operations to assure a stable population in the downstream wash area. This shall be done by the Applicant in combination with a long-term management plan and managed in perpetuity within the existing Cemex USA mitigation area, San Bernardino County Sheriff woollystar preserve, San Bernardino County Flood Control conservation area, and/or Vulcan Materials Company's Cajon Creek conservation bank. The criteria for such off-site lands are: (1) upland refugia must be adjacent to active wash areas; (2) the minimum size of any single upland island/patch is 5 acres; and (3) upland refugia must have 80 to 90 percent of its interface between the active wash and upland (common perimeter) that is topographically passable by the species (not supporting steep escarpments) to ensure individuals have access to the wash. Individual SBKR shall be translocated from the impact areas to newly acquired and restored areas to assist with initial colonization. Refinement of mitigation program through consultation with USFWS. As required under the Federal Endangered Species Act, during the "formal" Section 7 consultation the USFWS will gather all relevant information concerning the proposed project and the potential project-related impacts on the SBKR and designated critical habitat, prepare a biological opinion with respect to whether the project is likely to jeopardize the continued existence of the species, and formulate alternatives and mitigation/conservation measures where appropriate. Among those measures to be considered by USFWS are those described herein. At its sole discretion, the USFWS may refine, expand, and/or substitute some of these measures, or parts thereof, based on its analysis and determination that such modifications are required to comply with federal law. Accordingly, as long as any such modified, different or substituted on-site or off-site habitat creation, restoration, enhancement and/or management measures are found by the USFWS to result in a SBKR conservation program that is at least as effective in mitigating the impacts to SBKR as proposed herein (as evidenced by a determination by USFWS that the proposed project will not jeopardize the continued existence of the SBKR or result in the adverse modification of its designated critical habitat), such measures may be substituted for the on-site and off-site habitat creation, restoration, enhancement and/or management measures identified herein. [CONTINUED]		

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Biological Resources (Continued)		
5-7 (Cont.)	Avoidance and minimization of direct mortality of individuals. Construction-related mortality to individual SBKR shall be avoided through the design and implementation of a pre-construction trapping and relocation program. Key elements of this program shall include: (1) initial establishment of one or more receiver sites where suitable habitat is known to be unoccupied, is significantly below carrying capacity levels, and/or where scrub vegetation has been restored and colonization by the species has not occurred; (2) installation of exclusionary fencing at the limits of construction within suitable habitat areas; and (3) live-trapping of suitable habitat within construction areas and the relocation of trapped individuals to one or more biologically appropriate receiver sites. Implementation of the trapping and relocation program shall begin with the installation of appropriate exclusionary fencing to a height of three feet around all construction areas within occupied SBKR habitat. A qualified and permitted biologist shall then conduct live trapping of the construction area to the extent necessary to be confident that all SBKR have been removed and relocated. It is anticipated that live trapping and relocation shall be conducted one time prior to construction; however, follow-up monitoring of the silt fence integrity shall be preformed on a daily basis during construction. If at any point the fencing is compromised, construction shall be suspended in the area, repairs to the fence shall be made, and the trapping and relocation program shall be repeated. Minimization of indirect mortality of individuals. Edge effects, or mortality due to the “spillover” effects of development near and adjacent to areas preserved for the benefit of the species shall be minimized through design elements intended to buffer and avoid human-wildlife conflicts. Key elements shall include: (1) installation of a cat-proof fence at the perimeter of development where it abuts preservation areas, and the location of all pedestrian and vehicular routes and trails outside the fence (except any routes necessary solely for conservation activities within the preserved habitat areas or associated with any pre-existing easements); (2) prohibition of night lighting along the perimeter of preserved areas; (3) direction of all night lighting within development areas away from preserved areas; (4) installation of signage to direct human activity away from preserved habitat areas; (5) prohibition of unleashed dogs within preserved habitat areas; and (6) implementation of a homeowner’s awareness program to educate residents about the conservation values associated with preserved habitat areas. Long-term management of preserved habitat areas. All areas to be preserved as natural (undisturbed) biological open space to benefit the SBKR within the LCRSP study area, as well as all areas to be restored both on and off the site, shall be monitored biologically for five years and managed in perpetuity by an appropriate management entity. Monitoring of SBKR populations within the areas to be preserved shall take place over a five-year period to ensure the success of the mitigation efforts such that they provide suitable habitat for this species. On-going maintenance (e.g., fence and sign repair) and management (e.g., periodic vegetation thinning) shall be a part of the long-term management plan. [CONTINUED]		

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Biological Resources (Continued)		
5-7 (Cont.)	As determined by the Director, this plan shall be funded through a combination of up-front capital costs and revenue-generating, non-wasting endowment funded by the Applicant. If additional work is determined to be necessary after the five years of monitoring, the funds provided by the Applicant shall be such that they cover adaptive management necessary to meet the success criteria stated therein.		
5-8	Invasive Plant Management Plan. Prior to the commencement of any grubbing or grading activities, the Applicant shall submit and, when acceptable, the Director shall approve an invasive plant management plan, including, but not necessarily limited to: (1) preventive practices to avoid the transport and spread of weeds and weed seed during project development and operation; (2) a plan to control noxious weeds and weeds of local concern within designated open space areas; and (3) a strategy to educate construction personnel and homeowners in noxious weed identification and awareness. The invasive plant management plan shall incorporate weed prevention and control measures including, but not necessarily limited to: (1) use of only certified weed-free hay, straw, and other organic mulches to control erosion; (2) use of road surfacing and other earthen materials for construction that are certified weed free; and (3) use of only certified weed-free seed for the reclamation of disturbed areas.	Development Services Director	Issuance of Grading Permits
	Transportation and Traffic		
6-1	As a condition to the issuance of final grading permits, the Applicant shall be responsible for the repair of any damage to roads resulting from the delivery of heavy equipment and building materials and the import and export of soil and other materials to and from the project site. Any resulting roadway repairs shall be to the satisfaction of the City, if within the City, or the County, if located in an unincorporated County area.	City Engineer	Issuance of Grading Permits
6-2	Traffic Control Plan. Prior to the issuance of the final grading plan for new major development projects, defined herein as 50 or more new dwelling units and/or 50,000 or greater square feet of new non-residential use, the Applicant shall submit and, when deemed acceptable, the City Engineer shall approve a traffic control plan (TCP), consistent with Caltrans' "Manual of Traffic Controls for Construction and Maintenance Work Zones," or such alternative as may be deemed acceptable by the City Engineer, describing the Applicant's efforts to maintain vehicular and non-vehicular access throughout the construction period. If temporary access restrictions are proposed or deemed to be required by the Applicant, the plan shall delineate the period and likely frequency of such restrictions and describe emergency access and safety measures that will be implemented during those closures and/or restrictions.	City Engineer	Issuance of Grading Permits

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Transportation and Traffic (Continued)		
6-3	Construction Traffic Safety Plan. Prior to the issuance of the final grading permit for new major development projects, the Applicant shall submit and, when deemed acceptable, the City shall approve a construction traffic mitigation plan (CTMP). The CTMP shall identify the travel and haul routes through residential neighborhoods, if any, to be used by construction vehicles; the points of ingress and egress of construction vehicles; temporary street or lane closures, temporary signage, and temporary striping; the location of materials and equipment staging areas; maintenance plans to remove spilled debris from neighborhood road surfaces; and the hours during which large construction equipment may be brought onto and off the project site. The CTMP shall provide for the scheduling of construction and maintenance-related traffic so that it does not unduly create any safety hazards to children, to pedestrians, and to other parties.	City Engineer	Issuance of Grading Permits
6-4	Fair-Share Contribution. Based on a schedule and in an amount established by the City, as developed in consultation with the County, the Applicant shall equitably contribute to the implementation of identified improvement to the following project area and CMP intersections by paying a "fair share" of the cost of those improvements. These measures are included as part of those transportation improvements being funded by the City's transportation development impact fees. The project will be required to pay into this fund, less any in-lieu credit for measures which the Applicant implements. [1] I-215 Freeway NB On/Off Ramps/Arrowhead Boulevard/Devore Road. Install traffic signal. [2] Cajon Blvd/Glen Helen Parkway. Install traffic signal. [3] I-215 Freeway NB On/Off Ramps/Palm Avenue. Install traffic signal. [4] I-215 Freeway SB On/Off Ramps/Palm Avenue. Install traffic signal. [5] I-215 Freeway SB On/Off Ramps/University Parkway. Improve University Parkway to provide an exclusive right-turn lane in the NB direction and one left-turn lane, one left/through-shared lane, and one through lane in the SB direction. In order to accommodate the left-through-shared lane, modify the existing traffic signal to allow split phases for the NB and SB approaches. [6] Lytle Creek Road/Glen Helen Parkway. Restripe Lytle Creek Road to accommodate one left-turn lane and two through lanes in the southeast-bound direction and two through lanes and one right-turn lane in the northwest-bound direction. Improve and restripe the Glen Helen Parkway approach at Lytle Creek Road to provide dual left-turn lanes and one right-turn lane. Install a traffic signal at this location. [7] Lytle Creek Road/Sierra Avenue. Restripe Lytle Creek Road and Sierra Avenue to accommodate one left-turn lane and two through lanes in the northwest-bound direction and one through lane and one through/right-shared lane in the southeast-bound direction. Install a traffic signal at this location. [8] I-15 Freeway SB On/Off Ramps/Sierra Avenue. Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the northwest-bound direction and two through lanes and one free right-turn lane in the southeast-bound direction. Widen the SB off-ramp to accommodate one left-turn lane, one left/right-shared lane, and one right-turn lane. Install a traffic signal at this location. [9] I-15 Freeway NB On/Off Ramps/Sierra Avenue. Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the southeast-bound direction and two through lanes and one right-turn lane in the northwest-bound direction. Reconstruct the NB off-ramp to accommodate one left-turn lane, one left/through-shared lane, and one free right-turn lane. Install a traffic signal at this location. [CONTINUED]	Development Services Director	Tentative "B" Map Approval

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Transportation and Traffic (Continued)		
6-4 (Cont.)	[10] I-15 Freeway SB On/Off Ramps/Summit Avenue. Restripe Summit Avenue to accommodate one additional left-turn lane in the EB direction. [11] I-15 NB Freeway On/Off Ramps/Summit Avenue. Restripe the NB off-ramp to provide dual left-turn lanes and one right-turn lane. [12] Riverside Avenue/Sierra Avenue. Widen and restripe Sierra Avenue to provide dual left-turn lanes and two through lanes in the SB direction. Improve the intersection to allow a free right-turn from Riverside Avenue onto Sierra Avenue. Install a traffic signal at this intersection. [13] Riverside Avenue/Linden Avenue. Widen and restripe to provide one left-turn lane, one through lane, and one through/right-shared lane in the northwest-bound direction. [14] SR-210 Freeway WB On/Off Ramps/Alder Avenue. Restripe the WB approach to provide one left-turn lane and one left/through/right-shared lane. [15] SR-210 Freeway WB On/Off Ramps/Riverside Avenue. Flare and restripe Riverside Avenue to provide an exclusive right-turn lane in the SB direction. In addition, improve the Sr-210 off-ramp to provide one left-turn lane, left/through/right shared lane, and one right-turn lane. [16] SR-210 Freeway EB On/Off Ramps/Riverside Avenue. Improve Riverside Avenue to provide two through lanes and two right-turn lanes in the NB direction and dual left-turn lanes and two through lanes in the SB direction. [17] SR-210 Freeway WB On/Off Ramps/State Street. Improve State Street to provide dual left-turn lanes and two through lanes in the NB direction and one through lane, one through/right shared lane, and one right-turn lane in the SB direction. [18] SR-210 Freeway EB On/Off Ramps/State Street. Flare and restripe the EB off-ramp to provide one left-turn lane, one left/through-share lane, and two right-turn lanes. Modify the traffic signal to accommodate a right-turn overlap phase for the off-ramp EB approach and the SB approach on State Street. [19] Highland Avenue/State Street. Flare and restripe Highland Avenue to provide dual left-turn lanes, one through lane, and one through/right-shared lane in the WB direction and one left-turn lane, one through lane, one through/right-shared lane, and one right-turn lane in the EB direction. [20] Easton Street/Ayala Drive. Flare and restripe Easton Street in the EB direction to accommodate an exclusive right-turn lane. Modify the traffic signal to include a right-turn overlap phase with the left-turn phase in the NB direction. [21] Baseline Road/Alder Avenue. Flare and restripe Alder Avenue to provide one left-turn lane, one through lane, and one through/right shared lane in the SB direction. [22] Rialto Avenue/Cedar Avenue. Flare and restripe Cedar Avenue to provide an exclusive right-turn lane in the SB direction. [23] Merrill Avenue/Cedar Avenue. Flare and restripe Cedar Avenue to provide an exclusive right-turn lane in the NB direction and Merrill Avenue to provide an exclusive right-turn lane in the EB direction. Additional right-of-way may be required to implement this measure.		
6-5	Study Area Roadways. Based on a schedule established by the City, in consultation with the County, the Applicant shall undertake the following non-intersection improvements to study area roadways. These improvements could, however, be implemented by SanBAG, the City, the Applicant, and/or by others. [1] Lytle Creek Road. Widen and restripe Lytle Creek Road from Glen Helen Parkway to Sierra Avenue to provide two through lanes in each direction. [2] Glen Helen Parkway. [CONTINUED]	City Engineer	Tentative "B" Map Approval

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Transportation and Traffic (Continued)		
6-5 (Cont.)	Widen and restripe Glen Helen Parkway between Lytle Creek Road and Cajon Boulevard to provide two through lanes in each direction. [3] Sierra Avenue. Improve Sierra Avenue to provide two through lanes in each direction between Riverside Avenue and just north of Glen Helen Parkway. [4] Riverside Avenue. Widen and restripe Riverside Avenue between Sierra Avenue and Ayala Drive to provide two through lanes in each direction.		
6-6	Freeway Study Segments. Those CMP freeway improvements that are located in the study area are described below: (1) add a high-occupancy-vehicle (HOV) lane in the NB and SB directions on I-15 Freeway between the I-215 and the I-10 Freeways; (2) add a mainline lane in the NB and SB directions on the I-215 Freeway between the I-15 and the SR-259 Freeway; (3) improve the I-215 Freeway between the SR-259 and the I-10 Freeways to provide four mainline and one HOV lane in the NB and SB directions; (4) improve the SR-210 Freeway between the I-15 Freeway and Highland Avenue to provide a total of three mainline lanes and one HOV lane in the WB and EB directions; and (5) add a mainline lane on the SR-30 Freeway between Highland Avenue and the I-10 Freeway in the WB and EB directions. In addition to those freeway improvements, other physical improvements to address the cumulative impact of overall regional growth could include the addition of one freeway lane on the segments below: (1) I-215 Freeway between Highland Avenue and Massachusetts Avenue (NB and SB); (2) I-215 Freeway between Massachusetts Avenue and SR-259 Freeway (NB and SB); (3) I-215 Freeway between SR-259 Freeway and Baseline Street (NB only); (4) I-215 Freeway between Baseline Street and 5th Street (NB and SB); (5) I-215 Freeway between 2nd Street and Mill Street (NB and SB); (6) SR-210 Freeway between Riverside Avenue and Pepper Avenue (EB only); (7) SR-210 Freeway between Pepper Avenue and State Street (WB and EB); and (8) SR-210 Freeway between State Street and I-215 Freeway (WB and EB). Based on an implementation schedule and in an amount to be established by the City, as developed in consultation with the County and Caltrans, the Applicant shall equitably contribute to the implementation of identified regional transportation system improvement by paying a "fair share" of the cost of those improvements. These measures are included as part of those transportation improvements being funded by the City's transportation development impact fees. The project will be required to pay into this fund, less any in-lieu credit for measures which the Applicant implements.	City Engineer	Tentative "B" Map Approval
	Air Quality		
7-1	The Applicant shall water all active grading areas a minimum of three times per day (as opposed to two).	Building Inspector	Ongoing
7-2	All construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.	Building Inspector	Ongoing

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Air Quality (Continued)		
7-3	The Applicant shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall turn their engines off when not in use to reduce vehicle emissions. Construction emissions shall be phased and scheduled to avoid emissions peaks to the extent feasible and discontinued during second-stage smog alerts.	Building Inspector	Ongoing
7-4	The Applicant shall use line power instead of diesel- or gas-powered generators at all construction sites where ever line power is reasonably available.	Building Inspector	Ongoing
7-5	Unless required for safety reasons, during construction, equipment operators shall limit the idling of all mobile and stationary construction equipment to no more than five minutes. The use of diesel auxiliary power systems and main engines shall also be limited to no more than five minutes when within 100 feet of homes or schools while driver is resting.	Building Inspector	Ongoing
7-6	Active grading activities shall be limited to 10 acres per day or less when grading within 1,000 feet of residential receptors.	Building Inspector	Ongoing
7-7	The Applicant shall implement measures to reduce the emissions of pollutants generated by heavy-duty diesel-powered equipment operating at the project site throughout the project construction. The Applicant shall include in construction contracts the control measures required and recommended by the SCAQMD at the time of development. These measures include the following: (1) Use Tier II (2001 or later) heavy-duty diesel-powered equipment at the project site; (2) Apply NO_X control technologies, such as fuel injection timing retard for diesel engines and air-to-air cooling, and diesel oxidation catalysts as feasible; feasibility shall be determined by using the cost-effectiveness formula developed by the Carl Moyer Program; and (3) General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions and keep all construction equipment in proper tune in accordance with manufacturer's specifications.	City Engineer	Issuance of Grading Permits
7-8	If stationary equipment, such as generators for ventilation fans, must be operated continuously, locate such equipment at least 100 feet from homes or schools, where possible.	Building Inspector	Ongoing
7-9	Applicant shall ensure that the construction contractors utilize architectural coatings that contain a VOC rating of 75 grams/liter of VOC or less.	Development Services Director	Issuance of Building Permits
7-10	The Applicant shall, to the extent feasible, promote, support, and encourage the scheduling of deliveries during off-peak traffic periods to encourage the reduction of trips during the most congested periods.	Building Inspector	Ongoing
7-11	The specific plan shall include design and development standards and plans describing and delineating the location of all planned bicycle paths, routes, and trails and, excluding street-adjacent sidewalks, pedestrian pathways located within the project boundaries.	Development Services Director	Specific Plan Approval

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Air Quality (Continued)		
7-11 (Cont.)	Bicycle and pedestrian facility plans shall illustrate the physical linkages between on-site residential, commercial, and publicly accessible recreational areas and show the connectivity between those on-site facilities and existing and proposed off-site facilities delineated on adopted City and County plans. Motorized and non-motorized travel routes shall be minimized to the maximum extent feasible.		
7-12	During site plan review, due consideration shall be given to the provision of safe and convenient pedestrian and bicycle access to transit stops and to public transportation facilities.	Development Services Director	Tentative "B" Map Approval
7-13	Without forfeiting other development opportunities that may exist thereupon, development plans for Neighborhoods III or IV shall be revised to incorporate a park-and-ride/park-and-pool facility in proximity to the intersection of Sierra Avenue and Riverside Avenue (in the vicinity of PAs 27 or 33) or in an alternative location and of a size acceptable to the Director. Park-and-ride/park-and-pool facilities can be accommodated as part of or independent from a commercial development thought the provision of on-site parking opportunities in exceed of the parking requirements otherwise imposed by that use, accommodated at the perimeter of a residential development through the incorporation of appropriate design elements, or accommodated in a non-conservation open space area where such use can be shown not be produce a deleterious biological resource impact.	Development Services Director	Tentative "B" Map Approval
7-14	The Applicant shall provide covered transit benches at the park-and-ride/park-and pool facility and, should the local transit authority change existing and/or add new bus routes within the project site or along public roadways abutting the project site, at additional transit stops within the project boundaries.	Development Services Director	Tentative "B" Map Approval
7-15	The specific plan shall be modified to prohibit the on-site development of the following land uses: (1) heavy industrial; (2) landfills and transfer stations; (3) hazardous waste and medical waste incinerators; and (4) chrome plating facilities.	Development Services Director	Specific Plan Approval
7-16	Future purchasers of real property located within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the main truck route and active mining areas at the Cemex USA quarry and the Vulcan Materials Company plant shall, in accordance with the disclosure requirements of the California Department of Real Estate, receive notification that residential occupants and other sensitive receptors may be exposed to excess cancer risks as a result of long-term exposure to toxic air contaminants, including diesel particulate matter, associated with diesel-powered vehicles traveling along and operating within those areas.	Development Services Director	Ongoing
7-17	All dwelling units within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the main truck route and active mining areas at the Cemex USA quarry and Vulcan Materials Company plant shall incorporate an air filtration system designed to have a minimum efficiency reporting value (MERV) of 12 or better as indicated by the American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 52.2.	City Engineer	Issuance of Building Permits

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Air Quality (Continued)		
7-18	Excluding pedestrian and bicycle trails, sensitive public recreational uses, such as active outdoor playground, shall be prohibited within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the main truck route and active mining areas at the Cemex USA and Vulcan Materials Company quarries.	Development Services Director	Tentative "B" Map Approval
	Noise		
8-1	Noise barrier shall be constructed along any residential lots and school sites adjacent to the I-15 Freeway, Lytle Creek Road, Glen Helen Parkway, Sierra Avenue, and Riverside Avenue. Depending on the final lot grade elevations relative to the roadway elevations, noise barrier height of ranging between 5-8 feet would reduce the traffic noise to 65 dBA CNEL at outdoor noise sensitive uses, including residential backyards and courtyards and school playgrounds. A higher noise barrier will likely be required to mitigate I-15 Freeway noise. Overall height of noise barrier can be achieved by solid walls, earthen berms or combination of walls and earthen berms. Final noise barrier height shall be assessed when the final site and grading plans are completed. Prior to the issuance of grading permits for development projects located along I-15 Freeway, Lytle Creek Road, Glen Helen Parkway, Sierra Avenue, and Riverside Avenue, an acoustical analysis shall be prepared by a qualified acoustical consultant and submitted to, and when deemed acceptable, accepted by the City Engineer. The report shall determine the need for any noise barriers or other mitigation strategies and, if required, identify noise barrier heights, locations, and configurations capable of achieving compliance with applicable City standards.	Development Services Director	Tentative "B" Map Approval
8-2	The interior noise environment of residential structures (habitable rooms) and school classrooms shall not exceed 45 dBA CNEL. Prior to the issuance of building permits for those uses, an acoustical analysis shall be prepared by a qualified consultant and submitted to, and when deemed acceptable, accepted by the City Engineer for all new residential and school developments where exterior areas are projected to be 65 dBA CNEL or higher at the project's build-out, documenting that an acceptable interior noise level of 45 dB L_{dn} (or CNEL) or below will be achieved with the windows and doors closed and identifying any design or development measures that would be required to achieve that standard.	City Engineer	Issuance of Building Permits
8-3	Prior to the issuance of building permit for non-residential uses within the "Village Center Commercial (VC) district and "General Warehousing Overlay, an acoustical analysis shall be prepared by a qualified acoustical consultant and submitted to, and when deemed acceptable, accepted by the City Engineer demonstrating that an acceptable interior noise level of 45 dB L_{dn} (or CNEL) or below will be achieved for adjacent residential uses (including hotel, motel, transient lodging), office buildings, amphitheaters, auditoriums, meeting halls, movie theaters, churches, and other similar sensitive uses and that an acceptable interior noise level of 50 dB L_{dn} (or CNEL) or below will be achieved for retail commercial uses, banks, restaurants, and other similar uses with the windows and doors closed and identifying any design or development measures that would be required to achieve those standards.	Development Services Director	Issuance of Building Permits

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Noise (Continued)		
8-4	To the extent feasible, schools and parks shall be designed to: (1) locate and orient vehicle access points, including pick-up and drop-off areas, away from noise sensitive uses; (2) locate loading and shipping facilities away from adjacent noise sensitive uses; (3) minimize the use of outdoor speakers and amplifiers oriented toward adjacent sensitive receptors; and (4) incorporate fences, walls, landscaping, and other noise buffers and barriers between the proposed use and other abutting noise sensitive uses.	Development Services Director	Tentative "B" Map Approval
8-5	Since the upper levels of residential units located adjacent to I-15 Freeway could be exposed to noise levels in excess of City standard, design plans for residential projects adjacent to the I-15 Freeway shall either exclude balconies facing the I-15 Freeway or incorporate noise barriers in the design of those balconies, such as transparent plexiglass, which would reduce freeway noise at those balconies to 65 dBA CNEL.	Development Services Director	Issuance of Building Permits
	Public Services and Recreation		
9-1	Police Protection. The Applicant shall take such actions and pay such fees as may be reasonably imposed by the Rialto Fire Department (RPD) to ensure the timely provision of adequate and appropriate police protection and emergency services to the LCRSP and the uses authorized therein. This measure neither precludes the Applicant from identifying alternative actions and/or fees which can be demonstrated to result in the attainment of those same or similar objectives nor obligates the RPD to accept those alternative measures and/or fees in lieu of those identified by the RPD. If consensus cannot be reached between the RPD and the Applicant, the City Council shall establish the actions and fees applicable to the proposed project. Should the City subsequent adopt an impact fee program for police protection services, unless a substitute measure(s) is imposed by the City, payment of applicable impact fees would effectively mitigation project-related impacts upon police protection services and serve to fulfill the Applicant's obligations hereunder.	Police Chief	Specific Plan Approval
9-2	Police Protection. As specified by the RPD and in accordance with Section 505.1 (Premise Identification) in Chapter 15.28 (Fire Code) in Title 15 (Building and Construction) of the City Municipal Code, final design plans for individual residential and non-residential development projects shall include clearly visible street address signs and/or building numbers to allow for ease of identification during both day and nighttime periods and facilitate emergency response.	Development Services Director	Issuance of Building Permits
9-3	Police Protection. Prior to the issuance of building permits for new construction projects, the RPD shall be provided the opportunity to review and comment upon building plans in order to: (1) facilitate opportunities for improved emergency access and response; (2) ensure the consideration of design strategies that facilitate public safety and police surveillance; (3) offer specific design recommendations to enhance public safety; and (4) through the incorporation of "crime prevention through environmental design" (CPTED) strategies, reduce potential demands upon police services.	Police Chief	Issuance of Building Permits

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Public Services and Recreation (Continued)		
9-4	Fire Protection. Prior to the issuance of building permits for any habitable use in Neighborhoods I and IV, the Applicant shall demonstrate to the satisfaction of the RFD and/or to the agency with fire protection and emergency service jurisdiction over that area that either: (1) NFPA 1710 response standards can and will be satisfied prior to the issuance of any occupancy permits within those areas; or (2) although NFPA 1710 response standards cannot be satisfied, that alternative actions, measures, and/or design features, acceptable to the RFD and/or the jurisdictional agency, have been incorporated into the project's development plans and/or habitable uses as to constitute an acceptable response standard for those areas.	Fire Chief	Issuance of Building Permits
9-5	Fire Protection. The Applicant shall take such actions and pay such fees as may be reasonably imposed by the RFD to ensure the timely provision of adequate and appropriate fire protection and emergency services to the LCRSP and the uses authorized therein. This measure neither precludes the Applicant from suggesting alternative actions and/or fees which can be demonstrated to result in the attainment of those same or similar objectives nor obligates the RFD to accept those alternative measures and/or fees in lieu of those identified by the RFD. If consensus cannot be reached between the RFD and the Applicant, the City Council shall establish the actions and fees applicable to the proposed project. Should the City subsequent adopt an impact fee program for fire protection services, unless a substitute measure(s) is imposed by the City, payment of applicable impact fees would effectively mitigation project-related impacts upon fire protection services and serve to fulfill the Applicant's obligations hereunder.	Fire Chief	Specific Plan Approval
9-6	Schools. Prior to the issuance of any building permits for residential and/or non-residential uses within the boundaries of the Rialto Unified School District (RUSD), the Fontana Unified School District (FUSD), and/or the San Bernardino City Unified School District (SBCUSD), the Applicant shall present the City with a certificate of compliance or other documentation acceptable to the City demonstrating that the Applicant has complied with applicable school board resolutions governing the payment of school impact fees and/or has entered into an Assembly Bill 2926-authorized school facilities funding mitigation agreement with the applicable school district(s) or is exempt from the payment of school impact fee exactions.	Development Services Director	Issuance of Building Permits
9-7	Schools. Prior to the recordation of any final "B" level subdivision map (excluding any "A" level subdivision map for financing purposes only) specifying the location for a new public school site(s), the Applicant shall present the City with documentation, acceptable to the City, evidencing that the location, configuration, and size of the proposed school site has been found acceptable or has been found conditionally acceptable by the public school district in whose jurisdiction the site is located. The City, at its discretion, may condition the approval of the final subdivision map and/or any subsequent entitlements therein upon the fulfillment of any conditions subsequent or the Applicant's performance of such other actions as may be reasonably anticipated to produce compliance with conditions identified by that school district.	Development Services Director	Tentative "B" Map Approval

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Public Services and Recreation (Continued)		
9-8	Parks and Recreation. Prior to the recordation of any "B" level subdivision map (excluding any "A" level subdivision map for financing purposes only) affecting lands upon which a regional trail segment has been identified in the "County of San Bernardino General Plan" (e.g., "Open Space – A Plan for Open Space and Trails for the County of San Bernardino"), the Applicant shall submit and, when acceptable, the City shall approve a "regional trail component plan" addressing the Applicant's plans to implement any on-site segments of those identified trails, including preservation of rights-of-way, recordation of easements, and applicable design and development standards governing the construction, operation, and maintenance of those trail segments, if any.	Community Development Director	Tentative "B" Map Approval
9-9	Parks and Recreation. To the extent that the Applicant seeks to apply the dedication and/or physical improvement of any lands designated "open space/joint use" in the LCRSP against City-imposed Quimby Act obligations, the City, at its sole discretion, shall determine to what extend, if any, such dedication and/or physical improvement constitutes an off-set against the Applicant's obligations under Chapter 17.23 (Park and Recreation Facilities Dedication) in the City Municipal Code.	Community Development Director	Tentative "B" Map Approval
9-10	Parks and Recreation. Prior to the recordation of the first "B" level subdivision map (excluding any "A" level subdivision map for financing purposes only), the Applicant shall execute a park-dedication agreement, in a form acceptable to the City, stipulating: (1) the type, quantity, location, and timing of any real property to be dedicated to the City; (2) any improvements thereupon which will be undertaken by the Applicant; and (3) identifying the party or parties that will be responsible for the maintenance of those lands. The land to be dedicated shall be suitable for public use as parks, trails, and/or active open space, as shall be determined in the sole discretion of the City and the City shall not be required to accept land which, in the sole discretion of the City, is not useable for parks, trails, and/or active open space or which would require extensive expenditures on the park of the City to make usable or which possess environmental conditions or constraints that would preclude their use for public park and recreational purposes. If deemed applicable, the City may require that the Applicant provide a bond or other instrument acceptable to the City ensuring the Applicant's performance under that agreement.	Community Development Director	Tentative "B" Map Approval
	Utilities and Service Systems		
10-1	Water Supply. Prior to the issuance of any grading permits, the Rialto Fire Department shall review and, when deemed acceptable, approve final water improvement plans including, but not limited to, the location, sizing, design, and capacity of any proposed water storage tanks, water mains, and fire hydrants to ensure the sufficiency of fire storage and delivery capacity and compliance with applicable City requirements.	Fire Chief	Issuance of Grading Permits
10-2	Water Supply. Prior to the issuance of grading permits, fire hydrants shall be installed in compliance with applicable code requirements (e.g., Section 10.301 of the Uniform Fire Code) or, if fire flow requirements cannot be fully satisfied from existing on-site fire hydrants and mains, alternative fire flow delivery measures acceptable to the Chief Officer of the Fire Department (Fire Chief) serving the jurisdiction shall be formulated and make conditions of grading permit approval. Prior to permit issuance, a letter of compliance or similar documentation shall be submitted to the City Engineer by the Fire Chief or designee.	City Engineer	Issuance of Grading Permits

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Utilities and Service Systems (Continued)		
10-3	Water Supply. Prior to the issuance of any building permits, the Applicant shall deliver to the City a will-serve letter or similar documentation from the project's water purveyor, as may be acceptable to the City Engineer, documenting the availability and sufficiency of water supplies to serve the proposed development.	City Engineer	Issuance of Building Permits
10-4	Wastewater. Prior to the issuance of building permits for any use that generates additional sewer flows, the City Engineer shall verify that adequate sewer capacity is in place to accommodate that development. This measure neither obligates the City to fund nor stipulates a performance schedule whereby any publicly funded improvements to the City's sewer collection and treatment system shall be implemented.	City Engineer	Issuance of Building Permits
	Cultural Resources		
12-1	Prior to the issuance of any grading permits in Neighborhoods II, III, and IV, the Applicant shall retain a qualified cultural resources consultant, meeting the United States Secretary of the Interior's Professional Qualification Standards for Archaeology or Architectural History, to prepare and submit to the City of Rialto and the California Historical Resources Information System San Bernardino Archaeological Information Center (CHRIS-SBAIC) a National Register nomination form for the Fontana Union Water Company Spreading Ground, incorporating SBR-6698H and SBR-6705H.	Development Services Director	Issuance of Grading Permits
12-2	The Applicant shall develop and incorporate into the project planning a preservation plan for a representative portion(s) of the southern intact sections of SBR-6698H. The preservation plan shall be developed by a qualified archaeologist or architectural historian meeting the United States Secretary of the Interior's Professional Qualification Standards for Archaeology or Architectural History. The preservation plan shall include a detailed map of the intact portions of SBR-6698H, place those portions in perpetual open space, and present interpretive information about the site and its history accessible to the public. Interpretive information shall include, but may not be limited to, appropriate informative signage and public access. The preservation plan shall be submitted to the City and the California Office of Historic Preservation and, when deemed acceptable, shall be accepted by the Development Services Director (Director) prior to issuance of grading permits in Neighborhoods II, III, and IV.	Development Services Director	Issuance of Grading Permits
12-3	In the event that in-situ preservation of the Fontana Union Water Company Spreading Ground is infeasible, as an alternate to and in lieu of Mitigation Measure 12-2, intact portions of the Fontana Union Water Company Spreading Ground (as identified during preparation of the National Register nomination form) that will be directly or indirectly impacted by the project's development shall be documented by means of a Historic American Landscape Survey (HALS) recordation, Level II. This level of documentation includes large-format archival-quality black-and-white photographs linked to a detailed site plan and a written narrative. Completion of the HALS recordation, including acceptance by the Director, shall be implemented prior to the issuance of any grading permits in Neighborhoods II, III, and IV. This documentation shall be prepared by a qualified architectural historian or historic landscape architect and a photographer experienced in Historic American Building Survey/Historic American Landscape Survey (HABS/HALS) photography. [CONTINUED]	Development Services Director	Issuance of Grading Permits

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Cultural Resources (Continued)		
12-3 (Cont.)	The overall landscape layout, structural elements, and features, as well as the property setting and contextual views shall be documented. Original archival prints and negatives of the photographs shall be submitted to the Library of Congress. Original archival prints shall also be submitted to the California State Archives. Archival copies of the documentation shall be distributed to the CHRIS-SBAIC and the Rialto Public Library.		
12-4	Prior to the issuance of any grading permit in Neighborhood IV, a qualified paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists shall be retained by the Applicant and approved by the City to develop and implement a paleontological monitoring plan. The monitoring plan shall be submitted to and, when deemed acceptable, accepted by the Director. Where deemed applicable in the judgment of the Director, the monitoring plan shall be imposed as a condition to the issuance of grading permits in Neighborhood IV.	Development Services Director	Issuance of Grading Permits
	Aesthetics		
13-1	The project design shall include a detailed "freeway edge treatment" which incorporates both extensive landscaping and a 15-foot wide landscape easement adjacent to the freeway in the developed portions of Neighborhoods I and IV. Although no landscaping is proposed within the Caltrans' right-of-way, trees and shrubs selected for their height and visual appearance shall be utilized to create a landscaped edge that will serve as a visual screen separating the freeway from on-site land uses, will serve to demarcate the project site, and will frame the development that will occur beyond. A landscape plan shall be submitted to the City and approval by the City prior to the recordation of the final "B" level subdivision map.	Development Services Director	Tentative "B" Map Approval
13-2	Development projects proposed in all neighborhoods shall incorporate landscape buffer areas along those major arterial highways within and abutting those neighborhoods and shall incorporate decorative wall and fence treatments and architectural details designed to enhance the visual appearance of those neighborhoods, allowing for individual identity while including unifying design elements consistent with the development standards and design guidelines set forth in the LCRSP. A landscape plan shall be submitted to the City and approved by the City prior to the recordation of each final "B" level subdivision map within all neighborhoods.	Development Services Director	Tentative "B" Map Approval
13-3	Where feasible, because of projected long-term water demands, landscape vegetation shall be comprised of drought tolerant and low-water consuming species that provide color and a visual softening to the hardscape structures that comprise the built environment. The landscape plan shall include a mix of such species and shall be approved by the City prior to recordation of the final "B" level subdivision map.	Development Services Director	Tentative "B" Map Approval
13-4	Areas that have been mass graded to accommodate later development upon which no project is immediately imminent shall be hydro-seeded or otherwise landscaped with a plant palette incorporating native vegetation and shall be routinely watered to retain a landscape cover thereupon pending the area's subsequent development. The landscape plan shall include a mix of such species appropriate for hydro-seeding and shall be approved by the City and appropriate fire departments (City and/or County) prior to the issuance of grading permits.	Development Services Director	Issuance of Grading Permits

Table ES-4 (Continued)
DRAFT MITIGATION REPORTING AND MONITORING PROGRAM

No.	Mitigation Measure	Compliance Verification	Mitigation Milestone
	Aesthetics (Continued)		
13-5	Grading within retained open space areas shall be minimized to the extent feasible. Graded open space areas within and adjacent to retained open space areas shall be revegetated with plants selected from a landscape palette emphasizing the use of native plant species.	Development Services Director	Issuance of Grading Permits
13-6	Prior to the installation of any high-intensity, outdoor sports lighting within a park site and/or school facility, a detailed lighting plan shall be prepared for the illumination of active recreational areas, including a photometric analysis indicating horizontal illuminance, and submitted to and, when deemed acceptable, approved by the Development Services Director. Plans shall indicate that high-intensity, pole-mounted luminaries installed for the purpose of illuminating field and hardcourt areas include shielding louvers or baffles or contain other design features or specification, such as selecting luminaire with cut-off features, to minimize light intrusion to not more than 0.5 horizontal foot candle, as measured at the property boundary. Compliance with these standards shall not be required for adjoining public streets, school or recreational facilities, and other non-light-sensitive land uses.	Development Services Director	Ongoing

Source: City of Rialto, Development Services Department

1.0 INTRODUCTION

1.1 Introduction to the Environmental Impact Report

This "Draft Environmental Impact Report – Lytle Creek Ranch Specific Plan, State Clearinghouse No. 2009061113" (DEIR)[1] has been prepared in accordance with the provisions of the California Environmental Quality Act, as amended (CEQA), codified in Division 13, Section 21000 *et seq*. of the Public Resources Code (PRC), and the State of California's (State) Guidelines for the Implementation of the California Environmental Quality Act, as amended (State CEQA Guidelines), codified in Title 14, Chapter 3, Sections 15000-15387 of the California Code of Regulations (CCR). The State CEQA Guidelines have been adopted by and serve as the local CEQA guidelines for the City of Rialto (City or Lead Agency).[2] This environmental impact report (EIR) has been prepared to address both program-level entitlements, such as, but not limited to, the adoption of the proposed "Lytle Creek Ranch Specific Plan"[3] (LCRSP) and the annexation of certain lands into the City, as well as project-level analysis for those conservation activities, public works projects, public facilities, and infrastructure improvements proposed within the geographic area addressed herein.

A portion of the geographic area that would be subject to the proposed LCRSP is currently within the City's jurisdiction and the remaining portion is located in unincorporated lands in San Bernardino County (County). Those unincorporated County areas examined in this environmental impact report (EIR) are within the City's adopted Sphere of Influence (SOI), as depicted in the "City of Rialto General Plan"[4] (City General Plan) and as determined the San Bernardino County Local Agency Formation Commission (LAFCO). Because the proposed project involves the annexation of land into the City and because, upon adoption, the City would assume land-use regulatory authority over the future development of those annexed areas, the City is acting in the role of "lead agency" for the purpose of CEQA compliance

Under the direction and supervision of the City's Development Services Department – Planning Division (Department), this EIR has been prepared by or under contract to the Lead Agency.[5] If and when subsequently certified,[6] this EIR will provide an environmental basis for informed decision making with regards to some or all of those discretionary actions that are or that may

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[1]/ If subsequently certified by the Lead Agency, unless otherwise altered, all references to the "Draft Environmental Impact Report – Lytle Creek Ranch Specific Plan, State Clearinghouse No. 2009061113" (DEIR) herein would be modified to the "Final Environmental Impact Report – Lytle Creek Ranch Specific Plan, State Clearinghouse No. 2009061113" (FEIR). As such, with regards to this document, the Lead Agency has sought to utilize the term "environmental impact report" (EIR).

[2]/ As indicated in Section 18.70.010 (Guidelines – Incorporation by Reference) in Chapter 18.70 (Environmental Review) in Title 18 (Zoning) of the "City of Rialto Municipal Code" (City Municipal Code): "The California Environmental Quality Act (CEQA) statutes, Public Resources Code Division 13, Sections 21000-21177, as amended by the State of California January 1, 2000, and the Guidelines for Implementation of the California Environmental Quality Act (CEQA), California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387 and Appendices A-K, as amended by the State of California December 1, 1999, are incorporated by reference as the environmental assessment objectives, criteria and procedural guidelines for the city."

[3]/ Lytle Development Joint Venture III (KTGY Group, Inc.), Draft Lytle Creek Range Specific Plan, December 2008, as revised.

[4]/ City of Rialto, City of Rialto General Plan, March 31, 1992.

[5]/ As defined in Section 15367 of the State CEQA Guidelines: "'Lead agency' means the public agency which has the principal responsibility for carrying out or approving a project. The lead agency will decide whether an EIR or negative declaration will be required for the project and will cause the document to be prepared."

[6]/ Certification includes a determination, by the agency's decision-making body, that: (1) the document has been completed in compliance with CEQA; (2) the agency has reviewed and considered the information in the EIR prior to approving the project; and (3) the document reflects the agency's independent judgment.

be required from the Lead Agency, from other responsible and trustee agencies,[7] and from federal agencies with jurisdiction over the project site,[8] jurisdiction over the resources located thereupon, and/or possessing discretionary authority over any of the land uses, development, and conservation activities, infrastructure improvements, public works, public facilities, and other projects, plans, and programs authorized or allowable under, contemplated in, or associated, either directly and indirectly, with the adoption and subsequent implementation of the LCRSP.

This EIR examines not only the adoption of the proposed specific plan, inclusive of any and all amendments to the land-use and related plans and policies of the City as may be associated with or logically follow the LCRSP's adoption, but also those annexation and reorganization activities, those development, redevelopment, and the conservation activities, and those real property, capital improvements, public works, public and private facilities, and infrastructure-related activities associated with the implementation of the LCRSP. In addition, this EIR examines those construction, implementation, operation, use, occupancy, habitation, and maintenance activities that may be associated, either directly or indirectly, with any of those actions to the extent that those actions are now known or knowable.

CEQA applies to "discretionary projects"[9] that are proposed to be carried out or approved by public agencies. In the context of CEQA, the term "project" is inclusive of any activity: (1) directly undertaken by a public agency including, but not limited to, public works construction and related activities, enactment and amendment of zoning ordinances, and amendments to general plans or elements thereof; (2) undertaken by a person which is supported in whole or in part through public assistance from one or more agencies; (3) involving the issuance of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies. In accordance therewith, the proposed LCRSP and those development, redevelopment, conservation, infrastructure, public works and public facility activities, and those discretionary

[7]/ As defined in Section 15381 of the State CEQA Guidelines: "'Responsible agency' means a public agency which proposes to carry out or approve a project, for which lead agency is preparing or has prepared an EIR or negative declaration. For the purpose of CEQA, the term 'responsible agency' includes all public agencies other than the lead agency which have discretionary approval power over the project."

[8]/ Reference to the "project site" or "site" herein is to the entire specific plan area addressed in the LCRSP. In addition to the 2,447.3 "on-site" acres that comprise the project site, this EIR also considers impacts to approximately 19.9 acres of additional "off-site" lands in which infrastructure improvements, such as levee and drainage improvements associated with the LCRSP, are proposed and will be constructed by the Applicant. Where applicable, however, the terms "project site" and "site" can be equally applied to the individual properties and parcels that collectively comprise the totality of the specific plan area. Similarly, the terms "project" and "program," as used herein to describe the activities contained in and authorized under the LCRSP, could be equally applied, both individually and collectively, to those publicly, semi-publicly, and privately proposed development, institutional, infrastructure-related, public works, and conservation-related activities that may follow the adoption of the LCRSP. Those terms are intended to have that multiple intent and application. The case of certain words, as excerpted from other materials and cited herein, has been changed and typographic errors, if any, found in the source documents corrected. Similarly, certain words are generally accepted in multiple forms and may appear herein in those forms (e.g., groundwater or ground water, stormwater or storm water, and decisionmakers and decision makers), based on the source document from which excerpts are derived. Unless noted, no distinction is made with regards to the meaning, application, or intent of those words. In making such changes, it has not been the City's intent to alter the meaning, application, or intent of those excerpts but merely to promote consistency and allow for the incorporation of those excerpts herein. Also, certain words which appear herein as adjectives, nouns, and proper nouns, may appear either with hyphenation (e.g., single-family and multi-family) or without hyphenation (e.g., single family and multi family) based on the source documentation or context. Unless as otherwise noted, the inclusion or absence of hyphenation is not intended to alter the meaning of those words.

[9]/ As defined in Section 15357 of the State CEQA Guidelines: "'Discretionary project' means a project which requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has a determination whether there has been conformity with applicable statutes, ordinances, or regulations."

actions associated therewith collectively constitute the project which is subject to the disclosure, outreach, noticing, and analytical provisions of CEQA and the State CEQA Guidelines.

As defined in the State CEQA Guidelines, the term "project" refers to the activity or activities which are being approved and which may be subject to several discretionary approvals by governmental agencies. The term "project" does not mean each separate governmental approval (14 CCR 15379[c]) but is intended to be inclusive of the totality of the all discretionary and encompassing actions before decision-making bodies. Based on that definition, the terms "project" and "program" are used interchangeably herein.

The LCRSP, as proposed by Lytle Development Joint Venture III (Applicant[10]) and as may be implemented by the Applicant or by any subsequent holder(s) of real property interests, is a regulatory tool designed to facilitate the systematic implementation of the City General Plan for that approximately 2,447.3-acre area.[11] The proposed specific plan area includes lands and uses now located within the corporate boundaries of the City and lands and uses contained within unincorporated County areas but located within the City's adopted sphere of influence (SOI).[12] The City's regional vicinity is depicted in Figure 1-1 (City of Rialto - Regional Vicinity Map) and its corporate boundaries and adopted SOI are illustrated in Figure 1-2 (City of Rialto – Corporate Boundaries and Sphere of Influence).[13]

Additionally, this DEIR also addresses the potential environmental impacts to an additional approximately 19.9 acres of added "off-site" area located outside the boundaries of the proposed LCRSP but directly impacted by the specific plan's adoption and implementation. These areas include: (1) an approximately 3.6-acre utility easement located adjacent to Neighborhood I which is within San Bernardino County Flood Control District (SBCFCD) property; (2) an approximately 2.6-acre area consisting of a 20-foot wide SBCFCD maintenance road extending from the eastern portion of Neighborhood II to a connection to Highland Street that will provide an interim, secondary point of construction-term ingress and egress to Neighborhood II; (3) an approximately 2.3-acre road easement extending beneath the I-15 Freeway, under the jurisdiction of the California Department of Transportation (Caltrans), and

[10]/ Reference to the term "Applicant" herein is assumed to be inclusive of the contractors and subcontractors required for the construction of the proposed project and is inclusive of any subsequent holders of real property interests in the subject property, including master developers and builders but excluding subsequent owners and tenants of those improved residential and non-residential properties that are now planned on the project site and those governmental agencies that presently own or may become subsequent holders of real property interests on the project site in the future. Since the project's "end user(s)" cannot be identified at this time, except where otherwise noted, the term "Applicant" is intended to be inclusive thereof.

[11]/ All acreage, square footage, cubic yardage, and other dimensional or volumetric references presented herein are intended as approximations rather than precise figures. Although detailed engineering studies have been completed for the project, at this stage in the development process, precise figures may not be possible for many of the issues and items identified herein. Changes to those approximations should, therefore, be anticipated as the project progresses. Similarly, all such figures are subject to rounding, the conventions of which may not be universally applied by all contributors. As such, there may exist minor variations where individual numbers upon which a larger number is derived do not appear to precisely and collectively add up to the total number presented.

[12]/ As described by Section 56076 of the CGC, the "sphere of influence" is to be "a plan for the probable physical boundaries and service area of a local government agency." The sphere of influence is an important benchmark because it defines the primary area within which urban development is to be encouraged (Sections 56377(b) and 56841, CGC). The California Appellate Court has held that spheres of influence must be adopted before an annexation to the affected city or district can be considered. Section 56650.5 of the CGC limits the validity of annexation proposals in specified urban areas unless the request is consistent with the applicable spheres of influence (Source: Governor's Office of Planning and Research, LAFCOs, General Plans, and City Annexations, August 1997).

[13]/ City of Rialto, Notice of Preparation – City of Rialto General Plan Update and Related Zoning Ordinance Amendments, July 16, 2008, Figures 2 and 3.

connecting Neighborhoods III and IV; (4) approximately 2,000 linear feet of improvements to an existing levee on property owned by Cemex USA Construction Materials, Inc.[14] (Cemex USA) consisting of approximately 10.1 acres located between Neighborhood II and Neighborhood III; (5) additional levee improvements north of Neighborhoods II and IV consisting of a combined area of approximately 0.6 acres; and (6) approximately 0.7 acres of existing storm drain facility improvements adjacent to Neighborhood IV. As proposed, impacts to each of these "off-site" areas will occur as a result of Applicant-initiated actions.[15]

As indicated in Section 18.78.010 (Authority for Specific Plans) of the "City of Rialto Municipal Code" (City Municipal Code), the City Council is authorized to prepare, adopt, and implement specific plans for areas within the incorporated boundaries of the City and within the City's adopted SOI. Since those portions of the project site which are not already within the City's corporate boundaries are located within the City's adopted SOI, the Applicant is processing or intends to process concurrent annexation requests with the City, the County, and LAFCO in order to allow for the annexation of those areas and to modify the service area boundaries and/or designations of one or more existing special districts.[16]

As a portion of the project site currently is under the jurisdiction of the County and currently regulated by adopted County planning documents and established policies, such as the "County of San Bernardino 2007 General Plan"[17] (County General Plan), "Glen Helen Specific Plan"[18] (GHSP), "Lytle Creek North Planned Development Project"[19] (LCNPD or Lytle Creek North), and "County of San Bernardino 2007 Development Code"[20] (County Development Code), upon annexation to the City, the County may seek to amend relevant planning and zoning documents to remove the project site, or relevant portions thereof, from County land-use documents. This EIR provides the environmental basis for those future County actions as well.[21]

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[14]/ As of October 6, 2006, the California Department of Conservation identifies the existing mine operator as "Chet Kassotis Cemex Construction Materials, L.P." and the facility as "Mine Identification No. 91-36-0040." The 2009 "Lytle Creek Quarry Reclamation Plan Revision Application" (Lilburn Corporation, January 2009) was prepared for "Cemex Construction Materials Pacific LLC." As indicated therein, the site is owned by "Cemex Land Company." As used herein, the term "Cemex USA" is intented to refer to the owner and operator of the Lytle Creek quarry

[15]/ In addition to those "off-site" areas explicitly identified herein, infrastructure improvements, including Applicant-sponsored improvements and other master plan improvements for which the Applicant only bears a "fair-share" obligation, are anticipated to a number of additional areas located beyond the boundaries of the proposed LCRSP. Master planned facilities (e.g., water and wastewater facilities and street improvements) constitute those facilities identified by the City and/or by other governmental entities which will be will implemented by those entities and are not expressly initiated by the Applicant and for which the Applicant bears only a fee payment contribution.

[16]/ A "special district" is defined as "any agency of the state for the local performance of governmental or proprietary functions within limited boundaries" (Section 16271[d], CGC). Whereas cities and counties are "general purpose" governments (performing a broad array of services to protect the health, safety, and welfare of all their citizens), special districts are "limited purpose" local governments (performing only those services designated within a specified service area).

[17]/ County of San Bernardino (URS Corporation), County of San Bernardino 2007 General Plan, Land Use Services Department, adopted March 13, 2007.

[18]/ County of San Bernardino, Glen Helen Specific Plan, adopted November 15, 2005.

[19]/ County of San Bernardino, Lytle Creek North Planned Development Project, December 2001.

[20]/ County of San Bernardino, County of San Bernardino 2007 Development Code, Land Use Services Department, adopted March 13, 2007.

[21]/ Since the proposed project includes the annexation of County lands into the City, the discussion of the "San Bernardino County 2007 General Plan," "Glen Helen Specific Plan," "Lytle Creek North Planned Development Project," and "San Bernardino County 2007 Development Code," is not intended to serve as a basis for any consistency analysis, suggest any continuing land-use jurisdiction, or infer the continuing applicability of County plans and policies once all project lands have been annexed into the City. Although annexation may proceed in phases, neither the proposed project nor this environmental analysis assumes the retention of the project site or any portion thereof under County land-use jurisdiction. Areas that may be associated with project-related and cumulative mitigation, such as select street intersections and other roadway segments upon which improvements are identified,

Since the project site will be annexed into the City and since City plans and policies will subsequently govern the site's use, development, redevelopment, conservation, operation, and maintenance, this environmental analysis' primary focus is with regards to City plans and policies rather than with regards to County policies.[22] County plans and policies are, however, briefly discussed where potentially applicable to this environmental analysis and when such discussion provides potentially relevant information concerning the project site and/or the existing environmental setting. Since lands adjoining the project site may continue to exist in County unincorporated areas following the site's annexation and project's implementation, existing County plans and policies provide general information germane to the governance of those land and the existing and potential future uses reasonably expected to exist thereupon.

The proposed LCRSP and this EIR collectively provide a regulatory framework and environmental basis, under CEQA, for any and all actions and other activities that may follow or occur concurrently with the certification of the EIR and the adoption of the specific plan. Those actions and activities include, but are not limited to: (1) the formation of and the modification to the boundaries of existing governmental entities, service areas, special districts, utility user tax districts, lighting and landscape maintenance districts, and improvement districts, including changes to and modifications in the delivery and allocation of public services; (2) the approval of changes of organization and reorganizations, including annexations[23]; (3) the approval and implementation of development agreements; (4) the approval and effectuation of school, park, and other mitigation fee agreements; (5) the approval of vesting and tentative maps, parcel maps, street and utility easements, lot line adjustments, and other subdivision activities; (6) the approval, funding, construction, acceptance, operation, and maintenance of infrastructure improvements, public works projects, and public facilities; (7) the issuance of grading and other permits, approvals, and related entitlements, including site plan and architectural review, and the performance of the work authorized therein and the construction of the improvements associated therewith; any (8) real property acquisitions and conveyances whether to the City, the County, or to other public, quasi-public, or private entities.[24]

Reference to the proposed "project" and to the project's approval and implementation herein is intended to be inclusive of: (1) all of the actions and activities described herein; (2) such other related elements as may be associated, either directly and indirectly, with and required for the

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and conservation, open space, and resource preservation areas, may, however, continue to exist in County unincorporated areas following the annexation of the project site and/or implementation of the proposed development. Additionally, new or expanded special districts may include jurisdictional areas that extend beyond the proposed LCRSP's boundaries and, therefore, beyond those areas now proposed for annexation. Except as noted, because County policies do not control the project's future land-use decisions, the following information is presented for informational purposes only and is intended, in part, to facilitate an understanding of and subsequent analysis regarding land use and other environmental issues concerning other abutting and proximal County properties.

[22]/ As specified, in part, in Section 18.78.060 (Procedures for Adoption and Amendment of Specific Plans) of the Municipal Code, prior to approving or conditionally approving any specific plan or amendment thereto, the City shall determine whether the project is consistent with the goal and policies of the General Plan and with its purposes, standards, and land use guidelines.

[23]/ For purposes of annexation, the area proposed for annexation is considered "uninhabited," defined as any area containing less than twelve registered voters,

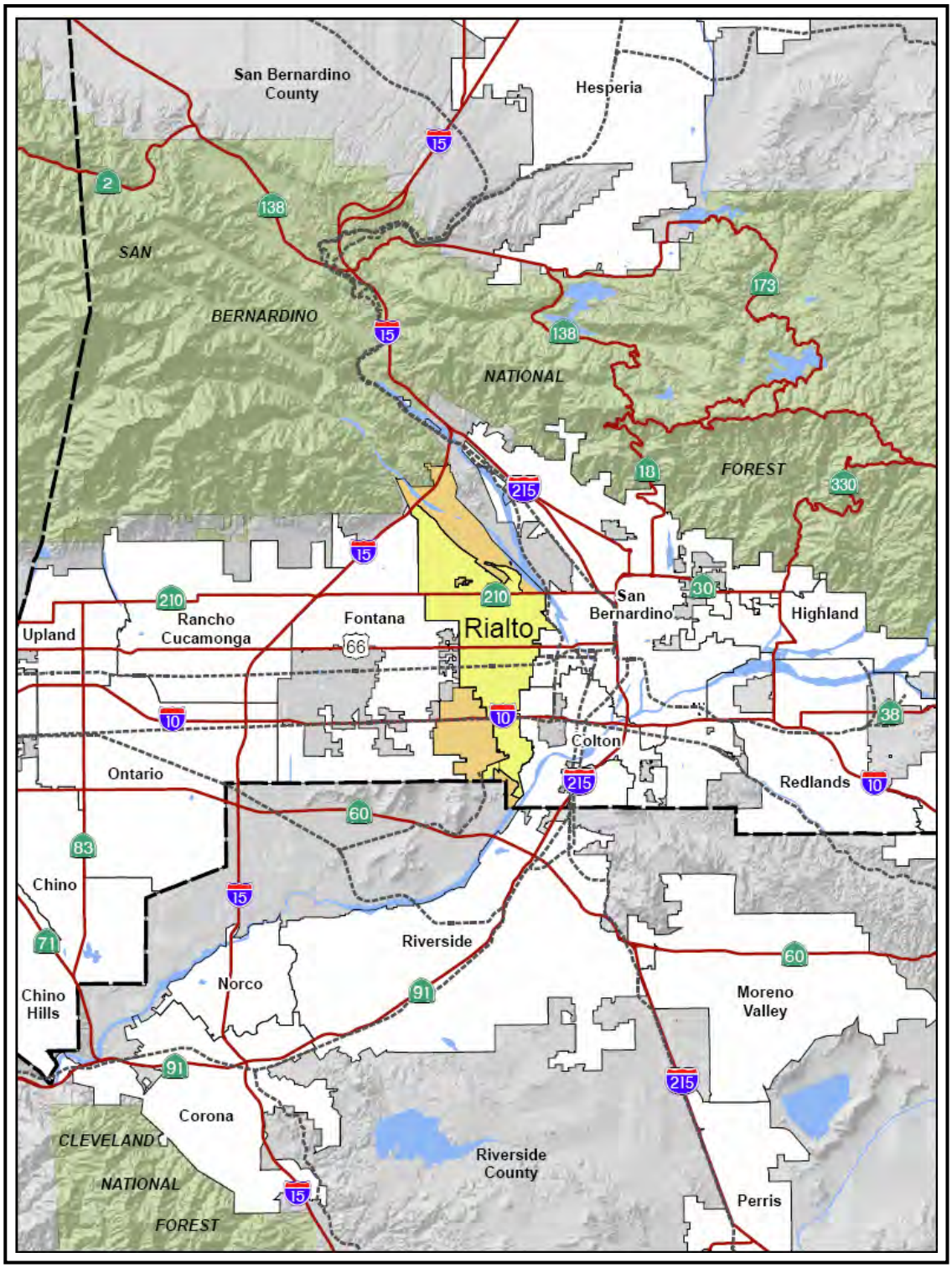
[24]/ Text rreferences to the singular herein shall be assumed to include the plural and vice versa. The gender of all words shall include the masculine, feminine, and neuter. The words "including" and "such as" shall be construed to mean "including, but not limited to" and "for example, but not necessarily exclusive of," respectively. None of the words, terms, or phrased uses herein should be construed as representing any predetermination or conclusion with regards to any aspect of the proposed project, with regards to any of the discretionary actions that may be associated therein, and with regards to the environmental process of which this document is a part. Any headings, section, and subsection names and numbers presented herein are for convenience purposes only and are not intended to have any effects under law.

effectuation of the proposed LCRSP; (3) the implementation and effectuation of agency-imposed mitigation measures and other conditions of project approval, including those located within and beyond the LCRSP boundaries; (4) the development and conservation of the lands within the boundaries of the LCRSP, plus those additional lands located beyond the LCRSP's boundaries associated with the mitigation of potential project-related and cumulative impacts and with those infrastructure improvements and other public facilities required to support, in whole or in part, the proposed project; and (5) such other actions, activities, plans, programs, works, and improvements as may be reasonably associated with any of the above. Similarly, reference to the proposed "project" herein, based on the context presented, is intended to be inclusive of the entirety of the LCRSP and the individual activities that serve to collectively comprise the totality of the proposed land-use actions and the site's subsequent development.

The information presented in this EIR may be used, in whole or in part, by the City, by the County, and by other governmental entities with jurisdiction over the project, the project site, and/or the resources located thereupon to support specific findings as mandated by State law and by agency requirements and procedures, both as may be required under CEQA and as may be required in support of other actions that may be taken by the City, by the County, and by those entities with regards to the proposed project or any aspect thereof, including, but not limited to: (1) the development agreement's consistency with the general and specific plans; (2) those annexations, reorganizations, and changes in service areas and organizations associated with the proposed project; (3) amendments to applicable general and specific plans; (4) zone changes, including specific plan adoption and corresponding revisions to official zoning maps and text; (5) subdivisions' consistency with applicable general and specific plans; (6) conditional use permits (CUPs) and variances; and (7) design review approvals (including all applicable findings supporting approval and conditions). This EIR also encompasses the potential establishment of one or more Mello-Roos districts pursuant to the provisions of the Mello-Roos Community Facilities Act of 1982, as codified in Section 53311 *et seq*. of the California Government Code (CGC), inclusive of the formulation of community facility districts (CFDs) and the construction and operation of each of the qualifying facilities included therein.

The proposed LCRSP and its accompanying EIR may also be used by other local, State, and federal agencies for later discretionary actions, including, but not limited to, approval of Section 401 and 404 (Federal Clean Water Act) permits, Section 10 (Rivers and Harbors Act) permits, Section 1600-1607 (California Fish and Game Code) streambed alteration agreements, Section 7 and 10 (Federal Endangered Species Act) consultation, incidental take authorizations, termination of designation status (SMARA), and issuance of National Pollution Discharge Elimination System (NPDES) and associated storm water discharge permits, water quality certifications, waste discharge requirements, and annexations, reorganizations, and changes in service areas and organizations. Because of the complexity and dynamic nature of statutory and regulatory requirements, the Lead Agency's inability to foretell and explicitly list other discretionary action herein does not preclude the Lead Agency, other responsible and trustee agencies, and other federal agencies from utilizing this EIR, if and when certified, as the environmental basis for those later actions.

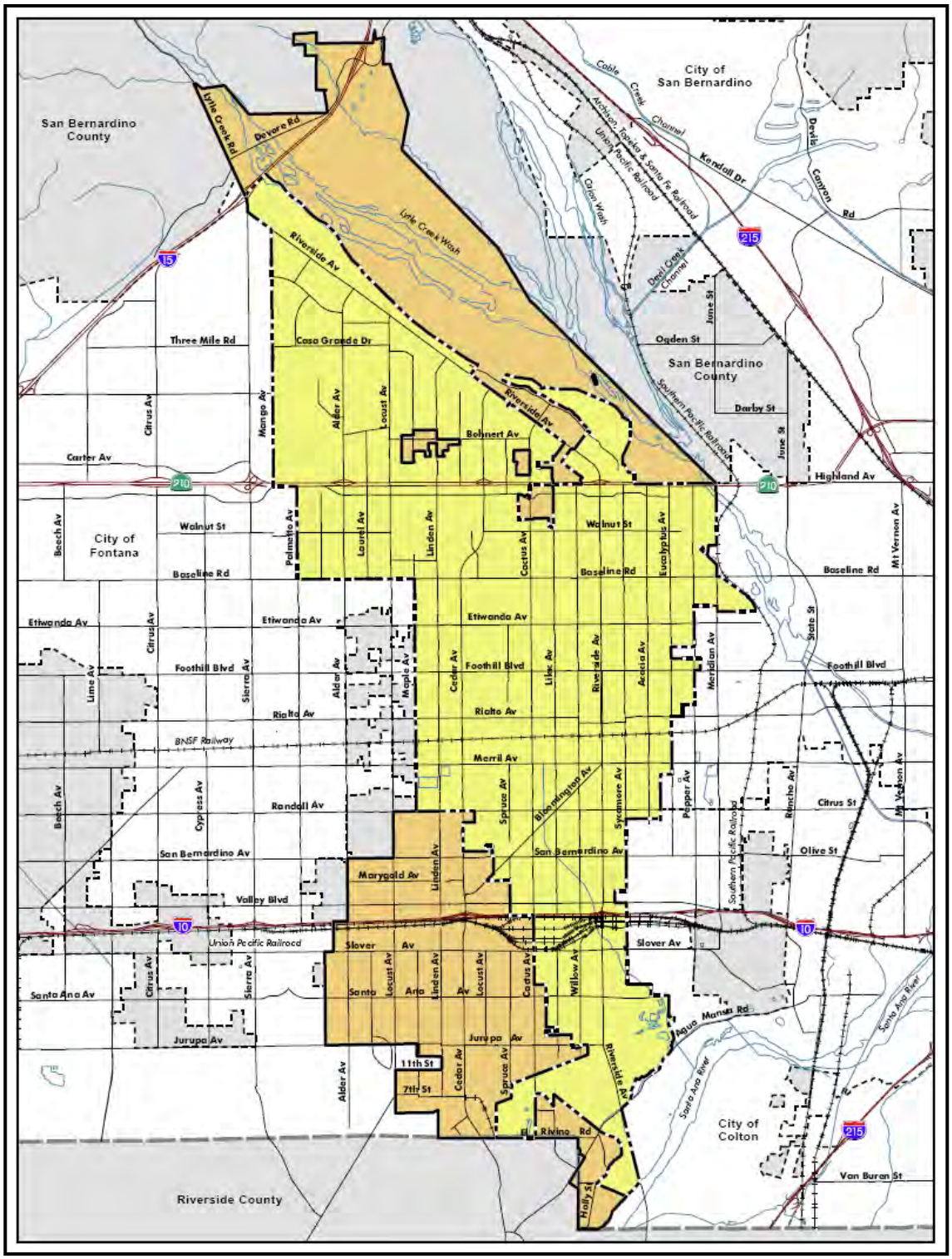
This EIR, in combination with the comments received thereupon and the Lead Agency's technical responses to those comments and such additional information as my be identified by the City's decision-making body, shall serve, in whole or in part, as the environmental basis for the Lead Agency's independent actions and the independent actions of other responsible, trustee, and federal agencies with regards to all components, phases, segments, and other related aspects of the proposed project, as now proposed by the Applicant or as subsequently modified by the Applicant, by the City, and/or by another governmental entity.



Legend

- Rialto Incorporated Area
- Rialto Sphere of Influence
- Surrounding City Boundary
- County Boundary
- National Forest
- Water Feature
- Freeway/Highway
- Railroad

Figure 1-1
CITY OF RIALTO
REGIONAL VICINITY MAP
Source: City of Rialto



Legend

- Rialto Incorporated Area
- Rialto Sphere of Influence
- Surrounding City Boundary
- County Boundary
- Freeway/Highway
- Major Road
- Railroad
- Hydrology

Figure 1-2
CITY OF RIALTO CORPORATE BOUNDARIES AND SPHERE OF INFLUENCE
Source: City of Rialto

This EIR assesses the potential direct, indirect, and cumulative impacts resulting from the adoption of the proposed specific plan and from the development, conservation, public works, and public facility activities associated with and that will follow the plan's adoption and from the subsequent construction, implementation, operation, use, habitation, and maintenance activities that may be associated, either directly or indirectly, therewith. In addition, this EIR provides the Lead Agency, other governmental entities, and the general public with detailed information about the effects that the proposed project is likely to have on the environment, lists the ways in which the project's significant effects might be avoided or substantially minimized, and includes an analysis of a reasonable range of alternatives to the Applicant's proposed project.[25]

This EIR provides objective and authoritative information which is presented to assist the Lead Agency's advisory and decision-making bodies, the advisory and decision-making bodies of other responsible, trustee, and federal agencies, the general public, and other stakeholders in their consideration of the environmental consequences associated with, attributable to, and/or resulting from the approval of the proposed project.

In the preparation of this EIR and in the derivation of preliminary findings presented herein, information from a broad array of documents and other sources has been considered. The information cited is often synoptic in nature and may, out of reasonable prudence, present only those portions of other documents and other analyses which appear most relevant to the proposed project and/or to the topic then at hand. Similarly, references contained in other technical documents are not generally cited but the documents from which information is extracted have been identified to allow for independent confirmation. Without any attempted alteration to their content or meaning, the format of certain exhibits and other references, as may be extracted from other sources, may be modified for the purpose of presentation herein. The Lead Agency has sought full disclosure and has, in good faith, attempted to present both a comprehensive and objective assessment of the proposed project and its possible environmental impacts.

If certified by the Lead Agency, the "Final Environmental Impact Report – Lytle Creek Ranch Specific Plan Project, SCH No. 2009061113" (FEIR) will be utilized by the City, the County, and other responsible agencies to serve as the environmental basis for any and all discretionary actions that may be required for the project's approval, implementation, and operation.[26] The City's action, with regards to the project's CEQA documentation, is independent of the agency's subsequent actions with regards to the proposed project. The certification of the FEIR does not, in and of itself, dictate the actions of the Lead Agency or the actions of other responsible or trustee agencies with regards to the proposed project. Prior to the certification of the FEIR, neither the City nor any other responsible agencies have: (1) made any predetermination with regards to the conclusions, findings, and determinations of the CEQA process and/or the approval, conditional approval, or denial of any subsequent actions that may be associated with the proposed project; (2) made any decisions that constitute an irretrievable commitment of resources toward the proposed project; or (3) committed to a definitive course of action or schedule with respect to the proposed project.

[25]/ In Laurel Heights Improvement Association of San Francisco, Inc. v. The Regents of the University of California, the court concluded "alternatives and mitigation measures have the same function - diminishing or avoiding adverse environmental effects. The chief goal of CEQA is mitigation or avoidance of environmental harm."

[26]/ Under CEQA, prior to taking any discretionary actions on the proposed project, other than outright denial, the Lead Agency is first required to certify the project's FEIR.

Public agencies must often balance a variety of factors in their decision-making process, including environmental, economic, technological, and social considerations. As such, the FEIR is intended to serve only as part and does not represent the totality of the project's administrative record upon which those decisions will be based. Besides environmental considerations, other documents addressing other issues will be considered by the project's advisory and decision-making bodies in the formulation of their recommendations, during their deliberations concerning the proposed project, and as the basis for any findings that may be required under State law of government procedures.

1.2 Introduction to the Lytle Creek Ranch Specific Plan

As indicated by the Southern California Association of Governments (SCAG or Association): "Local governments are encouraged to develop specific plans for areas identified, by themselves or by the region, as key growth opportunities. The specific plan can be used to create additional definition regarding the types and intensities of use under the parameters set forth in the general plan. For example, design considerations can be effectively addressed in a specific plan. Communities should perform an environmental analysis of the specific plan such that [it] can be tiered by individual project proposers (Policy Reference 159, 160, 161)."[27]

As authorized under Section 65450 *et seq*. in Article 8 of the CGC, a "specific plan" constitutes a legal tool for detailed design and implementation of a defined portion of an area covered by an agency's general plan. A specific plan may include all detailed regulations, conditions, programs, and/or proposed legislation that may be necessary or convenient for the systematic implementation of the general plan. As indicated in Section 65450 of the CGC: "After the legislative body has adopted a general plan, the planning agency may, or if so directed by the legislative body, shall, prepare specific plans for the systematic implementation of the general plan for all or part of the area covered by the general plan."

A specific plan is a regulatory tool that local governments can use to guide development in a localized area. A specific plan serves as a tool for the systematic implementation of the general plan.[28] It effectively establishes a link between implementing policies of the general plan and the individual development proposals in a defined area. A specific plan may be as general as setting forth broad policy concepts or as detailed as providing direction to every facet of development from the type, location, and intensity of uses to the design and capacity of infrastructure systems.[29] The proposed LCRSP has been formulated for the "systematic implementation" of the City General Plan.[30]

Section 65451 of the CGC mandates that a specific plan contain the following components: (1) a text and a diagram(s) specifying all of the following in detail: (a) the distribution, location, and

[27]/ Southern California Association of Governments, 2005/2006 SCAG RCP, Preliminary Draft Action Plan for Land Use and Housing Chapter, October 2005, p. 5.

[28]/ As required under Section 65300 of the CCR: "Each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgment bears relation to its planning. Chartered cities shall adopt general plans containing the mandatory elements specified in Section 65302.

[29]/ State of California, Governor's Office of Planning and Research, The Planner's Guide to Specific Plans, April 1998 Edition, p. 5.

[30]/ The City of Rialto is currently in the process of updating the "City of Rialto General Plan" (1992) and, on July 16, 2008, released a "Notice of Preparation – City of Rialto General Plan Update and Related Zoning Ordinance Amendments" (City of Rialto Planning Department). As specified therein, the "Project Planning Area consists of the corporate boundaries of the City of Rialto and its sphere of influence" (p. 3).

extent of the uses of land, including open space, within the area covered by the plan; (b) the proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan; (c) standards and criteria by which development will proceed and standards for the conservation, development, and utilization of natural resources, where applicable; and (d) a program of implementation measures, including regulations, programs, public works projects, and financing measures necessary to carry out items (a), (b), and (c) above; and (2) a statement of the relationship of the specific plan to the general plan.

As indicated in Section 66473.5 of the CGC: "No local agency shall approve a tentative map, or a parcel map for which a tentative map was not required, unless the legislative body finds that the proposed subdivision, together with the provisions for its design and improvement, is consistent with the general plan required by Article 5 (commencing with Section 65300) of Chapter 3 of Division 1, or any specific plan adopted pursuant to Article 8 (commencing with Section 65450) of Chapter 3 of Division 1. A proposed subdivision shall be consistent with a general plan or a specific plan only if the local agency has officially adopted such a plan and the proposed subdivision or land use is compatible with the objectives, policies, general land uses, and programs specified in such a plan."

As indicated by the Governor's Office of Planning and Research (OPR): "Future development proposals may benefit from the foundation created by the specific plan. For example, a program EIR adopted to fulfill the plan's CEQA obligations may streamline the processing of subsequent discretionary projects by obviating the need for additional environmental documentation."[31]

As specified, in part, in Section 18.78.060 (Procedures for Adoption and Amendment of Specific Plans) in Chapter 18.78 (Specific Plans) of the City Municipal Code, prior to the preparation of any specific plan within the City or its adopted SOI, the City Council shall, by resolution, authorize the Department to accept and process the proposed specific plan. As indicated in the City General Plan, as adopted by City Council resolution, all or a portion of the project area that is located within the City's existing corporate boundaries and its adopted SOI is designated as a "Special Study Area," requiring specific plan approval as a precursor to that area's development.

As noted, a portion of the project site is presently a part of the "El Rancho Verde Specific Plan"[32] (ERVSP), as adopted by the City on August 1, 1995 and subsequently amended by the City on July 5, 2006.

Pending their annexation, those portions of the project site located in County unincorporated areas are subject to the provisions of the County General Plan and County Development Code. In addition, with regards to County unincorporated areas, a portion of the proposed project site is included within the geographic area comprising and presently subject to the plans and policies contained in the County's GHSP.

[31]/ *Ibid*., p. 6.
[32]/ City of Rialto, El Rancho Verde Specific Plan, August 1, 1995, as amended on July 5, 2006.

1.3 CEQA Provisions

1.3.1 Program and Project-Level Documents

The degree of specificity required in an EIR corresponds to the degree of specificity involved in the underlying activity that is described therein. An EIR prepared for a construction project can be more detailed in the specific effects of the project than will be an EIR prepared for the adoption of a local general plan because the effects of the construction activity can be predicted with greater accuracy. An EIR prepared for the adoption or amendment of a local general plan need not be as detailed as an EIR prepared on the specific construction projects that might follow therefrom.[33]

As described in Section 15168(a) of the State CEQA Guidelines, a "program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically, (2) As logical parts in the chain of contemplated actions, (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

Section 15168(b) of the State CEQA Guidelines further indicates that the use of a program EIR can "(1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, (2) Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis, (3) Avoid duplicative reconsideration of basic policy considerations, (4) Allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and (5) Allow reduction in paperwork."

Use of a program EIR enables a lead agency to characterize the overall program as the project being approved at the time of the plan's adoption. Except where otherwise provided, when individual activities within the program are proposed, the Lead Agency may be required to reexamine those individual activities in order to determine whether their effects were adequately analyzed in the program EIR.

Although the proposed LCRSP encompasses a series of related program-level actions that collectively comprise the scope and content of the specific plan, those actions and activities specifically identified or authorized therein, in combination with those project-level actions and activities that may logically follow the specific plan's approval, constitute a "project" under CEQA. As defined under Section 15378 of the State CEQA Guidelines, a "'project' means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." The "whole of the action" examined herein is, therefore, more encompassing than merely the adoption of the proposed LCRSP.

Specific aspects of the proposed project can be described and analyzed to a sufficient degree to constitute a project-level assessment. For example, although individual architectural plans have not been submitted for City review, the draft LCRSP contains specific design standards upon which those architectural plans must be formulated. Similarly, even in the absence of concurrent

[33]/ Section 15146, State CEQA Guidelines.

processing of tentative tract maps, since the specific plan area is divided into smaller planning areas, future development intensities, lot sizes, and land uses within each planning area can be reasonably defined, described, and analyzed. The location and capacity of many of the proposed infrastructure systems and public facilities required to support development activities authorized under the LCRSP can also be defined with a reasonable level of certainty. This EIR, therefore, contains analysis of those project components at a level of detail commensurate with those discretionary entitlements.

The City has not sought to defer to later CEQA analyses any significant effects associated with the proposed action. Subject to Lead Agency determination and the determination of other responsible, trustee, and federal agencies, this EIR provides the environmental basis for the subsequent approval, construction, implementation, operation, use, and maintenance of major aspects of the LCRSP. As individual development, conservation, infrastructure, and public works projects are proposed and submitted for City processing, the City will independently determine whether this EIR provides a sufficient environmental basis for later discretionary actions associated with those activities or whether additional environmental review is required in accordance with Section 21166 of CEQA.

1.3.2 CEQA Provisions Concerning Actions Subject to General, Specific, and Community Plans

Under CEQA, when assessing the environmental effects of a general plan amendment for a change in a site's land-use designation, the agency must compare the proposed land use with the conditions that actually exist and not just the conditions that would hypothetically exist based upon the uses authorized under the existing general plan (Environmental Planning and Information Council v. County of El Dorado[34]).

As indicated in Section 65457(a) of the CGC: "Any residential project, including any subdivision, or any zoning change that is undertaken to implement and is consistent with a specific plan for which an environmental impact report has been certified after January 1, 1980, is exempt from the requirements of Division 13 (commencing with Section 21000) of the Public Resources Code. However, if after adoption of the specific plan, an event as specified in Section 21166 of the Public Resources Code occurs, the exemption provided by this subdivision does not apply unless and until a supplemental environmental impact report for the specific plan is prepared and certified in accordance with the provisions of Division 13 (commencing with Section 21000) of the Public Resources Code. After a supplemental environmental impact report is certified, the exemption specified in this subdivision applies to projects undertaken pursuant to the specific plan."

Pursuant to Section 21080.7 of CEQA, in urbanized areas, no additional environmental impact reports or negative declarations are required for later "housing or neighborhood commercial facilities"[35] when: (1) the later project is consistent with a specific plan that has a certified EIR

[34]/ As indicated therein, the Third District Court of Appeals noted: "CEQA nowhere calls for evaluation of the impacts of a proposed project on an existing general plan; it concerns itself with the impacts of the project on the environment, defined as the existing physical conditions in the affected area. The legislation evinces no interest in the effects of proposed general plan amendments on an existing general plan, but instead has clearly expressed concern with the effects of projects on the actual environment upon which the proposal will operate."

[35]/ "Neighborhood commercial facilities" are defined as "those commercial facilities which are an integral part of a project involving the construction of housing and which will serve the residents of the housing" (Section 21090.7[b][1], CEQA). In that context, by defining the specific plan as the housing project, all commercial uses designed to serve the planning area would constitute "neighborhood commercial facilities.

and that has been adopted not more than five years prior to making the required findings under this section; (2) the EIR is sufficiently detailed to identify the project's significant effects and corresponding mitigation measures; (3) the lead agency has determined the type of environmental document needed in accordance with Section 21080.1 and has given notice of such fact in accordance with Section 21092(b) or (c); (4) the lead agency makes one or more of the findings required by Section 21081 of CEQA and Section 15091 of the State CEQA Guidelines; and (5) the lead agency files a notice of its decision with the county clerk.

In accordance with the provisions of Section 65457 of the CGC and Sections 21080.7, 21083.3, and 21166 of CEQA, following certification of this EIR, the Lead Agency may be authorized to limit the need for and/or the scope of any subsequent environmental analysis for residential, neighborhood commercial, and other development, redevelopment, institutional, and infrastructure-related projects that are deemed by the Lead Agency to be consistent with the adopted specific plan and/or which do not result in substantial changes to the project or the circumstances under which the project is being undertaken which would require major revisions to the EIR or unless new information becomes available which was not known and could not have been known at the time the EIR was certified.

If certified, the City may be authorized to limit subsequent project-level and site-specific analyses and rely, either in whole or in part, on the information and analysis presented herein.[36]

As authorized under Section 18.78.060 (Procedures for Adoption and Amendment of Specific Plans) in Chapter 18.78 (Specific Plans) in the City Municipal Code: "All specific plans shall be subject to the requirements of the California Environmental Quality Act (CEQA) of 1970 and City Environmental Guidelines. In cases in which a master environmental impact report has been prepared for a specific plan, subsequent projects proposed in accordance with the adopted specific plan and within the scope of development anticipated at the time of certification of the master environmental impact report, and if permitted under State law, shall not require additional environmental review."

1.3.3 Environmental Review Requirements

As indicated in Section 15060(b) of the State CEQA Guidelines, "[e]xcept as provided in Section 15111, the lead agency shall begin the formal environmental evaluation of the project after accepting an application as complete and determining that the project is subject to CEQA." As indicated by OPR, to the extent feasible, the process of preparing the specific plan and the environmental analysis should proceed concurrently because both documents require many of the same studies and resulting information.[37]

As such, in order to facilitate implementation of a consolidated planning and environmental review process, in order to integrate environmental considerations into the planning process and to solicit early agency and public comments on the recommended scope and content of the DEIR and the environmental issues, alternatives, and mitigation measures germane to CEQA review, the Lead Agency elected to prepare and disseminate the "Notice of Preparation" (NOP),

[36]/ As indicated in Section 21083.3(b) of CEQA: "If a development project is consistent with the general plan of a local agency and an environmental impact report was certified with respect to that general plan, the application of this division to the approval of that development project shall be limited to effects on the environment which are peculiar to the parcel or to the project and which were not addressed as significant effects in the prior environmental impact report, or which substantial new information shows will be more significant than described in the prior environmental impact report."

[37]/ *Op. Cit*., The Planner's Guide to Specific Plans, p. 24.

dated June 26, 2009, and commence the environmental review process under CEQA concurrent with the City's review of the draft LCRSP. In that fashion, the information developed through the CEQA process could best serve to facilitate the incorporation of environmental planning considerations into the proposed specific plan, thus minimizing the potential impacts associated with the plan's adoption and subsequent implementation.

Prior to the release of the NOP, the Lead Agency conducted a preliminary environmental review of the likely impacts of the forthcoming LCRSP and determined: (1) that the proposed action constitutes a "project" and, therefore, was subject to the provisions of CEQA; and (2) since the project had the potential to generate significant or potentially significant effects on the environment,[38] that an EIR constitutes the appropriate form of CEQA documentation to assess the project's potential direct, indirect, and cumulative effects.

The topical issues examined herein are based on the preliminary findings outlined in the NOP, the City's independent environmental evaluation of the proposed project and its potential environmental effects, and the comments received from and the Lead Agency's evaluation of correspondence from public agencies and other stakeholders during the noticed comment period established by the NOP. The NOP and the comments that were received by the Lead Agency following the dissemination of the NOP and the noticed CEQA scoping meeting are included in Appendix I-A (Notice of Preparation and Pre-Circulation Comments).

1.3.4 Recommended Threshold of Significance Standards

As required under the State CEQA Guidelines, the Lead Agency has authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with the applicable constitutional requirements that such actions meet the "nexus" and "rough proportionality" standards established under case law (Section 15041[a], State CEQA Guidelines).

The primary role of CEQA is to: (1) inform the Lead Agency, other responsible and trustee agencies, and other stakeholders about the potential environmental effects of their discretionary actions; (2) create a formal mechanism to receive public and agency input relative to the potential environmental effects of those actions, including alternatives and mitigation measures that, if implemented, would reduce or avoid the significant or potentially significant effects of those actions; (3) explore ways to mitigate any adverse consequences of those actions; and (4) determine whether there are alternatives to the proposed actions that could reduce or avoid any adverse effects. Under CEQA, agencies are asked to draw a "line in the sand" beyond which any impact would be deemed "significant." Although guidance is provided, the threshold determination ultimately rests with the Lead Agency and its own set of environmental values.

As required under Section 21001(f) of CEQA, it is the policy of the State to "[r]equire governmental agencies at all levels to develop standards and procedures to protect environmental quality." At minimum, the City's standards cannot impose lower thresholds than established under applicable State and federal statutes and regulations. The City can, however,

[38]/ Referencing Section 15382 of the State CEQA Guidelines, a "'[s]ignificant effect on the environment means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

impose its own set of environmental standards. Those standards must be factually based and fairly applied. Only by first identifying and defining a threshold standard can the significance of the project's effects be determined.

Under CEQA, one of the most important determinations that the Lead Agency makes is whether the environmental consequences of a proposed action are significant or potentially significant. This determination influences the agency's determination concerning whether or not to commence the preparation of an EIR and determines whether mitigation measures will be required once an EIR is commenced. Judgments of significance are made at the following three different points in the CEQA process: (1) in determining whether a project may have a significant effect and, thus, requires the preparation of an EIR (Section 21082.2[a], CEQA); (2) in the EIR's discussions of which environmental impacts are significant and, thus, warrant mitigation (Section 15126.4[a][4], State CEQA Guidelines); and (3) in making findings on whether a project's significant environmental effects have, in fact, been avoided or substantially reduced (Section 21081[a], CEQA).[39]

The assessment of whether a particular impact is significant must be based on a defined threshold of significance criteria. OPR has defined "thresholds of significance" as follows: "The 'threshold of significance' for a given environmental effect is simply that level at which the Lead Agency finds the effects of the project to be significant."[40] To the extent feasible, significance criteria should be measurable and supported by scientific evidence. Referencing Section 15064.7 of the State CEQA Guidelines, a "threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant."

The "Final Master Environmental Impact Report - City of Rialto General Plan Update"[41] (City General Plan MEIR) identified four "classes" of impacts relative to certain topical issues but, with regards to other issues, did not specifically include a clearly articulated set of threshold of significance standards. In addition, the City has yet to adopt a uniform set of criterion against which the significance of project-specific environmental effects is to be assessed. As a basis for the assessment of the significance or potential significance of those environmental impacts likely to manifest from the adoption and subsequent implementation of the LCRSP, this EIR identifies those threshold criteria nominated by the Lead Agency.[42]

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[39]/ The standard of review is drastically different as between the first of these contexts and the latter two. In determining whether an EIR is required, the test is whether there is any substantial evidence in the record to indicate that the impact may be significant, known as the "fair argument" test (e.g., Friends of "B" Street v. City of Hayward). This test is reversed when an EIR has been prepared and the question then becomes whether the agency's judgment regarding the significance of the impact is valid. In that instance, substantial evidence in the record that the impact is not significant will suffice.

[40]/ State of California, Governor's Office of Planning and Research, Thresholds of Significance: Criteria for Defining Environmental Significance, September 1994, p. 4.

[41]/ City of Rialto (The Keith Companies), Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, March 31, 1992.

[42]/ The Lead Agency acknowledges that the formulation and selection of an alternative set of threshold standards could conceivably alter the City's preliminary findings, increase or decrease the resulting level of significance of those environmental effects addressed herein, as well as alter the subsequent need for mitigation for those significant environmental effects. As part of the decision-making process, the Lead Agency, with the input of other stakeholders, must determine whether these recommended threshold standards are reasonable, whether other threshold of significance criteria should be considered by the Lead Agency's advisory and decision-making bodies, and whether the resulting categorization of each impact's level of significance is appropriate based on the totality of information now available to the Lead Agency and contained in the project's administrative record.

In the derivation of the project's threshold of significance criteria, information contained in a number of statutory, regulatory, and policy-related documents and guidelines were considered by the Lead Agency. Because a portion of the project site is presently located within the County, with regards to unincorporated County areas, in the derivate of those project-specific threshold of significance standards identified herein, the City reviewed and considered the information contained in a number of County documents, each of which address a portion of the project site. Those documents included: (1) "Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038"[43] (County General Plan FPEIR); (2) "Final Environmental Impact Report – Lytle Creek North Planned Development Project, SCH No. 99051015"[44] (Lytle Creek North FEIR); and (3) "Final Environmental Impact Report – Glen Helen Specific Plan, SCH No. 2000011093"[45] (GHSP FEIR).

The threshold standards presented in this EIR have been formulated by the City in order to determine the level of significance of those environmental impacts identified herein. The categorization of significance is based on the identified threshold standards and the City's independent assessment of the project's potential environmental effects with regards to those standards. Where possible, the Lead Agency has identified quantitative and/or performance-based standards against which identified impacts are evaluated. However, certain threshold standards include terminology which may be perceived as more qualitative in nature. Except where otherwise noted, certain terms, including, but not necessarily limited to, "substantial," "substantially," "substantial adverse effect," "significant adverse effect," and "substantial adverse change," are neither defined in CEQA nor in the State CEQA Guidelines and require a local determination, based on the Lead Agency's independent assessment, whether the proposed actions would meet or exceed the stated standard.

Based on the findings of that evaluation and in accordance with the impact categorization presented in the State CEQA Guidelines (14 CCR 15000-15387, Appendix G), as presented in Table ES-1 (Summary of Environmental Impacts and Mitigation Measures), each identified environmental effect has been classified under one of four categories.[46] Those environmental impacts that exceed the identified threshold criteria which cannot be reduced to a less-than-significant level through the incorporation of feasible mitigation measures or alternatives are categorized as "potentially significant impacts." Those environmental effects that exceed the identified threshold criteria but which can be reduced to below a level of significance are categorized as "potentially significant impacts unless mitigation incorporated." Those impacts that do not exceed the specified threshold criteria are categorized as "less-than-significant impacts." Those potential impacts which have been determined not to be relevant to the proposed project would be categorized as "no impact."

1.3.5 Recommended Mitigation Measures

Section 21002 of CEQA indicates that State and local agencies should not approve projects, as proposed, if there are feasible mitigation measures or alternatives available which would

[43]/ County of San Bernardino (URS Corporation), Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038, certified March 13, 2007.

[44]/ County of San Bernardino (L.D. King, Inc.), Final Environmental Impact Report – Lytle Creek North Planned Development Project, SCH No. 99051015, certified December 18, 2001.

[45]/ County of San Bernardino (Michael Brandman Associates), Final Environmental Impact Report – Glen Helen Specific Plan, SCH No. 2000011093, certified November 15, 2005.

[46]/ Since mitigation measures are not required for effects which are not found to be significant (14 CCR 15126.4[a][3]), mitigation measures are only considered by the Lead Agency for those impacts deemed to be potentially significant prior to the imposition of any such measures.

substantially lessen the significant environmental effects of such projects. This requirement is not, however, applicable to impacts that do not exceed the agency's threshold of significance criteria since such impacts would, by definition, not be deemed to be significant. Referencing Section 15126.4(a)(3) of the State CEQA Guidelines, "[m]itigation measures are not required for effects which are not found to be significant." Additionally, mitigation measures are also not required for purely socio-economic impacts (Goleta Union School District v. Regents of the University of California).

Pursuant to Section 15370 of the State CEQA Guidelines, mitigation measures need to accomplish one or more of the following: "(a) Avoiding the impact altogether by not taking a certain action or parts of an action. (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation. (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment. (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action. (e) Compensating for the impact by replacing or providing substitute resources or environments." Measures, alternatives, or other actions that do not avoid, minimize, rectify, reduce, or provide compensation for identified impacts do not, therefore, meet the definition for mitigation under CEQA.

Mitigation measures must also impose an obligation on a project proponent in excess of those obligations that would otherwise exist in the absence of those measures. Compliance with existing laws, statutes, rules, and regulations, as well as the imposition of standard conditions routinely imposed on development projects by the Lead Agency or other responsible agencies would not constitute appropriate mitigation under CEQA. In determining the need for additional project-specific mitigation, the application and implementation of each of those preexisting requirements must be assumed. Similarly, individual project components, actions, or activities that comprise a part of the project itself, including those actions and activities that the Applicant has voluntarily committed to self-impose, do not constitute mitigation measures since implementation of the proposed project, unless subsequently modified, cannot mitigate for the impacts that the implementation of the proposed project would itself create.

Mitigation measures must satisfy the constitutional test of "substantially advancing legitimate governmental interests." The California Supreme Court has ruled that this requirement consists of two elements. First, the courts (Nollan v. California Coastal Commission) have delineated the "essential nexus" that must exist between the legitimate public interest being protected and the mitigation which is imposed. A basis link between the imposed mitigation measures and the identified environmental effect is needed in order to satisfy this test. Second, the courts (Dolan v. City of Tigard) have stated that the imposed mitigation measure must substantially advance legitimate governmental interests and be "roughly proportional" to the project's individualized environmental effects. Agency imposed mitigation, therefore, cannot exceed the magnitude or extent of the impact being addressed.[47]

Certain types of mitigation are expressly restricted by statute. For example, as indicated in Section 21085 of CEQA, for a project involving a housing development, an agency may not reduce the number of housing units as a mitigation measure if there is another feasible mitigation measure or alternative that would produce a "comparable level of mitigation."

The State CEQA Guidelines impose an obligation on pubic agencies to avoid or minimize environmental damage to the extent feasible (Section 15021[a]). Although not specified as mitigation measures under CEQA, standard conditions and project design features can be used

[47]/ Section 15041(a) and Section 15126.4(a)(4)(A) and (B), State CEQA Guidelines.

to provide a means to reduce those project-related and cumulative environmental impacts that do not themselves elevate to a level of significance.

1.3.6 Standards of Adequacy

As required under the State CEQA Guidelines, an EIR should be prepared with a sufficient degree of analysis to provide decision makers with information that will enable them to make a decision which intelligently takes into account the environmental consequences of that action. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. As indicated in Section 15003(i) of the State CEQA Guidelines, "CEQA does not require technical perfection in an EIR, but rather adequacy, completeness, and a good-faith effort at full disclosure. A court does not pass upon the correctness of an EIR's environmental conclusions, but only determines if the EIR is sufficient as an informational document."

If the substantive and procedural requirements of CEQA are satisfied, a project may be approved even if it would create significant and unmitigable impacts on the environment. In reviewing an agency's determination under CEQA, a court must determine whether the agency prejudicially abused its discretion. As stipulated under Section 21168.5 of CEQA, abuse of discretion is established if the agency has not proceeded in a manner required by law or if the determination is not supported by substantial evidence. Courts are not to determine whether the EIR's ultimate conclusions are correct but only whether they are supported by substantial evidence in the record and whether the EIR is sufficient as an information document. As indicated in Section 15384 of the State CEQA Guidelines, "substantial evidence" is defined as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might be reached."

It is the City's intent to provide a sufficient level of analysis, including facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts, to fully address each of the potentially significant environmental impacts resulting from the approval of the proposed project and the construction, use, operation, habitation, and maintenance of the project site. The Planning Commission and the City Council, through the independent deliberations of those bodies, will determine the appropriate level of environmental review and the adequacy and sufficiency of the information and analysis presented as part of the CEQA process.

1.4 Pre-Circulation Scoping Activities

"Scoping" is an important component of the environmental review process. Referencing Section 15083 of the State CEQA Guidelines, "[m]any public agencies have found that early consultation solves many potential problems that would arise in more serious form later in the review process. This early consultation may be called scoping. . .Scoping has been helpful to agencies in identifying the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in an EIR and in eliminating from detailed study issues found not to be important."

In order to solicit pre-circulation comments, the Lead Agency prepared and disseminated an NOP announcing the City's intent to prepare an EIR.[48] The NOP were sent, via certified mail,

[48]/ Based, in part, on information contained in other certified environmental documents addressing portions of the project site, the Lead Agency elected not to prepare an initial study but to proceed with the preparation of this

to: (1) the California Governor's Office of Planning and Research, in that agency's role as State Clearinghouse (SCH); (2) the Southern California Association of Governments, in that agency's role as the local council of governments[49]; (3) all potential responsible and trustee agencies known to the City at the time of the document's dissemination; (4) all transportation planning agencies and public agencies with transportation facilities in their jurisdiction which could be affected by the project[50]; (5) other public entities[51]; (6) other interested parties and organizations; and (7) those parties that had previously submitted a written request for such notification to the Lead Agency. The distribution list identifying those public agencies and other stakeholders who received copies of the NOP is included in Appendix I-A (Notice of Preparation and Pre-Circulation Comments).

Following the release of the NOP, a noticed CEQA scoping meeting was held on July 28, 2009 (commencing at 2:00 PM) at the offices of the Department (150 South Palm Avenue, Rialto, California 92376). Representatives of a number of agencies and organizations were in attendance at that meeting, included: (1) San Bernardino County Local Agency Formation Commission; (2) City of Fontana; (3) Rialto Unified School District; (4) Vulcan Materials Company; and (5) Bruce Cash (undisclosed affiliation). Issues raised by parties attending the scoping meeting have been addressed under the corresponding sections of this EIR most applicable to those issues. Except where otherwise noted, since, in most cases, the commenter sought information to be included in the EIR, none of the issues raised in response to the release of the NOP and submitted in response to that scoping meeting are considered "areas of controversy" by the Lead Agency.

As required under Section 15082 of the State CEQA Guidelines, recipients of the NOP were asked to provide written comments within thirty days of their receipt of that notice. All comments received by the City following the dissemination of the NOP have been considered

EIR. As stipulated in Section 15060(d) of the State CEQA Guidelines: "If the lead agency can determine that an EIR will be clearly required for a project, the agency may skip further initial review of the project and begin work directly on the EIR process described in Article 9, commencing with Section 15080. In the absence of an initial study, he lead agency shall still focus the EIR on the significant effects of the project and indicated briefly its reasons for determining that other effects would not be significant or potentially significant.

[49]/ As required under Section 15206(a)(1) of the State CEQA Guideline: "A draft EIR or negative declaration prepared by any public agency on a project described in this section shall be submitted to the State Clearinghouse and should be submitted also to the appropriate metropolitan area council of governments for review and comment." More specifically, Section 15206 delineates the criteria for the identification of "projects of Statewide, regional, or areawide significance." As indicated therein, that criteria includes, but is not limited to: (1) proposed general plan amendments for which an EIR was prepared; (2) proposed residential development of more than 500 dwelling units; (3) shopping centers or business establishments employing more than 1,000 persons or encompassing more that 500,000 square feet of floor space; and (4) commercial office buildings employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space. In accordance therewith, the proposed project constitutes a "project of Statewide, regional, or area-wide significance."

[50]/ As indicated in Section 21092.4 of CEQA and Section 15086(a)(5) of the State CEQA Guidelines, for project's determined to be of Statewide, regional, or area-wide significance, the lead agency is required to "consult with transportation planning agencies and public agencies which have transportation facilities within their jurisdiction which could be affected by the project. Consultation shall be conducted in the same manner as for responsible agencies pursuant to this division, and shall be for the purpose of the lead agency obtaining information concerning the project's effects on major local arterials, public transit, freeways, highways, and rail transit service within the jurisdiction of a transportation planning agency or a public agency which is consulted by the lead agency. . .As used in this section, 'transportation facilities' includes major local arterials and public transit within five miles of the project site and freeways, highways, and rail transit service within 10 miles of the project site."

[51]/ In accordance with Section 15086(a)(3) and (4) of the State CEQA Guidelines, consultation shall further include "[a]ny other state, federal, and local agencies which have jurisdiction by law with respect to the project or which exercise authority over resources which may be affected by the project, including water agencies consulted pursuant to section 15083.5" and "[a]ny city or county which borders on a city or county within which the project is located."

by the Lead Agency in the preparation of this EIR. Prior to taking any formal actions on the proposed project, additional scoping opportunities will be provided as part of the noticed public hearings that will be scheduled by the Planning Commission and/or by the City Council following the dissemination of this DEIR. Information submitted at those hearings will be considered by those bodies as part of their deliberations on the proposed project. As a result of those comments, the Lead Agency's responses to any issues that may be raised, any further technical analyses that may result from those comments and/or the agency's continuing technical analysis, and the subsequent deliberations of those advisory and decision-making bodies, the Lead Agency's analysis and preliminary findings may be modified from those presented herein.

1.5 Documents Incorporated by Reference

Section 15150 of the State CEQA Guidelines allows EIRs to "incorporate by reference" all or portions of other documents that are a matter of public record and either relate to the proposed project or provide additional information concerning the project's environmental setting and/or impacts. Pursuant to that authority, the following documents, including each of the documents which are themselves incorporated by reference therein, are hereby incorporated by reference and by this reference made a part of this EIR. Each of the documents incorporated herein by reference are available for review at the office of the Lead Agency (i.e., City of Rialto, Development Services Department, Planning Division, 150 South Palm Avenue, Rialto, California 92376) during the City's normal business hours.

Based on the extent of information already presented about the existing environmental setting, the general project area, the project site, and the environmental impacts attributable to areawide development, as contained in each of the documents incorporated by reference, this EIR is not required to repeat, duplicate, or represent that information and analysis herein but the referenced part of the document shall be briefly summarized or described and the relationship between the incorporated material and the EIR described. That information and analysis is, however, made a part of the project's environmental review record and provides the basis for the deliberations and actions by the Lead Agency and by other responsible agencies.

The following certified CEQA documents are incorporated herein by reference and, by this reference, made a part hereof. The incorporated materials are inclusive of all relevant documents associated therein including, but not limited to, environmental notices, all accompanying technical studies, appendices, and attachments, and agency adopted findings of fact and statements of overriding consideration. The materials incorporated by reference include both the certified CEQA documents listed below, along with the accompanying planning and policy documents upon which those analyses were based.

1.5.1 City of Rialto CEQA Documents

- City of Rialto (The Planning Associates), Addendum – Revised El Rancho Verde Specific Plan, certified July 5, 2006.

  This "addendum" addressed a proposed amendment to the "El Rancho Verde Specific Plan" (ERVSP) including a City General Plan amendment changing the underlying land use designation, authorizing the construction of up to 300 single-family dwelling units within the specific plan boundaries (representing a 156 unit increase to that previously authorized), and increasing the allowable size of the golf course clubhouse. The accompanying CEQA documentation included a number of technical studies conducted

to assess the potential impacts of the proposed action. Since the proposed LCRSP includes the 221.0-acre ERVSP, the information contained in the addendum may be applicable to both an understanding of the project site and the potential impacts associated with the project's implementation.

- City of Rialto, Final Environmental Impact Report for the El Rancho Verde Specific Plan, SCH No. 1992082028, certified August 1, 1995.

  This certified "focused EIR" examined the impacts associated with the adoption of the "El Rancho Verde Specific Plan," located adjacent to Lytle Creek and northeast of Riverside Avenue and County Club Drive in the City of Rialto. The approximately 221.0-acre project entailed the renovation and upgrade of the existing 18-hole golf course and the construction of 144 single-family homes. The "Final Environmental Impact Report for the El Rancho Verde Specific Plan" (ERVSP FEIR) concluded that, as mitigated, the project would not result in the creation of any significant adverse impacts.

  The planning area comprising the ERVSP has been included within the boundaries of the proposed LCRSP. As such, the information and analysis presented in that previously certified EIR may be applicable to both an understanding of the project site and the potential impacts associated with the project's implementation.

- City of Rialto (The Keith Companies), Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, March 31, 1992.

  The City General Plan MEIR evaluated the potential environmental effects resulting from the "build-out of the City," focusing on the effects both during and at build-out of the City and its SOI under the policies of the then proposed City General Plan. In the City General Plan MEIR, the general project area is referred to the "Pharris land" and the "Sycamore land." The City General Plan MEIR indicates that subsequent environmental reviews would be tiered from that program-level (first-tier) EIR, such that "many issues can be eliminated from further consideration in the project-specific EIR," thus "reducing the size of these subsequent documents." As a result of that stated intent, much of the information presented in the City General Plan MEIR, including the discussion of the existing environmental setting, the mitigation provided by policies presented in the City General Plan, and the analysis of cumulative impacts, remains applicable.

- City of Rialto (T&B Planning Consultants, Inc.), Final Environmental Impact Report for the City of Rialto Wastewater Collection System Master Plan Update, SCH No. 95082034, certified December 20, 1996.

  This program-level EIR was prepared for the purpose of assessing the potential environmental effects resulting from the implementation of the "City of Rialto's Wastewater Collection System Master Plan Update" (Wastewater Master Plan). The Wastewater Master Plan is a comprehensive plan for the provision of wastewater collection and treatment services and includes the expansion of the City's sewer service area to include the northern SOI area and an approximately 1,850-acre area within the City of Fontana. Because the Wastewater Master Plan included portions of the LCRSP area, the environmental analysis conducted as part of that plan is or may be applicable to the evaluation of the potential effects of the LCRSP.

1.5.2 County of San Bernardino CEQA Documents

- County of San Bernardino (URS Corporation), Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038, certified March 13, 2007.[52]

  The "Final Program Environmental Impact Report, San Bernardino County 2007 General Plan Program" (County General Plan FPEIR) provided an analysis of the potential environmental effects associated with a comprehensive update to the County General Plan, the areas within the County where community plans had been prepared (including the unincorporated area of "Lytle Creek"[53] located to the northwest of the LCRSP area), and the County Development Code. The County General Plan is designed to accommodate a population increase of 436,500 individuals by 2030.

  As indicated therein, through the preparation of the County General Plan FPEIR, it was the County's objective to: (1) disclose the significant environmental affects of proposed project activities; (2) identify ways to avoid or reduce environmental damage; (3) prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures; (4) foster interagency coordination in the review of projects; and (5) enhance public participation in the decision-making process. Since there exists no "iron clad definition of significant effect" (14 CCR 15064[b]), the County General Plan FPEIR can be considered as establishing within unincorporated areas, a set of community-based environmental values for the region.

  Based on the County's assessment of the potential impacts associated with the implementation of the County General Plan, although not directly applicable to the proposed project, the County concluded that the following impacts could not be mitigated to below a level of significance:

  - ◊ Aesthetics: (1) Potential damage to scenic resources within a federal, state, county or local scenic highway or by-way (Impact AES-1); (2) Impact to scenic resources recognized by federal, state and local jurisdictions, including open space and recreational areas throughout the County that offer scenic vistas and views (Impact AES-2); (3) Create additional amounts of light at night that will impact dark sky areas in the County (Impact AES-3).

  - ◊ Agricultural resources: (1) Decline of agricultural uses within the County due to urban expansion and economic considerations (Impact AG-1); and (2) Land uses allowed by the update to the [County] General Plan will further accelerate the conversion of the Chino Dairy Preserve to urban uses (Impact AG-2).

[52]/ In accordance with the provisions of the "Order Regarding Settlement" (San Bernardino County Superior Court Case No. CIVSS 700329) between the County and the Office of the California Attorney General, dated August 28, 2007, some aspects of this document may be subject to change (State of California v. County of San Bernardino).

[53]/ As described by the County: "The Lytle Creek planning area is roughly 6 square miles of unincorporated area. It is approximately 15 miles northwest of the City of San Bernardino and 10 miles from the cities of Fontana and Rialto. This small remote community is located in a large southeast-trending canyon on the eastern portion of the San Gabriel Mountains completely within the boundaries of the San Bernardino National Forest. The neighborhoods within the plan area are accessible by a single road off the I-15" (Source: County of San Bernardino (URS Corporation), Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038, certified March 13, 2007, p. III-7).

◊ Air quality: (1) New residential, commercial and industrial development will occur as a result of the update of the 2007 [County] General Plan resulting in the creation of more air pollutants that will impact the existing poor air quality in the county (Impact AQ-1); (2) The growth allowed by the update of the [County] General Plan will either create emission of NOx, hydrocarbons, pesticides and PM10 or new residents will be exposed to these pollutants. This would be particularly significant to sensitive populations in the county (e.g., those with respiratory illness and the older population) (Impact AQ-2); and (3) Growth facilitated by the update to the County's General Plan will result in the need to develop new roads within the county to allow for the movement of goods within the county that will result in exposing the county's population to diesel fumes that are known to be harmful to people (Impact AQ-3).

◊ Biological resources: (1) Development allowed by the [County] General Plan Update will adversely affect candidate, sensitive, or special-status plant and animal species in the Valley and Mountain Regions of the County (Impact BIO-1); (2) Development allowed by the [County] General Plan update will adversely impact protected wetlands as defined by Section 404 of the Clean Water Act and impact native habitat downstream of the limits of a project in the Valley Region. [County] General Plan implementation within the Mountain and Desert Regions will not directly impact federally protected wetlands, but indirect effect to downstream wetland and other natural habitat may occur from loss of sediment, natural sediment deposition, and flood control management but these are not issue[s] with the scope of the [County] General Plan (Impact BIO-3); (8) Development allowed by the [County] General Plan update will adversely impact riparian habitat or other sensitive natural communities identified by state and federal agencies for projects developed within the Mountain Region that are mostly located on privately owned lands (Impact BIO-8); (4) Development allowed by the [County] General Plan with[in] the Mountain Region may directly and indirectly affect federal protected wetlands (Impact BIO-9); (5) Development allowed by the [County] General Plan update in the Desert Region will adversely affect candidate, sensitive or special-status plant [and] animal species (Impact BIO-13); (6) Development allowed by the [County] General Plan update in the Desert Region will impact riparian habitat or other sensitive natural communities as identified by state and federal agencies that may be directly affected by ongoing development or indirectly affected by development of adjacent buffer habitat and public use and access. Regional growth may affect a riparian habitat that is a very limited resource in the Desert Region and has a more significant consequence and recover from temporary effects because it takes substantially longer for these impacts to be mitigated because of the limited amount of rainfall in this Region (Impact BIO-14); and (7) Development allowed by the [County] General Plan within the Desert Region may adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policies and ordinances (Impact BIO-16).

◊ Hazards and hazardous materials: Development in high fire hazard areas will be subject to periodic wildland fires that occur in these areas. Even if structures are built with the most current fire-safe building techniques and standards, these structures may be damaged or destroyed during major wildland fire

conflagrations. People occupying these structures during a willdand fire will also be subject to injury or death (Impact HAZ-6).

◊ Traffic and circulation; (1) Traffic is projected to grown [sic] on roadways not under the County's jurisdiction due to continued population growth in each of the San Bernardino County sub-regions and surrounding areas including the following areas: San Bernardino Valley Planning Area; Mountain Planning Area; Desert Planning Area. Growth in these areas will result in deficiencies in some roadways in these areas (Impact TR-2); and (2) Traffic is projected to grow on roadways in the counties and surrounding areas adjacent to San Bernardino County due to continued population growth in Riverside, Los Angeles and Orange Counties. This will result in deficiencies in some roadways in these areas (Impact TR-3).

In addition, the County concluded the following cumulative impacts could not be mitigated to a less-than-significant level: (1) loss of productive agricultural resources; (2) degradation of air quality; (3) loss of biological resources; and (4) increased transportation and traffic. The County concluded that all other impacts either did not manifest at a level of significance or could be effectively reduced to below a level of significance.

The data, analysis, mitigation measures, and alternatives presented in the County General Plan FPEIR provides relevant information concerning the existing environmental setting, the potential impacts resulting from future development throughout the County, the effects of that development on County services, systems, and resources, and actions that could be instituted, either by the County or by others, to reduce the impacts of that development to the extent feasible.

- County of San Bernardino (Michael Brandman Associates), Final Environmental Impact Report – Glen Helen Specific Plan, SCH No. 2000011093, certified November 15, 2005.

  As indicated by the County: "In April of 1998, the County of San Bernardino Board of Supervisors called for the preparation of the GHSP for approximately 3,400 acres of unincorporated territory in the Devore area, located south of the intersection of the I-15 and I-215 freeways. The Board of Supervisors found that a comprehensive plan for land use and infrastructure was needed to ensure the orderly development and economic growth of the Glen Helen area. A comprehensive study of land use, circulation, sewage treatment, water distribution, and other utilities has been completed to ensure orderly development consistent with the public health, safety and welfare. . .The proposed 'project' pursuant to California Environmental Quality Act Section 21065, is the adoption and implementation of the Glen Helen Specific Plan. The purpose of the Glen Helen Specific Plan is to facilitate the orderly development of a complementary pattern of land use that will occur over the next 15 to 20 years. As such, the Plan is differentiated from a specific project to be constructed in that it does not directly lead to a physical change in the environment. Rather the Plan is likely to lead to reasonably foreseeable indirect physical changes in the environment. The Specific Plan provides for the following development and open space potential: [1] 262 acres of industrial development along Cajon Blvd. and Kendall Drive [2] 96 acres of traveler services and business support services at freeway interchanges [3] 257 acres of destination entertainment and

recreation uses within private and public lands that will complement and reinforce the activities at the regional park [4] 1700 acres of various types of open space."[54]

The programmatic GHSP FEIR concluded that not all impacts associated with the specific plan's implementation could not be effectively mitigated to a less-than-significant level. The following unavoidable adverse impacts were identified: (1) traffic and circulation; (2) climate and air quality; and (3) visual resources/aesthetics.

An approximately 276.7-acre portion of the GHSP project site (Sycamore Flats and Sycamore Canyon[55]) has been included within the boundaries of the LCRSP and addressed in this EIR. In addition, an additional "off-site" area totaling approximately 3.6-acre (off-site utility easement), which is currently and will remain a part of the GHSP, is also addressed in this EIR. As a result, information concerning both those areas and other surrounding properties and other related projects and information concerning the impacts associated with the implementation of the GHSP project and the potential cumulative impacts associated with the development of those related projects is or may be applicable to the evaluation of the potential effects of the LCRSP.

- County of San Bernardino (L.D. King, Inc.), Final Environmental Impact Report – Lytle Creek North Planned Development Project, SCH No. 99051015, certified December 18, 2001.

  This County-certified CEQA document examined the potential impacts associated with the implementation of the "Lytle Creek North Planned Development Project" (LCNPD or Lytle Creek North or Rosana Ranch or Tract No. 15900). The approximately 647.4-acre area master plan authorized the development of a maximum of 2,466 dwelling units and 678,450 square feet of mixed commercial development. Other uses included, but were limited to, a 10.0-acre school site, 29.0 acres of community parkland, 66.2 acres of additional open space area, and a package wastewater treatment facility.

  Although the LCNPD project is separate and distinct from the LCRSP, both project sites were, at one time, included as part of a larger development project included in "The Villages at Lytle Creek Specific Plan"[56] (Villages Specific Plan) and examined in the City's "Draft Environmental Impact Report for The Villages at Lytle Creek Specific Plan/Sunwest Reclamation Plan Amendment"[57] (Villages Specific Plan DEIR). Because it was withdrawn prior to certification by any decision-making body, the Village Specific Plan DEIR was never certified and The Villages Specific Plan never adopted.

  In that historic context and based on the proximity between the two sites, the information presented in the Lytle Creek North FEIR appears particularly germane to the environmental assessment of the proposed project. The relationship between the Lytle

[54]/ County of San Bernardino, Report/Recommendation to the Board of Supervisors of San Bernardino County, California and Record of Action, October 25, 2005, pp. 3-4.

[55]/ As described in the "Glen Helen Specific Plan": "This is actually two undeveloped areas of somewhat different characteristics. Sycamore Flats, along the east side of the I-15 Freeway, and Sycamore Canyon, a topographically varied area of private property on the west side of the freeway in the San Bernardino National Forest. Sycamore Flats is characterized by gently sloping terrain, a stream with a ponded freshwater marsh and surrounding riparian vegetation near the I-15 Freeway" (Source: County of San Bernardino, Glen Helen Specific Plan, p. 2-4).

[56]/ Lytle Creek Land & Resources Company, The Villages at Lytle Creek Specific Plan, January 1995.

[57]/ City of Rialto, Draft Environmental Impact Report for The Villages at Lytle Creek Specific Plan/Sunwest Reclamation Plan Amendment, February 6, 1996.

Creek North FEIR and this EIR is further highlighted by the existence of specific mitigation and conservation activities established as a result of the County's approval of the Lytle Creek North project,[58] proposed plans by the Applicant to build upon those activities, and the currency of the Lytle Creek North FEIR.

An approximately 104.3-acre portion of the Lytle Creek North project site has been included within the boundaries of the LCRSP (Neighborhood I) and is addressed in this EIR.[59] As depicted in the Lytle Creek North FEIR, those planning areas (PAs) extracted from the approved LCNPD and included in the proposed LCNSP encompass all of PAs 1 through 7, all of PA 14 and a portion of PA 13. As a result, information concerning both those areas and other surrounding properties and other related projects and information concerning the impacts associated with the implementation of the Lytle Creek North project and the potential cumulative impacts associated with the development of those related projects is or may be applicable to the evaluation of the potential effects of the LCRSP. Based on the inclusion of those areas, this EIR retains some of the basic formatting presented in the Lytle Creek North FEIR.

- County of San Bernardino, Mitigated Negative Declaration - Amended Reclamation Plan 93M-04, April 19, 2001.

1.5.3 Other CEQA Documents

- Southern California Association of Governments, Final 2008 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2007061126, January 2008; Southern California Association of Governments, Final 2008 Regional Transportation Plan Program Environmental Impact Report Addendum, May 2008, certified May 8, 2008, certified May 8, 2008.

  As described by SCAG: "The purpose of the 2008 RTP is to provide a clear, long term vision of the regional transportation goals, policies, objectives and strategies of the SCAG region. The plan provides an assessment of current and projected demand for travel and goods movement in the region, and includes actions to meet the region's mobility and accessibility needs."[60] The 2008 "Regional Transportation Plan" (2008 RTP) identifies the improvements to the regional transportation system based on anticipated population growth and the need to maintain and preserve an aging transportation system for its long-term viability. This program-level EIR provides information about the project's regional setting and describe anticipated regional growth and the potential impacts associated with that growth through a 2035 horizon year.

  Specific transportation-improvements projects are listed in the 2008 RTP. In the general project area, "financially constrained RTP projects" include adding one high-occupancy vehicle (HOV) lane in each direction (PM 0.0-16.0) along the I-15 Freeway between the

[58]/ Approximately 160.5 acres of land in Lytle Creek Wash was set aside for San Bernardino kangaroo rat conservation as part of the Lytle Creek North's biological opinion (United States Fish and Wildlife Service) and Section 404 permit (United States Army Corps of Engineers).

[59]/ Including lands located within the following Planning Areas (PAs): PA-8 (36.3 acres), PA-9 (1.0 acre), PA-10 (11.0 acres), PA-11 (3.0 acres), PA-12 (3.0 acres), PA-13 (29.0 acres), PA-14 (2.0 acres), and PA-15 (9.0 acres), plus 10.0 acres of roadways.

[60]/ Southern California Association of Governments, Final 2008 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2007061126, January 2008, certified May 8, 2008, p. 2-3.

Riverside County line and the I-215 Freeway (RTP ID 4H01004).[61] Any project-related obligations with regards to those improvements would likely be limited to the payment of a fair-share contribution thereto.

Concurrent with the certification of the "Final 2008 Regional Transportation Plan Program Environmental Impact Report" (2008 RTP PEIR), SCAG adopted a mitigation monitoring and reporting program (MMRP). The "purpose of this MMRP is to ensure compliance with the adopted mitigation measures included in the 2008 Regional Transportation Plan Program EIR. . .The MMRP for the 2008 RTP PEIR clarifies the process for implementing agencies to comply with these mitigation measures and designates responsibility for implementation, monitoring, and reporting mitigation" and "SCAG will rely upon each project's Lead Agency to implement monitoring and verification of successful completion of each mitigation measure.[62] To the extent applicable, the Lead Agency has considered the mitigation measures presented in the 2008 RTP PEIR MMRP.

- South Coast Air Quality Management District, Final Program Environmental Impact Report for the 2007 Air Quality Management Plan, SCH No. 2006111064, certified June 1, 2007.

  The South Coast Air Quality Management District's (SCAQMD) 2007 "Air Quality Management Plan" (2007 AQMP) is the planning document that sets forth policies and measures to achieve federal and State air quality standards for the region, including attainment of all ambient air quality standards. The 2007 AQMP includes measures which address stationary, mobile, and indirect emission sources. The overall control strategy for the 2007 AQMP is designed to demonstrate attainment of the federal $PM_{2.5}$ ambient air quality standard by 2015 and the federal 8-hour ozone standard by 2024 while making expeditious progress toward attainment of State standards. The SCAQMD's program EIR contains applicable information concerning existing conditions throughout the region, including an assessment of the environmental impacts of the control measures outlined in the 2007 AQMP.

- California Air Resources Board, Climate Change – Proposed Scoping Plan, A Framework for Change, California Environmental Quality Act Functional Equivalent Document, October 2008.[63]

  Under Assembly Bill 32, California must reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. This requires the State to reduce GHG emissions by 169 million metric tons carbon dioxide (CO_2) equivalent ($MMTCO_2E$) from a projected 596 $MMTCO_2E$ "business as usual" (BAU) case in 2020. The California Air Resources

[61]/ Southern California Association of Governments, 2008 Regional Transportation Plan: Making the Connection, Supplemental Report, Project List, adopted May 8, 2008, p. 148.

[62]/ *Op. Cit*., Final 2008 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2007061126, p. 7-1.

[63]/ Section 21080.5 of the PRC allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an EIR once the Secretary of the Resources Agency has certified the regulatory program. The Secretary for Resources has determined that the California Air Resources Board (CARB) meets the criteria for a Certified State Regulatory Program (14 CCR 15251[d]), allowing the CARB to adopt rules, regulations, standards, and plans and exempts the CARB from the requirement to prepare EIRs. As a certified agency, however, the CARB is required to prepare a substitute document subject to the provisions of CEQA. This functional equivalent document serves to satisfy the CARB's CEQA obligations for the proposed "Climate Change – Proposed Scoping Plan" (October 2008).

Board's (CARB) "Climate Change – Proposed Scoping Plan" provides a comprehensive approach to reduce emissions to achieve the 2020 target, including the development of a cap-and-trade program. This functional equivalent document addresses the potential environmental effects that may result from the implementation of those measures.

1.6 Document Format

In addition to such other information as may be part of the project's administrative record or subsequently added by the Lead Agency, the project's CEQA documentation is comprised of the following three (3) separate volumes:

- **Volume I: Draft Environmental Impact Report**. This volume contains a description of the proposed project, includes a detailed analysis of potential project-related and cumulative impacts on the environment, presents a list of those mitigation measures recommended by the Lead Agency in response to those identified effects, and examines a reasonable range of project alternatives. The DEIR further includes, but is not limited to, each of the mandatory components required for an adequate EIR, as defined in Sections 15122 through 15129 of the State CEQA Guidelines. The DEIR also includes a copy of the NOP and those written comments received by the Lead Agency following the dissemination of the NOP and noticed CEQA scoping meeting (Appendix I-A) and a copy of the Lead Agency's draft mitigation reporting or monitoring program (Table ES-2).

- **Volume II: Traffic Impact Analysis**. A key element of the "San Bernardino County Congestion Management Plan, 2005 Update"[64] (County CMP) is the traffic impact analysis (TIA) report. The TIA serves to provide a basis for addressing the impacts of land-use decisions on the regional transportation system by providing a consistent format to identify and mitigate traffic impacts and quantify mitigation costs. TIA reports shall be prepared when a proposed change in land use or a development project or will equal or exceed the County CMP threshold of 250 two-way peak-hour trips generated, based on trip generation rates published for the applicable land use in the Institute of Transportation Engineers' (ITE) "Trip Generation" or other approved Congestion Management Agency (CMA) approved data source. The proposed project's TIA is presented in Appendix II-A (Traffic Impact Analysis).[65]

  While presenting traffic information applicable to this CEQA review, the project's TIA is separately reviewed by SanBAG (acting in its role as CMA) and by other potentially impacted jurisdictions,[66] in concert with the permitting jurisdiction's project review schedule and prior to any approval or permitting activity. The County CMP indicates that the TIA may be contained in other similar documents, including CEQA documentation.[67]

[64]/ San Bernardino Associated Governments, San Bernardino County Congestion Management Plan, 2005 Update, adopted November 2, 2005.

[65]/ The scope of the proposed project's TIA was developed in conjunction with the City and the San Bernardino Associated Governments (SanBAG). Prior to the commencement of the TIA, coordination meetings were held with City and SanBAG staff to finalize the study parameters and methodology. The approach, assumptions, and methodology utilized are consistent with the current County's CMP.

[66]/ The study area for the traffic report includes roadways traversing the following jurisdictions: Cities of Rialto, Fontana, San Bernardino and the County of San Bernardino.

[67]/ *Op. Cit*., Congestion Management Program for San Bernardino County, 2003 Update, Appendix C, December 3, 2003, pp. C-4 and C-11 and 12.

- **Volume III: Technical Appendix**. This two-part companion document contains a number of project-specific technical studies used in the derivation of the preliminary findings presented in the DEIR, including technical studies submitted by the Applicant[68] and other documents addressing site-specific and/or project-specific conditions.

- **Volume IV: Response to Comments**. Following the dissemination of the DEIR, the closure of the comment period established by the Lead Agency in the "Notice of Completion" (NOC), and prior to the preparation of the "Notice of Determination" (NOD), the Lead Agency will prepare detailed written responses to the written CEQA-related comments received thereupon. Those comments and the Lead Agency's draft responses will be included in a separately bound document that, upon its preparation, shall constitute an integral component of the project's CEQA documentation and, in combination with the DEIR, the technical appendix, and such additional documents as may be identified by the Lead Agency, shall serve as the FEIR for the proposed project.

Collectively, these separate volumes, in combination with such additional material, information, studies, reports, and other documentation as may be identified herein and/or subsequently included by the Lead Agency's decision-making body, shall constitute the FEIR and, if certified, shall provide the environmental basis under CEQA for the approval or conditional approval and the implementation of the proposed project, if so approved.

1.7 Agencies/Organizations Associated with the Proposed Project

Presented in Table ES-2 (Agencies and Organizations Associated with the Proposed Project) is a listing of those agencies, organizations, and individuals associated with the proposed project including, but not limited to: (1) the Lead Agency and the Applicant; (2) State, regional, and local responsible agencies that will or that may be required to take one or more discretionary actions concerning the proposed project and who may be required to utilize the Lead Agency's CEQA documentation as part of their own independent deliberations; (3) trustee agencies having jurisdiction by law over those natural resources affected by the proposed project[69]; and (4) federal agencies from whom discretionary permits or approval will or may be required and who will or may elect to utilize the Lead Agency's CEQA documentation as the environmental basis for those discretionary actions. Each of the entities, organizations, and individuals identified therein may be contacted should the reader have any questions or comments concerning any aspect of the proposed project and/or the environmental analysis presented in this EIR.

For each of the agencies listed, there may exist other departments, divisions, subdivisions (e.g., county service areas), and/or affiliated entities (e.g., special districts), other than those specifically identified, from whom one or more discretionary actions may be required. Reference to each agency herein is assumed to be inclusive of each of those departments, divisions, subdivisions, and affiliated entities that are associated therewith.

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[68]/ Section 15084(b) and (c) of the State CEQA Guidelines states that, the "lead agency may require the project applicant to supply data and information" and "[a]ny person, including the applicant, may submit information or comments to the lead agency to assist in the preparation of the draft EIR." As required under Section 15084(e) therein, "[b]efore using a draft prepared by another person, the lead agency shall subject the draft to the agency's own review and analysis." The project's administrative record demonstrates the Lead Agency's independent review of all materials that were submitted to the City for the Lead Agency's consideration during the preparation of this EIR, included the Lead Agency's independent review of all Applicant-submitted materials.

[69]/ As defined in Section 21070 of the PRC: "'Trustee agency' means a State agency that has jurisdiction by law over natural resources affected by a project, that are held in trust for the people of the State of California."

In preparing the list of responsible, trustee, and federal agencies, the Lead Agency has attempted to be inclusive of all agencies from which discretionary permits and approvals will or may be required for the approval and implementation of the proposed project. As this planning and environmental review process progresses, other public agencies may be identified from whom later entitlements are or may be required. The City's failure to list one or more such agencies herein does not preclude that agency or those agencies from utilizing the FEIR as the environmental basis for those later actions and would not necessitate the recirculation of this document merely to identify that agency or those agencies and those later entitlements. The identification of an agency as a potential responsible agency hereunder does not necessarily elevate the role of that agency to the status of a responsible agency if no discretionary permits or approvals are ultimately determined to be required from that agency.

In addition, excluding those individuals and organizations that were contacted in the document's preparation and other parties submitting comments to the Lead Agency in response to any of the environmental notices released by the Lead Agency for the purpose of soliciting public and agency comments for consideration in the document's preparation, presented in Table 8-1 (Project Participants) are those parties that contributed to the preparation of this EIR and/or submitted technical material for the Lead Agency's consideration.

1.8 Custodian of the Environmental Review Record

As specified in Section 18.70.020 (Administration) of the City Municipal Code, the Development Services Director (Director) or the Director's assigned designee shall administer the provisions of CEQA within the City. As such, the Director or the Director's assigned designee shall serve as the custodian of the project's environmental review record. The documents, studies, reports, correspondence, and other material comprising the administrative record for the proposed project are located at the City of Rialto, Development Services Department (150 South Palm Avenue, Rialto) and are, upon appointment, available for review during the regular business hours of the Department.

1.9 Review Period

This DEIR and the accompanying "Notice of Completion" (NOC) and/or "Notice of Availability" (NOA) have been distributed to all responsible and trustee agencies known to the Lead Agency, to other affected agencies, to other stakeholders, and, pursuant to Section 21092(b)(3) of CEQA, to those parties formally requesting a copy of the DEIR. During the 45-day public review period established by the NOC and NOA, the DEIR is available for review at the City of Rialto - Development Services Department (150 South Palm Avenue, Rialto) from the custodian of the environmental review record. The City is not required under CEQA to accept late comments.

Parties wishing to submitted written comments to the Lead Agency concerning any aspect of the DEIR should address those comments to: Mike E. Story, Director, City of Rialto - Development Services Department, 150 South Palm Avenue, Rialto, California 92376.

1.10 Independent Judgment

The information, analysis, and preliminary conclusions, as well as the recommended thresholds of significance and mitigation measures and the range of alternatives presented herein, reflect the independent judgment of the Lead Agency relative to the potential direct, indirect, and cumulative impacts of the proposed project and those other reasonably foreseeable probable

future projects identified herein. The administrative record for this project fully documents the Lead Agency's concerted efforts to ensure the technical adequacy, accuracy, and objectivity of the material presented in the project's environmental review record, the Lead Agency's efforts and actions to fully and faithfully demonstrate compliance with CEQA and the State CEQA Guidelines, and the City's efforts and action to effectively involvement all interested and affected stakeholders in the project's planning, environmental review, and decision-making processes.

Prior to the certification of the FEIR, the Lead Agency will not nor has the Lead Agency made any decisions that would constitute an irretrievable commitment of resources toward the proposed project nor has the City previously committed to a definite course of action with respect to the proposed project. Prior to certification, no statements presented herein should be construed as being indicative of a final decision on the part of the City with regards to the proposed project, City-issued entitlements, and/or the City's CEQA obligations.

2.0 PROJECT DESCRIPTION

The proposed project is the adoption and subsequent implementation of the proposed "Lytle Creek Ranch Specific Plan" (LCRSP). The LCRSP would establish the development policies, land uses, and development standards for an approximately 2,447.3-acre area located, in part, within the corporate boundaries of the City and, in part, within unincorporated San Bernardino County. The proposed LCRSP would authorize the development of up to 8,407 dwelling units and 849,420 square feet of general and specialty commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar uses, result in the creation and retention of open space and conservation areas, and allow for the development of public, semi-public, and private recreational facilities, school, and other institutional uses, as well as associated public works and other infrastructure improvements. As described below, the overall master-planned community which would be created through the approval and subsequent implementation of the proposed LCRSP will consist of four separate and distinct "neighborhoods," each comprised of numerous "planning areas." Within each planning area, separate project-level activities would be authorized in accordance with the land uses and development standards established under the proposed specific plan.

Although no square footages have been explicitly assigned either by the Applicant or by the Lead Agency, institutional, recreational and other infrastructure-related uses are addressed through there introduction herein, through the assignment of acreages to those uses, and through the depiction of those facilities and improvements herein. The potential environmental impacts attributable to those acreage-based uses and depicted facilities and improvements are addressed in this EIR. As such, with regards to those uses, facilities, and improvements, the 849,420 square feet of non-residential use identified in the proposed LCRSP and examined herein does not constitute a finite cap, other than with regards to those general commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar uses authorized or conditionally authorized under the proposed LCRSP.

A portion of the project site is currently under the jurisdiction of the City and the remainder of the site is under the jurisdiction of the County. The project includes the annexation or phased annexation of those unincorporated area within the geographic area comprising the proposed LCRSP into the City. A general description of the proposed project is presented below.

2.1 Project Location and Setting

2.1.1 Project Site

The project site that will be regulated by the LCRSP, if adopted by the City, consists of approximately 2,447.3-acres. Approximately 694.2 acres of the area located within the proposed LCRSP is currently within the corporate boundaries of the City and the remaining approximately 1,753.1 acres is currently located in unincorporated San Bernardino County, under the jurisdiction of the County, but within the City's adopted Sphere of Influence (SOI). In addition, for the purpose of CEQA compliance, this EIR also analyzes certain additional "off-site" areas,[1] including those areas associated with any infrastructure and related improvements that

[1]/ As used herein, the term "off-site" refers to lands located outside the boundaries of the proposed LCRSP and not subject to the land-use provisions of that specific plan, if subsequently adopted by the City. These lands, in whole or in part, may not be within the ownership and/or control of the Applicant, may not be proposed for annexation, and may not be subject to the jurisdictional authority of the City. Since these lands will or may be impacted during the project's construction and/or operation, they have been included within the geographic area examined herein and made a part of this environmental analysis.

may be directly required for the project's implementation. Additional off-site areas addressed in this EIR total approximately 19.9 acres and are located outside the boundaries of the proposed LCRSP but are nonetheless included herein and made a part of this EIR. Those lands include:

- Southern California Gas Company (SoCalGas) utility easement within County-owned property located adjacent to Neighborhood I totaling approximately 3.6 acres;
- An approximately 20-foot wide improved roadway owned by the County extending from the northeast portion of Neighborhood II to a connection to Highland Street that will provide an interim, secondary point of access to Neighborhood II during construction, totaling about 2.6 acres;
- Road easement extending beneath the I-15 Freeway, totaling about 2.3 acres;
- Levee improvements extending approximately 2,000 linear feet on property owned by Cemex USA and consisting of about 10.1 acres between Neighborhoods II and III;
- Additional levee improvements north of Neighborhoods II and IV with a combined acreage of approximately 0.6 acres; and
- Drainage improvements in the vicinity of Neighborhood IV, totaling about 0.7 acres within the Lytle Creek Road right-of-way.

With the exception of the existing Lytle Creek Road right-of-way, except through the consent of the off-site property owner or their designate or except where expressly authorized under law, neither the Applicant nor the City currently have authority to utilize or encroach upon public or private lands or lands under the jurisdiction of another governmental entity. It is not the City's intent to exercise eminent domain authority to secure rights to any of the above referenced properties nor would the City support unauthorized trespass thereupon. As such, the Applicant shall bear all costs and sole responsibility for securing any such rights, easements, or other authorizations as may be required to utilize those properties for any project-related purpose.

In addition, there exist other off-site areas that are primarily related to areawide or other master planned infrastructure improvements that are, directly or indirectly, associated with the implementation of the proposed project. Those areas include, but may not be limited to, the locations upon which facilities, capital improvements, infrastructure systems, and other public work projects that will or that may be implemented by other parties and which have been previously examined or will be examined as part of CEQA documents and other entitlement processes prepared or conducted by other governmental entities and/or improvements that will be implemented by others and for which the Applicant bears only a fee payment or fair-share financial contribution. In addition, additional off-site areas include lands which will be acquired, retained, preserved, enhanced, and/or conveyed by the Applicant as compensatory resources for project-related impacts affecting protected on-site plant communities (e.g., Riversidean alluvial fan sage scrub, southern cottonwood willow riparian), wildlife species (e.g., San Bernardino kangaroo rat), and jurisdictional waters. Those additional off-site areas have not been included in the acreage totals presented herein.

2.1.2 Regional and Local Vicinity

The project site is located, in part, in unincorporated San Bernardino County and, in part, within the City of Rialto. The project site can be generally described as being located to the southwest of the unincorporated community of Devore, to the west of the City of San Bernardino, to the south of the San Bernardino National Forest (SBNF or National Forest), to the east of the City of Fontana, and to the north of confluence of Cajon and Lytle Creeks. The northeastern corner of the project site borders the County-administered Glen Helen Regional Park (GHRP) and portions of the project site abuts the federally-administered National Forest.

The project site includes certain acreage that was previously entitled by the County as part of the "Lytle Creek North Planned Development Project" (LCNPD or Lytle Creek North) and the "Glen Helen Specific Plan" (GHSP). The project site also includes certain lands that were previously entitled by the City as part of the "El Rancho Verde Specific Plan" (ERVSP). As proposed, those geographic areas that within the boundaries of the proposed LCRSP that fall within those jurisdictional areas would be removed from the boundaries of those respective planning areas and would be included in the larger geographic area defined and governed by the provisions of the proposed LCRSP. Upon adoption of the LCRSP and annexation of the unincorporated areas to the City, the LCRSP will supersede the existing plans and policies that currently regulate the use and development of those areas within the specific plan boundaries.

The project site is situated at the base of the San Gabriel and San Bernardino Mountains, abutting and proximal to the mouth of Lytle Creek Canyon. Three of the project's proposed neighborhoods (Neighborhoods II, III, and IV) are bordered on the east by the main channel of Lytle Creek (also referred to as Lytle Creek Wash). During a typical flood event, the floodplain created by that watercourse is approximately 600-feet wide. The Lytle Creek channel traverses the project site in a northwest to southeast direction. Storm flows are generally confined within an existing groin and levee system.

Two of the project's proposed neighborhoods (Neighborhoods I and IV) are bordered on the north by the SBNF. The Interstate 15 (I-15 or Ontario) Freeway serves as the primary source of regional access to the subject property, slicing through the LCRSP along a generally northeast to southwest orientation. The I-15 Freeway traverses and physically divides one of the project's neighborhoods (Neighborhood I), such that a portion of that neighborhood in located on the north side and a portion is located on the south side of that roadway. The I-15 Freeway also forms a border or edge for two other neighborhoods (Neighborhoods III and IV). From the I-15 Freeway, the project area can be accessed from Devore Road/Glen Helen Parkway on the north and Sierra Avenue on the south. Sierra Avenue transitions to Lytle Creek Road to the north of the Ontario Freeway. South of the I-15 Freeway, Sierra Avenue intersects with Riverside Avenue. Sierra and Riverside Avenues form the westerly boundary of the project site.

The project's regional location is illustrated in Figure 2-1 (Regional Location Map) and the site's local context is depicted in Figure 2-2 (Local Vicinity Map). The project's proximity to the SBNF is illustrated in Figure 2-3 (San Bernardino National Forest in the Vicinity of the Project Site).

2.1.3 Proximal Land Uses

Surrounding land uses are as generally depicted in Figure 2-4 (Existing Proximal Land Uses). An aerial view of the general project area is presented in Figure 2-5 (Aerial Photograph). Additional information about existing land uses is presented in Section 4.1.3.2 (Local Setting). As illustrated, the project site is bordered by a variety of land uses located within the Cities of Fontana and Rialto, within County unincorporated areas, and within the SBNF. In the City of Fontana, uses to the west and northwest of the project site include single-family residences, community facilities, and commercial uses (e.g., Nealey's Corner). Within the City of Rialto, uses to the south and southwest of the project site include single-family residential units (e.g., Las Colinas and Country Club Estates), light industrial uses, community facilities (e.g., Oliver P. Roemer Wastewater Treatment Plant [Oliver P. Roemer Water Filtration Facility] and Zone 4 Reservoir Complex), and a neighborhood park (i.e., Birdsall Park). A number of religious, eleemosynary, and educational facilities are located along North Riverside Drive and within the general project area.

To the south of the project site, Vulcan Materials Company (Calmat) (2400 W. Highland Avenue, Rialto) operates a screening facility which produces materials for asphalt, asphalt aggregate, base materials, concrete aggregate, natural sand, and recrushed concrete. Operations at the Vulcan Materials' (CalMat) San Bernardino Sand and Gravel Plant (San Bernardino Rock and Asphalt) include, but may not be limited to, a concrete ready-mix plant which is located approximately 3,000 feet east of the project site's easternmost boundaries.

Located in the general vicinity of the central portion of the project site, within an unincorporated County area, are a number of industrial uses, including Southern California Edison's (SCE) Fontana Power Plant and Cemex USA's Lytle Creek Plant. Cemex USA's existing sand and gravel quarry has been in operation since 1954 and is projected to operate through April 29, 2028. The pits are situated on the north and south sides of the Lytle Creek main channel and are separated from channel flows by two earthen levees.

Within unincorporated County areas, south of the I-15 (Ontario) Freeway, is the area of the LCNPD (Tract 15900) (Rosena Ranch), a 2,466-unit master planned community approved by the County in 2001. South of the Ontario Freeway is the GHRP and Glen Helen Off-Highway Vehicle Park. Located within GHRP is the Hyundai Pavilion at Glen Helen (formerly Glen Helen Blockbuster Pavilion), an open-air entertainment amphitheater. Further to the east, north of Lytle Creek, is the site of the Glen Helen Regional Rehabilitation Center and the Glen Helen Regional Training Center. Both facilities are operated by the County Sheriff's Department.

North of the project site is the 820,848-acre SBNF (including 673,688 acres of National Forest System lands and 147,160 acres of private in-holdings). The SBNF is divided into three non-contiguous ranger districts: Mountain Top Ranger District, Front Country Ranger District, and San Jacinto Ranger District. The project site abuts that portion of the Front County Ranger District administered by the Cajon Ranger Station (1209 Lytle Creek Road, Lytle Creek). Proximal land uses within the National Forest include rural residential uses, recreation and open space, and the United States Department of Agriculture - United States Forest Service's (USFS or Forest Service) Fire Station No. 32 (Sycamore). In addition, the Forest Service operates the Lytle Creek Ranger Station (1209 Lytle Creek Road, Lytle Creek) which provides recreation visitor information and issues adventure passes. In Neighborhood I, a portion of the project site (Sycamore Canyon) is located within the Congressional boundaries of the National Forest but, because the project lands are privately owned, is not subject to Forest Service jurisdiction.

Northwest of the project site, at the intersection of Sierra Road and Lytle Creek Road and north of the I-15 Freeway, are a number of automobile service stations and fast-food restaurants, within a commercial area commonly known as "Nealey's Corner." Further to the north, within the SBNF is SCE's Lytle Creek Hydroelectric Project (FERC Project No. 1932-004). That existing facility is a run-of-the-river hydroelectric facility, generating approximately 3,056,000 kilowatt hours (kWh) of electricity annually. Land uses in the general vicinity of that hydropower project include power generation,[2] agriculture, residential and commercial uses, open space, recreational, and natural resource management.

To the southwest (but not contiguous with the project site) is the site of the former United States Department of Defense's (previously the War Assets Administration) Rialto Ammunition Back-up

[2]/ Federal Energy Regulatory Commission and United States Forest Service, Final Multiple Project Environmental Assessment for Hydropower Licenses, Santa Ana River Projects, Lytle Creek Hydroelectric Project, FERC Project No. 1932-004, Santa Ana River 1 and 3 Hydroelectric Project, FERC Project No. 1933-010, Mill Creek 2/3 Hydroelectric Project, FERC Project No. 1934-010, California, September 2002, pp. 179 and 184.

Storage Point (Used Defense Site No. J09CA057200[3]) (RASP). The RASP was active during World War II and a large portion of the munitions used in the Pacific theater were temporarily stored at that location.[4] Further to the south (south of Highland Avenue) is the 453-acre Rialto Municipal Airport/Art Scholl Memorial Airport (formerly Miro Field). This general aviation airport is part of the proposed 3,100-acre "Rialto Airport Specific Plan" project. Based, in part, on the decline in based aircraft and aviation operations due to increased regional capacity, the federal government has consented to the airport's closure.[5] A private developer (Lewis-Hillwood Rialto, LLC) has submitted plans to convert an approximately 1,510.3-acre portion of the airport site, including other adjoining properties, into a mixed-use development (Renaissance Rialto) containing 2,118 dwelling units and 16,470,472 square feet of retail and service-oriented commercial, office professional, and light industrial uses.[6] Pending entitlement, the precise nature of the proposed use of that property remains subject to change and refinement.

Further to the south, north of Highland Avenue, is the Mid-Valley Sanitary Landfill (Fontana Refuse Disposal Site), owned and operated by the County Solid Waste Management Division. The Mid-Valley Sanitary Landfill (MVSL) is a Class III municipal solid waste landfill located about 0.25 mile north and east of the intersection of Sierra and Highland Avenues. The permitted disposal area at the MVSL consists of approximately 142 acres of lined area and 60 acres of composite-lined area. Another 206 acres of composite-lined area will be constructed for the disposal of municipal solid waste (MSW) and treated wood waste (TWW).[7]

2.2 Project Land-Use Plan Overview

The proposed LCRSP consists of a total of approximately 2,447.3 acres[8] of land located partially within the City corporate boundaries and its adopted SOI. As proposed, those portions of the project site that are now located in unincorporated County areas will be annexed (including potential phased annexation) into the City. An objective of the project is to provide a new northern "gateway" to the City with the annexation and development of this area. The proposed LCRSP will allow for the development of a master planned community, consisting of residential and commercial uses, open space areas, and supporting public facilities.

At the project's build-out, projected in 2030 (or as otherwise specified in an approved development agreement or as otherwise dictated by market conditions), the master planned community will include a maximum of 8,407 dwelling units (comprised of single-family detached, single-family attached, and multi-family dwellings), a maximum of 849,420 square feet[9] of retail

[3]/ United States Army Corps of Engineers (Science Applications International Corporation), Final Report – Operational History 1941-1945: Rialto Ammunition Back-Up Storage Point, Rialto, California, January 2004, p. ES-1.

[4]/ South of the project site, the existence of a perchlorate ground water plume has resulted in the closure of five of the City's 15 ground water wells. In January 2004, the City and the Rialto Utility Authority (RUA) filed a lawsuit against the United States Department of Defense and others, seeking the recovery of response costs and other damages from the environmental contaminants released into the environment at the approximately 2,800-acre site.

[5]/ Section 4408 (Rialto Municipal Airport) in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Public Law 109-59) (SAFETEA-LU), August 10, 2005.

[6]/ The Planning Center, Renaissance Specific Plan, Screencheck Draft, December 2007, Table 2-1, p. 2-14.

[7]/ California Regional Water Quality Control Board, Santa Ana Region, Staff Report – Amendments to Existing Waste Discharge Requirements for the Mid-Valley Sanitary Landfill, County of San Bernardino Waste System Division, Order No. R8-2006-0040, July 14, 2006.

[8]/ For the purpose of CEQA compliance, the project site analyzed in this EIR encompasses both on-site and other off-site areas, totaling approximately 19.9 acres, as may be required for the project's implementation, as well as additional off-site areas that may be associated with any infrastructure improvements that are predicated, in whole or in part, by the proposed development.

[9]/ Not inclusive of institutional, educational, recreational, and infrastructure-related uses and other similar uses and facilities.

and service-oriented commercial development and other non-residential land uses (e.g., office, business park, self storage, and light industrial/manufacturing uses), institutional, educational, and recreational uses, and other associated uses, facilities, and improvements.

Presently, approximately 1,753.1 acres of the project site are located within unincorporated County areas. Those portions of the proposed LCRSP that are within County unincorporated areas are presently subject to compliance with the plans and policies presented in the "County of San Bernardino 2007 General Plan" (County General Plan). In Neighborhood I, an approximately 267.7-acre portion of the project site is currently included in the County-approved GHSP. In addition, an approximately 104.3-acre portion of Neighborhood I was previously entitled by the County as part of the LCNPD. As proposed, those portions of the project site located in County unincorporated areas (and presently subject to those planning documents) will be annexed into the City, thus changing the jurisdictional authority over land-use decisions from the County to the City. Upon annexation into the City, the land uses for those areas would be governed by the "City of Rialto General Plan" (City General Plan) and the LCRSP.

Presently, approximately 694.2 acres of the project site are located within the City's corporate boundaries. Those portions of the proposed LCRSP which are presently located within the City's corporate boundaries are within those geographic areas defined by and which are subject to the provisions of the City General Plan. In Neighborhood II, an approximately 221.0-acre portion of the project site is currently governed by the City-adopted ERVSP. Upon adoption of the proposed LCRSP, the provisions of the ERVSP would be superseded and would be replaced by the provisions of the LCRSP.

As proposed, the project includes the establishment of a specific plan, prepared pursuant to Section 65450 *et seq*. of the California Government Code (CGC), which will direct the overall development and build-out of the entire 2,447.3-acre project site.[10] The LCRSP will describe the distribution, location, intensity, and extent of proposed land uses that could be developed in the specific plan area, including open space and supporting infrastructure. The LCRSP will also establish the development standards and criteria by which development will proceed. In addition to developed areas, the proposed project will contain extensive areas of open space (1,253.8 acres). Open space areas will include natural undisturbed areas retained for resource conservation purposes as well as improved areas consisting of parklands, paseos, recreation centers, greenbelts, landscaped parkways, engineered slopes, the El Rancho Verde Royal Golf Course, and other open space areas.

Approximately 939.4.0 acres of the project site (37.4 percent) will be allocated for single- and multi-family residential use. Approximately 95.6 acres of the project site (3.9 percent) will allow for a mix of retail and other commercial uses. Dividing the total acres upon which residential uses would be authorized (939.4 acres) by the maximum number of dwelling units that would be allowable within the specific plan boundaries (8,407 units), at project build-out and if developed to that maximum, the project's overall residential density within residentially-designated areas, absent any consideration of on-site open space areas, will be about 8.95 dwelling units per gross acre. When on-site open space areas (1,253.80 acres) and residentially-designated areas (939.4 acres) are combined (2,193.2 acres), residential densities within the specific plan area are reduced to 3.83 dwelling units per gross acre. When the maximum allowable number of dwelling units (8,407 units) is divided into the entire specific plan area (2,447.3 acres), residential densities are further reduced to 3.44 dwelling units per gross acre.

[10]/ Not inclusive of those additional off-site areas which are addressed in this EIR and which are associated with the proposed project but not directly a part of the proposed LCRSP.

Figure 2-1
REGIONAL LOCATION MAP
Source: PCR Services Corporation

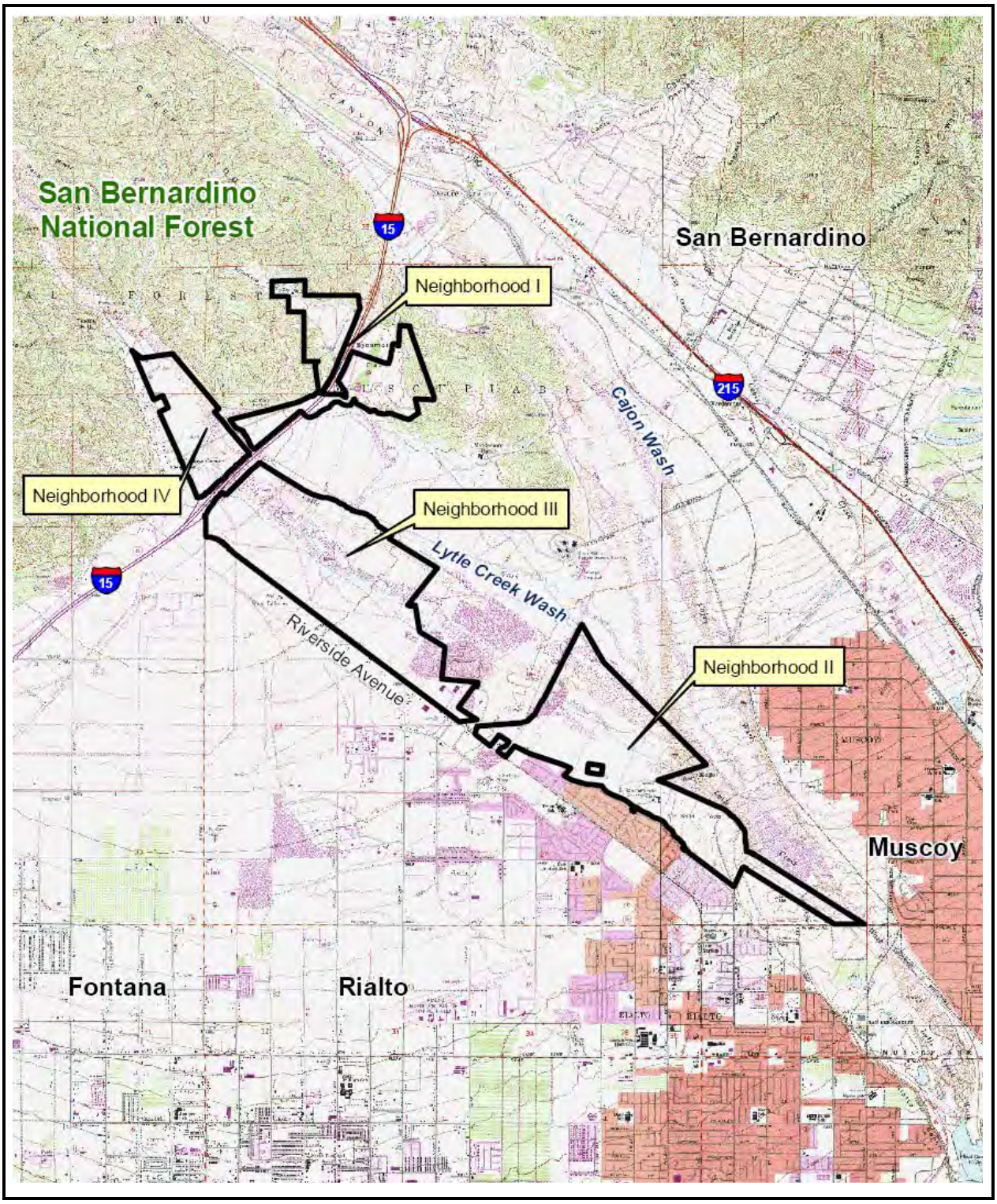

Figure 2-2
LOCAL VICINITY MAP
Source: PCR Services Corporation

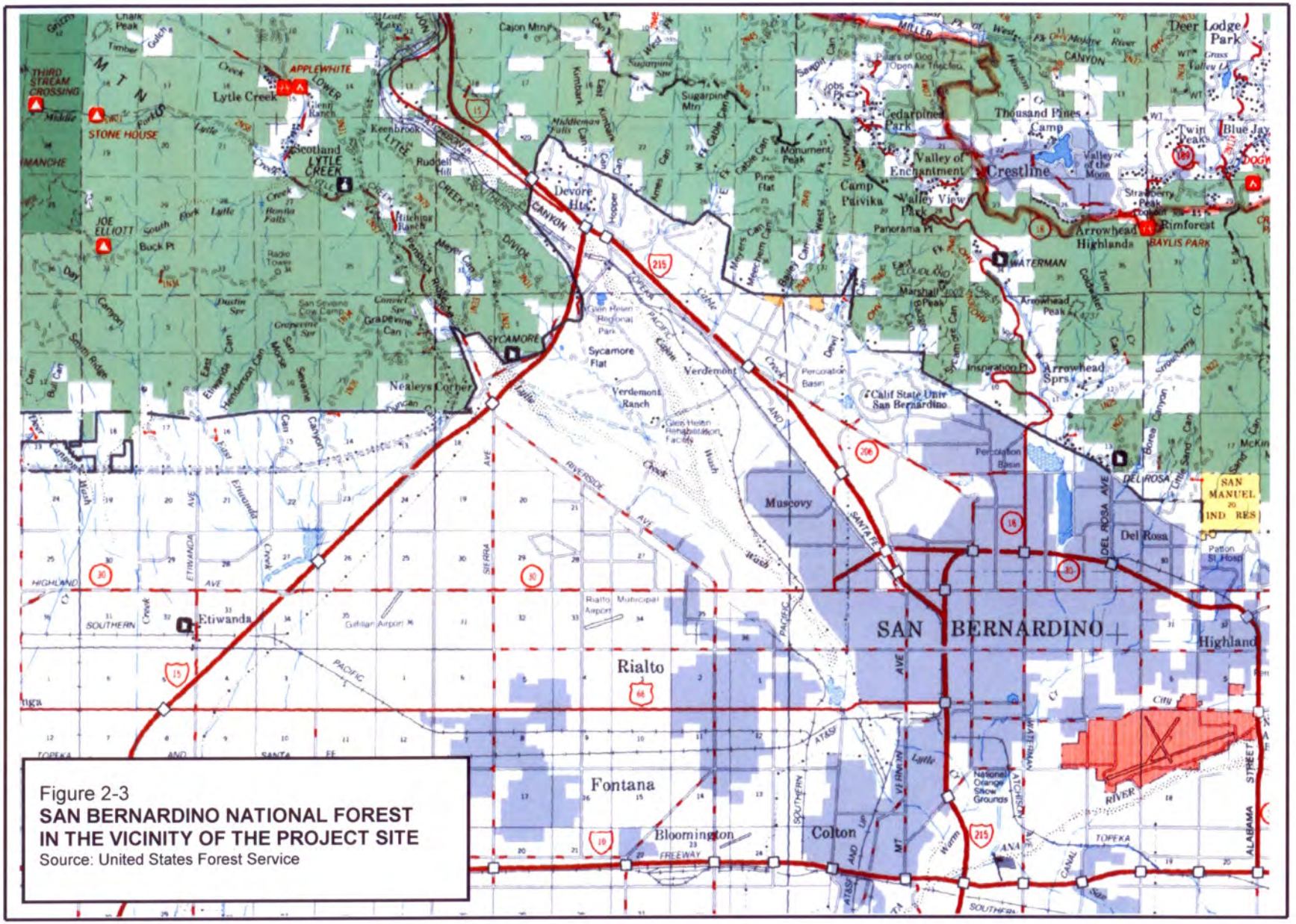

Figure 2-3
SAN BERNARDINO NATIONAL FOREST IN THE VICINITY OF THE PROJECT SITE
Source: United States Forest Service

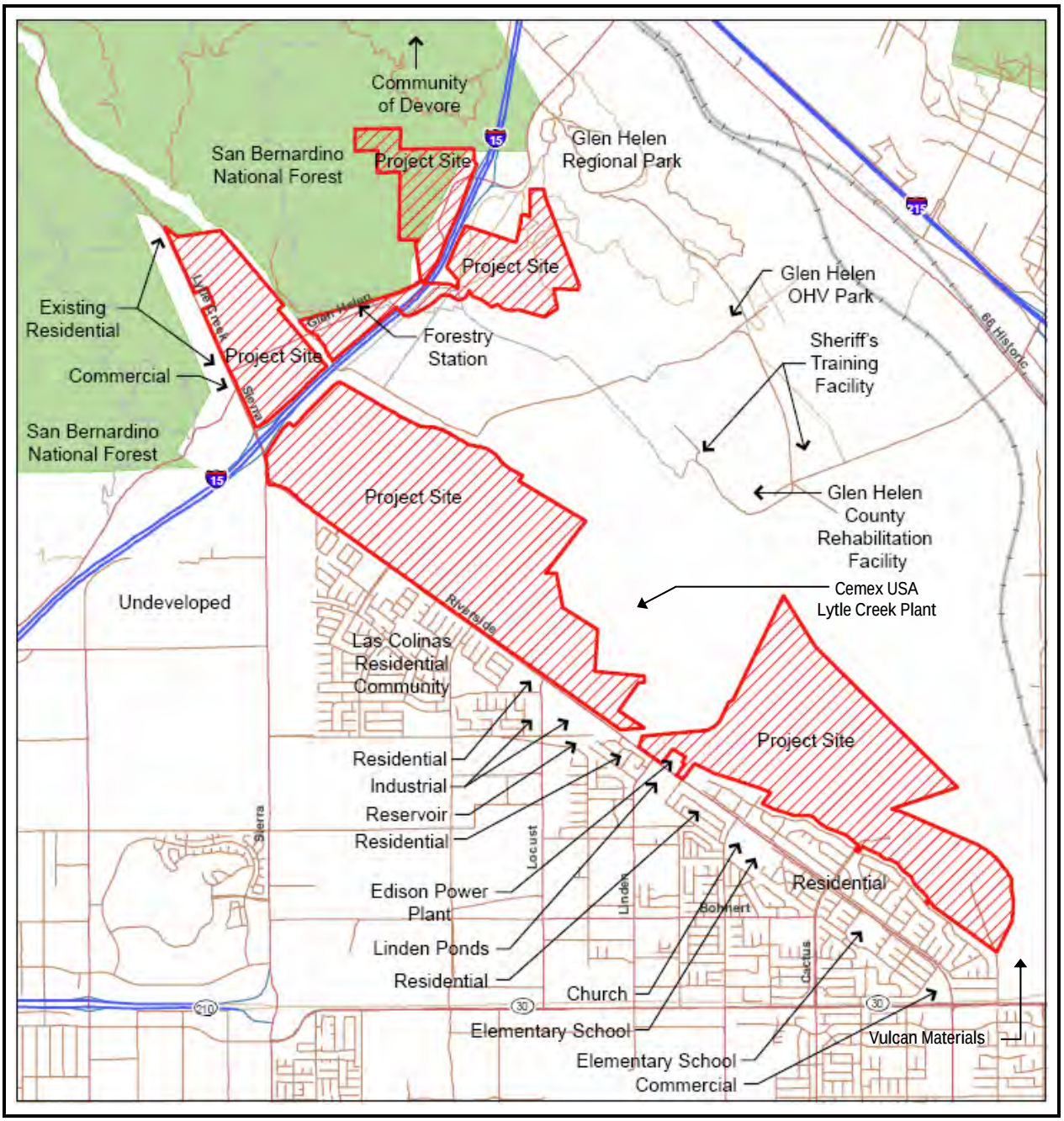

Figure 2-4
EXISTING PROXIMAL LAND USES
Source: Lytle Development Joint Venture III

2.3 Project Objectives

2.3.1 Lead Agency's Project Objectives

As indicated by the National Governor's Association, with regards to the purpose of long-range planning: "The intent is not to stop growth or even to slow growth, but rather to foster more sensible, planned growth. The goal is a decision-making process that is more comprehensive, encourages growth, and addresses the needs and circumstances of each community."[11]

Since the City's planning and land-use decisions with regards to the proposed project will be predominately based on the plans and policies established by the City and presented in the City General Plan, that document constitutes the appropriate source for the identification of project objectives. The following objectives, which are independent of any project-related objectives identified by the Applicant, have been extracted from the City General Plan (GP) and serve as the Lead Agency's objectives for the proposed project. The City's advisory and decision-making bodies will subsequently determine whether the proposed project is consistent with and further the intent of the following objectives:

GP-1[12] Encourage annexation which will demonstrate net benefit to the City (Land Use Element, Goal 4.1.1).
GP-2 Demonstrate compatibility of land uses both within and adjacent to the planning area (Land Use Element, Policy 4.1.1.4).
GP-3 Demonstrate protection of all resources valued by the citizens of Rialto, including, but not limited to, views, trees and other landscaping features, aquifers, surface water courses, and historic buildings (Land Use Element, Policy 4.1.1.5).
GP-4 Ensure that development is adequately served with essential public services and infrastructure including, but not limited to, streets, water, surface drainage, sanitary sewers, law enforcement, fire protection, and public schools (Land Use Element, Goal 4.1.7).

In addition, although not specifically tied to any single City General Plan goal or policy, based on the City General Plan's broad intent and the application of that intent to the project site, the following additional project-specific objectives have been formulated by the Lead Agency (LA):

LA-1 Accommodate development activities both within the City of Rialto and its Sphere of Influence that further the overall intent of the City General Plan.
LA-2 Protect and enhance residential neighborhoods, commercial districts, and other areas by encouraging physical development that is of high quality and is compatible with the character, scale, and function of surrounding areas.
LA-3 Provide for and encourage development that contains a compatible mix of residential and nonresidential uses within close proximity to each other.
LA-4 Respond to local and regional needs for additional housing opportunities in response to anticipated areawide population growth.
LA-5 Unless identified hazards can be effectively reduced, restrict or otherwise limit future develop in those areas containing identified public safety hazards.

[11]/ National Governors' Association, Principles for Better Land Use Policy, as cited in The American Institute of Architects, Communities by Design – Influencing Your Community's Quality of Life, 2001, p. 8.

[12]/ The numbering and designation of identified goals and objectives is for convenience purposes only and serves to foster identification and discussion. Any such labeling is not intended to represent or reflect any formal prioritization of the stated objectives either by the Lead Agency or the Applicant.

LA-6 Provide for and/or facilitate the introduction and expansion of economic opportunities and benefits for the City and its residents.
LA-7 Reduce, to the extent feasible, adverse impacts to City and County services, service providers, and systems resulting from permitted development.
LA-8 Ensure that man and nature can effectively coexist.
LA-9 Ensure that sufficient sewer capacity and other requisite services and systems are available to accommodate projected demand.
LA-10 Private development activities should be deemed by the City to be fiscally prudent.

2.3.2 Applicant's Project Objectives

The Applicant is a landowner/developer that is proposing the development of a master planned community that will provide a mix of residential, commercial, open space, and recreational uses for the project site. The Applicant has formulated the following project-specific objectives:

A-1 Build upon the platform of high-quality design, architecture, and landscaping established by neighboring residential communities to provide a northern gateway to the City of Rialto that offers new and exciting amenities to residents.
A-2 Establish a conservation-based community through the creation of open space preservation areas that will provide functioning habitats for sensitive, threatened, and endangered species, preserve Lytle Creek and minimize impacts to its riparian and alluvial fan sage scrub habitats, while providing other wildlife benefits.
A-3 Locate and integrate the design of open space areas with significant blocks of native habitat and natural vegetation landscaping through the provision of habitat linkages and wildlife movement corridors in the region.
A-4 Maximize opportunities for using native plant material/species in the project landscaping, especially in areas where such landscaping is located in proximity to areas of preserved native habitat.
A-5 Develop freeway-oriented commercial areas to serve regional needs and stimulate job and revenue growth in the City.
A-6 Concentrate development within neighborhoods to promote greater efficiency of land use and promote walking and bicycling by providing a network off pleasant, safe, and convenient pedestrian trails and bike lanes.
A-7 Respond to the unmet need for active-adult communities in the Rialto area by providing residents with a golf course-oriented community and a variety of conveniently located on-site amenities.
A-8 Provide the City and surrounding community with a redesigned public golf course and clubhouse, recreation and open space areas, parks, and trails to meet the City General Plan goals to provide such facilities to maintain and enhance the City's quality of life.
A-9 Address the City's current and projected housing needs for all segments of the community by providing a range of family-oriented single- and multi-family residences, as well as an active-adult golf course community.
A-10 Establish a mix of land uses and local-serving activities that meet the City General Plan's objectives concerning community character and pedestrian-friendly design.
A-11 Implement the City General Plan's Land Use Element goal to facilitate annexation of large areas of land that are governed by a specific plan, which provides for compatibility of land uses, fiscal balance, recreation, and resource protection.
A-12 Create a transportation network that will fulfill the policies of the City General Plan's Circulation Element by allowing residents to live within proximity to schools, recreational opportunities, retail centers, and commercial development, and by minimizing vehicle

trips utilizing access to a variety of transportation opportunities, including pedestrian pathways, bikeways, regional freeways, transit, and Metrolink.

A-13 Address regional infrastructure concerns by locating development in areas where opportunities for ground water recharge are maintained and the life of ground water aquifers are protected.

A-14 Incorporate "green" and sustainable practices, as practicable, in developing buildings and infrastructure.

A-15 Identify and address safety hazards, such as wildfire and flooding dangers, through implementation of design safety features and levee improvements.

A-16 Undertake development of the project site in a manner that is economically feasible and balanced to address both the Applicant's and the City's economic concerns.

2.4 Existing General Plan Land Use and Zoning

2.4.1 City of Rialto

For that portion of the proposed development located within the corporate boundaries of the City, the City General Plan land-use designations for the project site presently include "Special Study Area," "Open Space - Edison Easement," "Low Density Residential (0-3 du/ac)," and "Medium Density Residential (3-6 du/ac) / Recreational Golf Course." Those portions of the project site located within the City's SOI are designated "Special Study Area," Specific Plan Zone (SPZ)," and "Mineral Resources." Through the adoption of the LCRSP, the Applicant seeks to amend the City General Plan so as to establish a "Specific Plan Area" designation encompassing the entire project site or that portion of the project site subsequently annexed into the City.

Those portions of the project site located within the City are presently zoned "Specific Plan (SP)" and "Single-Family Zone (R-1-A)." Following the adoption of the LCRSP, the land-use designations presented in the specific plan would substitute for the City's existing zoning.

2.4.2 County of San Bernardino

For that portion of the proposed LCRSP presently located within the County, the unincorporated portions of the site are designated in the County General Plan as "Floodway (FW)," "Resource Conservation (RC)," "Rural Living (RL)," "Single Residential (RS)," "Special Development - Residential (SD-RES)," and "Specific Plan (SP)." In addition, the County's hazardous overlap map designations for portions of the project site include "Fire Safety Area 3 (FS3)," "Flood Plain Safety Area – Flood Plain 1 (FP1), "Geologic Hazard Overlay – Earthquake Fault Zone," "Liquefaction Susceptibility – Low, Medium, and High," and "Mineral Resource Zone."

Within the County, as indicated in the "County of San Bernardino 2007 Development Code" (County Development Code), portions of the project site are designated "Rural Living (RL)," "Single Residential (RS)," "Floodway (FW)," "Resource Conservation (RC)," "Planned Development (PD)," and "Specific Plan (SP)." In addition, portions of the project site are presently designated "Glen Helen Specific Plan" (GHSP) and "Lytle Creek North Planned Development." Following the adoption of the proposed specific plan and the annexation of those lands presently located in unincorporated County, if so adopted, the LCRSP's land-use designations would generally regulate the nature of future on-site uses.

2.5 Proposed Lytle Creek Ranch Specific Plan

The proposed LCRSP represents a comprehensive planning document containing text and diagrams describing: (1) the distribution, location, and extent of uses of land within the area addressed therein; (2) the proposed distribution, location, extent, and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and as needed to support the land uses described therein; (3) standards and criteria by which development will proceed and standards for the conservation, development, and utilization of natural resources; and (4) a program of implementation measures, including regulations, programs, public works, and financing measures necessary for the plan's implementation.

2.5.1 Overview

The LCRSP project is designed to contain a series of neighborhoods clustered around public amenities such as a community park, neighborhood parks, school sites, recreation facilities, a golf course, and other open space areas. Once developed, the approximately 2,447.3-acre master planned community described in and envisioned by the LCRSP will be located within and will form the City's northern "gateway." As described below, the overall community created through the implementation of the LCRSP will consist of the following four separate and distinct "neighborhoods."

- **Neighborhood I**. Neighborhood I includes, but is not limited to, those areas identified herein as "Sycamore Creek East" (Sycamore Flat) and "Sycamore Creek West" (Sycamore Canyon). Both Sycamore Flat and Sycamore Canyon were included within the boundaries of the County-adopted 3,400-acre GHSP.[13] The remaining lands within Neighborhood I include acreage located within the boundaries of the County-approved LCNPD (presently being marketed as "Rosena Ranch") area. Once approved and annexed by the City, those portions of the project site now subject to the GHSP and LCNPD will be removed from the County's jurisdiction and those land-use and related plans and policies outlined in the adopted LCRSP will replace those plans and policies contained in the GHSP and the LCNPD for those areas so affected. As proposed, those planning areas which will be removed from those County-approved plans include, but may not be limited to: (1) Planning Areas (PAs) 1-15, as illustrated in the proposed LCRSP; and (2) PAs 1-7, 14, and a portion of 13, as illustrated in the approved LCNPD.

- **Neighborhood II**. Neighborhood II is planned as a gated, active-adult, golf course-oriented community located on approximately 801.8 acres and will include the entire 221-acre ERVSP area. Once approved, the land-use and related plans and policies outlined in the LCRSP will supersede those contained in the City-approved ERVSP. Areas to be removed from the adopted ERVSP include a portion of PA 95 and all of PAs 96-103 of the proposed LCRSP.

[13]/ As depicted in the GHSP, the "Sycamore Flats Planning Sub-Area" is proposed for extraction from the boundaries of the approved GHSP. The GHSP includes the following description of that subarea: "This is actually two undeveloped areas of somewhat different characteristics: Sycamore Flat, along the east side of the I-15 Freeway, and Sycamore Canyon, a topographically varied area of private property on the west side of the freeway in the San Bernardino National Forest. Sycamore Flat is characterized by gently sloping terrain, a stream with a ponded freshwater marsh and surrounding riparian vegetation near the I-15 Freeway. These two areas have a strong visual, biological and historical identity within the Glen Helen area" (GHSP, p. 2-4).

- **Neighborhood III**. Neighborhood III is located south of the I-15 Freeway and will primarily include a mix of single-family detached and attached homes, as well as a mix of retail and other commercial uses on approximately 968.8 acres.

- **Neighborhood IV**. Neighborhood IV will consist primarily of multi-family residential and a mix of retail and other commercial uses on about 259.5 acres located north of the I-15 Freeway.

The establishment of distinct "neighborhoods" serves to facilitate the consideration of a hierarchical division of the entire specific plan area into successively smaller groupings (neighborhood) and individual planning areas. The "neighborhoods" also provide a geographical organization of the project site as well as a means by which overall development of the site may be phased. Although neighborhood boundaries may be subsequently revised, as proposed, each neighborhood is intended to have a distinct identify, linked together internally and externally both physically (through a network of roadways and pedestrian pathways) and visually (through the incorporation of unifying design elements and identity).

Three of the neighborhoods (Neighborhoods I, III, and IV) will be built-out with "traditional family-oriented housing." The fourth neighborhood (Neighborhood II) will be built as a gated, age-restricted community for residents aged 55 years and older. In all, a maximum of 8,407 dwelling units may be constructed within the LCRSP.

As depicted in Table 2-1 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan Summary),[14] approximately 95.6 acres of "Village Center Commercial (VC)" development are planned within the project boundaries. Those areas designated "Village Center Commercial (VC)" will develop with local retail and service-oriented commercial, low-rise office, and business park (including research and development). One of the "Village Center Commercial (VC)" areas, located at the juncture of Sierra Avenue and Riverside Avenue (PA 33), is expected to build-out as a major retail shopping center.

Of the 2,447.3 acres within the boundaries of the LCRSP, more than half of the property will be preserved as open space by clustering development along Riverside Avenue, Glen Helen Parkway, Clearwater Parkway, Lytle Creek Drive, and along the I-15 Freeway corridor. Approximately 908.0 acres will be preserved as undisturbed open space. As proposed, 908.0 acres will be set aside, in perpetuity, as permanent natural open space. Of those 908.0 acres, approximately 829.2 acres (91.3 percent) will be dedicated as mitigation lands to offset impacts resulting from development associated with the proposed LCRSP. The remaining 78.8 acres will remain as natural (undisturbed) open space but is not proposed for conservation purposes.

As proposed, the approximately 829.2-acre natural (undisturbed) open space area will includes: (1) approximately 612.5 acres of natural open space, including 444.8 acres within and adjacent to Lytle Creek and 167.7 acres adjacent to the SBNF and GHRP; (2) approximately 160.5 acres of land in Lytle Creek previously set aside for San Bernardino kangaroo rat (SBKR) conservation through consultation with federal agencies as part of the LCNPD; (3) an additional 52.2 acres for SBKR mitigation in Lytle Creek to be set aside by the Applicant in conjunction

[14]/ As noted, the LCRSP land-use summary only depicts the approximately 2,447.3 acres directly associated with and located within the boundaries of the proposed specific plan. Although an additional approximately 19.9 acres of "off-site" area are also examined in this EIR, those areas are not located within the proposed specific plan's boundaries, are not included in the area to be annexed to the City, and will not be subsequently subject to the plans and policies presented in the LCRSP. The inclusion of off-site areas herein is for CEQA compliance purposes only.

with the LCRSP; and (4) in connection with mitigation of the West Valley Water District's Reservoir Nos. 7-3 and 7-4 construction projects along Lytle Creek Road, an additional 4.0 acres of SBKR habitat was set aside as an expansion of the "SBKR Conservation Area." The "SBKR Conservation Area" was established for the conservation of the SBKR as part of the County-approved LCNPD.

To protect the flora and fauna, no trails will be constructed within these conservation areas and no public access will be authorized either within those areas along and within Lytle Creek or within those portions of the hillsides in Neighborhood I which are adjacent to GHRP and SBNF that are proposed to be retained as natural (undisturbed) open space.

2.5.2 Unifying Design Elements

Northern Gateway

An important land use and design concept embodied in the LCRSP is the role the project site will play in creating a new "northern gateway" to the City once this area has been annexed. As indicated in the "History of Rialto": "When the Mormons first arrived in San Bernardino Valley, they entered from the desert by way of Cajon Pass. One group of these settlers, under Captain Andrew Lytle, made camp at the mouth of Lytle Creek canyon. This swift-flowing mountain stream must have seemed a blessing to the weary travelers, and they named it for their leader, Captain Lytle. Lytle Creek has its source in the San Gabriel Mountains and flows south into the Santa Ana River. In those days, and until the 1920's, it continued to flow all year long through the wash between San Bernardino and Rialto. The banks of the creek were lined with sycamores, cottonwoods, alders, and wild grape vines, and there was always good fishing."[15]

As further indicated in the County's "Lytle Creek Community Plan": "Mormons arrived in the valley in 1851, making camp at the mouth of a canyon with a creek, which flowed briskly southeast through the canyon to the valley and the Santa Ana River. Overjoyed with the abundance of water, the dense growth of willow, cottonwoods and sycamores, and the mustard and wild oats that grew on the hillsides, the settlers named the stream 'Lytle Creek' after their leader, Captain Andrew Lytle."[16] Now, more than 150-years later, the City believes that opportunities exist for that same sense of discovery.

The project site includes and would extend northward from the northern boundary of the City. There currently exists no clear visual or physical definition to or any design elements that serve to create and establish the northern edge of the City. The City limits extend northward to the I-15 Freeway, with only a relatively small segment of the City provided with freeway frontage. The City's "window" to the north (and to the 134,700 vehicles per day that now pass by the City along the I-15 Freeway) exists absence any form of community monumentation. Entering the City from the north, traveling along Riverside Avenue, there presently exists few physical features or design elements that serve to establish a "sense of place" or a local identify producing, in the mind of the traveler, any sense of arrival.

[15]/ Stoebe, Martha and Bemis, L. Roy, A History of Rialto, The Rialto Historical Society, updated 1999, Chapter 1.

[16]/ County of San Bernardino, Lytle Creek Community Plan, Final Draft Community Plan, February 2007, updated February 14, 2007, p. 7.

Table 2-1
LYTLE CREEK RANCH SPECIFIC PLAN - CONCEPTUAL LAND-USE PLAN SUMMARY

Land Use Designation	**Density Range** (DU/ac.)	**Target Dwelling Units** (DU)	**Medium Density** (DU/ac.)	**Intensity** (s.f.)	**Acres**	**%**
Residential	-	-	-	-	-	-
Single-Family Residential 1 (SFR-1)	2 - 5	943	3.6	-	263.2	10.8
Single-Family Residential 2 (SFR-2)	5 - 8	1,908	6.3	-	304.5	12.4
Single-Family Residential 3 (SFR-3)	8 - 14	2,403	10.9	-	220.0	9.0
Multi-Family Residential (MFR)	14 - 28	1,828	17.2	-	106.3	4.3
High Density Residential (HDR)	25-35	1,325	29.2		45.4	1.9
Subtotals	-	8,407	8.95	-	939.4	37.4
Commercial/Retail	-	-	-	-	-	
Village Center Commercial (VC)	-	-	-	849,420[1]	95.6	3.9
Subtotal	-	1,325	-	849,420	95.6	3.9
Institutional	-	-	-	-	-	
Elementary School (ES)	2 - 14	As Transferred	-	-	10.0	<0.1
Elementary/Middle School (ES/MS)	2 - 14	As Transferred	-	-	14.0	<0.1
Subtotal[2]	-	As Transferred	-	-	24.0	<0.1
Open Space	-	-	-	-	-	
Open Space / Recreation (OS/R)	-	-	-	-	328.8	13.4
Open Space (OS)	-	-	-	-	908.0[4]	37.1
Open Space / Joint Use (OS/JU)[3]		-	-		17.0	<0.1
Subtotal	-	-	-	-	1,253.8	51.2
Other	-	-	-			
Roadways	-	-	-	-	134.5	5.5
Subtotal	-	-	-	-	134.5	5.5
Totals	-	8,407	3.44[5]	849,420	2,447.3	100.0

Note:
1. Assumes 849,420 square feet of retail and service-oriented commercial and other non-residential land uses on 141.0 acres, representing a floor-area-ratio (FAR) of 0.14. This figure is not inclusive of institutional, educational, recreational, infrastructure-related, and other similar uses.
2. For the purpose of environmental analysis, school sites are assumed to comprise approximately 261,360 square feet of total building area. This estimate, as presented for the purpose of air quality assessment, is not intended to constitute a limit as to the maximum allowable size of on-site school facilities.
3. Since the "Open Space/Joint Use (OS/JU)" area is intended to be developed for joint use by the City and the Rialto Unified School District or other benefitting school district, its partial notation as "Open Space (OS)" appears to misstate its actual intent as "Recreation (R)."
4. This total remains subject to change and refinement. The Applicant states that a minimum of 829.2 acres within the proposed LCRSP, including Lytle Creek Wash, will be preserved as natural (undisturbed) open space by clustering development along Riverside Avenue, Lytle Creek Road/Sierra Avenues, Glen Helen and Clearwater Parkways, and the I-15 Freeway. While the actual acreage included within this natural open space may be adjusted to a limited degree as a result of future reconfiguration and refinement of individual neighborhoods and planning areas, in no event will the total acreage of natural (undisturbed) open space be less than 829.2 acres for the proposed LCRSP.
5. Assuming 8,407 dwelling units on 939.4 acres, the project's residential density can be calculated as 8.95 dwelling units per gross acre. If all open space lands (939.4 + 141.0 = 2,193.2) were also considered, the project's residential density can be calculated as 3.83 dwelling units per gross acre.

Source: Lytle Development Joint Venture III

The new master planned community will become, either by design intent or merely as a result of its locale and I-15 Freeway frontage, the northern gateway into the City. Through conscious design and City directive, the Applicant seeks to create a "community of distinction" and a visual and physical transition (linkage) into the City.

One element of that design palette will be the placement of an entry feature on Riverside Avenue announcing to residents and visitors that they are entering the City's northern "gateway." This entry feature will include low-entry signage made of local stone and containing City identification and a representation of the "Rialto Bridge," a water feature, groupings of flowering trees and/or accent trees, and flowering shrubs. The entry feature will be lighted at night with soft accent lighting.

Design Theme

Successful neighborhood design includes, but may not be limited to, integrating site planning, architecture, and landscaping into a unified neighborhood concept. With regards to the LCRSP, this concept includes "placemaking" to ensure that each neighborhood has a distinctive feel and "sense of place." The project's design guidelines seek to further a design goal that the resulting neighborhoods not consist merely of a series of walled subdivisions but rather become an integrated community comprised of a variety of housing types. Although select planning areas may be fully walled, it is intended that the use of perimeter walls enclosing individual planning areas be minimized in most areas.

Where feasible, single-family detached homes will either front or side onto primary streets to minimize the amount of wall facing the primary street. If fronting on the primary street, vehicular access to these homes may be provided via local streets or alleyways. In addition, individual planning areas will be interconnected through street and alley connections and via greenbelts and trails. Entrances for multi-family and attached homes will generally front onto the adjoining roadways so as to create an appealing street scene, rather than having the rear of the units face the major streets.

With the introduction of continuous parkways along streets, uniform street trees on each street, pocket parks, and sidewalks for pedestrian connectivity, the LCRSP seeks to promote a strong balance between architecture and landscaping. In formulating the LCRSP, it has been the Applicant's goal to create intimate, socially interactive, and secure neighborhoods that, through their design, encourage street activity, promote walking, and allow convenient access to parks, schools, and local shopping.

Neighborhood Character

As proposed, the project will include a variety of residential housing types in community settings that reflect the aesthetic character and neighborhood structure reminiscent of traditional southern California towns. The LCRSP promotes the development of a mix of traditional family-oriented and active-adult homes clustered into identifiable neighborhoods. The neighborhoods will be designed so that each will have a unique identity and individual character. The LCRSP seeks to accomplish that objective by promoting "authentic" architecture and designing streets so that each street "tells a story." Each neighborhood will have its own landscape palette, as well as design elements and features, to create an identifiable street scene.

The entire community is organized into four residential neighborhoods, defined by physical features and public amenities. Three of the neighborhoods will be built-out with "traditional family-oriented housing" (Neighborhoods I, III, and IV). The fourth neighborhood (Neighborhood II) will be built as a gated, age-restricted community for residents aged 55 years and older. The planned character of each of the four neighborhoods is described below.

- **Neighborhood I**. This neighborhood will include some of the largest lots within the LCRSP area. The homes within this neighborhood will include a mix of sizes, with lot sizes ranging between 6,000 and about 10,800 square feet. Residential development in this area will reflect large gracious homes with variable building setbacks. The landscaping will be designed to reflect the proximity of the homes to the nearby Glen Helen Regional Park and the San Bernardino National Forest. Streetscapes will include native and water-wise landscaping interspersed with ornamental plantings. Individual housing developments within Neighborhood I may be gated.

- **Neighborhood II**. This neighborhood will be devoted exclusively to active-adult housing for residents aged 55 years and older. These neighborhoods will contain clusters of homes on smaller sized lots. Neighborhoods will incorporate a mix of housing types to foster visual interest. Front porches, patios, and enhanced entries will be incorporated to promote a sense of neighborliness. The focal point of the community will be an enhanced and reconfigured public 18-hole golf course and an active-adult recreation center. Neighborhood II will be constructed as a gated community.

- **Neighborhood III**. Neighborhood III is the largest of the neighborhoods and is targeted at households of all sizes, with a range of incomes and housing needs. This neighborhood will contain a mix of both attached and detached single-family housing and higher density housing. This neighborhood will include a number of community amenities, including an elementary and elementary/middle school, several parks, three private recreation centers, trails, and a large greenbelt. Clusters of homes will be arranged to promote a sense of place and neighborhood. Some of the enclaves of homes within this neighborhood may be gated.

- **Neighborhood IV**. This neighborhood will consist primarily of multi-family and attached housing. While single-family housing is not prohibited, it is anticipated that this area will develop mostly with higher-density residential development. Individual development projects located within this neighborhood may be gated.

On approximately 939.4 acres designated for residential development, a maximum of 8,407 dwelling units would be permitted on the project site. In addition, on approximately 95.6 acres, a total of 849,420 square feet of retail and service-oriented commercial and other non-residential development would be permitted within the "Village Center Commercial (VC)" areas. One of the "Village Center Commercial (VC)" areas, located at the juncture of Sierra Avenue and Riverside Avenue (within Neighborhood III), is expected to include a major retail shopping center with retail and service-oriented commercial and a variety of restaurant-type uses.

Architectural Styles

Lytle Creek Ranch will contain a mix of architectural styles within enclaves of homes within each neighborhood. Rather than limit housing types to one or two styles, a variety of architectural styles will be permitted to promote interest and diversity.

The project's architectural character seeks to reflect the design influenced by the historical precedents of development traditionally found throughout the City and the Inland Empire during the late 19th and early to mid 20th Centuries. Neighborhoods of these eras can be characterized by their use of a mixture of architectural building styles, homes oriented to the street featuring architecturally expressive elevations and front porches, and streetscape treatment. Permitted architectural styles include, but will not limited to, American farmhouse, California bungalow, Craftsman, Monterey, Spanish eclectic, Tuscan, and Italianate.

Because of its long-term build-out period, in order to allow for changing consumer tastes in architectural styles over time, no particular styles have been identified for LCRSP. A variety of architectural styles would be permitted, provided that the buildings are articulated with variations in doorways, windows, rooflines, facades, and trim.

Dwelling units will be constructed of a variety of materials, including local stone used as accent treatment on some of the buildings. "Four-side architecture" will be required for homes abutting Riverside Avenue, internal primary streets, along Lytle Creek, along the proposed "Grand Paseo," and on homes located adjacent to parks, schools, recreation centers, and the Neighborhood II golf course.

Streetscape

As proposed, Lytle Creek Ranch will be designed to promote social connectivity. Homes will be designed to have a strong relationship to the street. Residents should have direct views of the street and outdoor living space to enhance the sense of safety and community. One way to accomplish this is to have houses "open up" to the street by incorporating architectural elements such as front stoops and porches. In order to create more "livable streets," it is also necessary to control traffic and reduce vehicle speeds. As proposed, on-street parking in residential neighborhoods will help to calm traffic, as will narrower street cross-sections. Two traffic roundabouts are presently planned in the active-adult neighborhood (Neighborhood II) to help slow traffic. Along primary streets, the streets will include extensive landscaping, including a 30-foot wide parkway (on one side). Curb separated sidewalks will be used to enhance the streetscape.

2.5.3 Recreational Features and Facilities

The proposed project includes approximately 328.8 acres of recreational open space, consisting of a variety of recreational types and features, including an enhanced public 18-hole golf course (El Rancho Verde Royal Vista Golf Course), neighborhood parks, a private active-adult community center (Neighborhood II) and private recreational centers (Neighborhood III), a linear paseo (promenade), identified in the proposed LCRSP as the "Grand Paseo" (Neighborhood III), and trail system. An extensive greenbelt system will link the various neighborhoods with one another and with schools, neighborhood parks, and the project's recreation centers.

Recreational Centers

Four recreational centers will be provided, including a private center exclusively available to the active-adult community and three centers available to all project residents. The Neighborhood II recreation center will be located within that gated community and its use will be limited to those residents residing within that neighborhood and their guests. This center, which will be a

minimum of three acres in size, is intended to serve as a focal point, gathering spot, and social hub for that neighborhood.

The Neighborhood III recreation centers will be available for use by residents in Neighborhoods I-IV and will range in size between two and five acres. Each recreation center will serve as community focal and gathering point. It is anticipated that one of the three recreation centers in Neighborhood III, as well as the recreation center in Neighborhood II, will include a community center building containing one or more meeting rooms, an exercise room, locker rooms, and comfort facilities. All recreation centers will contain a swimming pool and spa. The active-adult community center will also contain an internet room/library and a crafts room.

Community and Neighborhood Parks

Three neighborhood parks are proposed in Neighborhood III (PAs 40, 53, and 64). The public neighborhood parks will provide for both active and passive uses, including sports fields, picnicking areas, playgrounds, and picnic shelters. Each of the neighborhood parks will be at least 6.0 acres in size. In addition, an approximately 11.0-acre neighborhood park (PA 10) will be provided in Neighborhood I, connecting to additional park acreage in the adjacent County-approved LNCPD (Tract No. 15900 or Rosena Ranch). In addition, an approximately 35.7-acre community park may be developed in Neighborhood III (PA 72). This land may be developed with a mixture of community and neighborhood park elements.

Joint-Use Facilities

Two additional areas within Neighborhood III (PAs 48 and 74) are planned as "joint-use" school and park facilities, linking public park areas to proposed adjoining school sites. These joint-use areas are anticipated to contain athletic fields, playgrounds, and informal play areas which will be available to the general public when school is not in session. The size of these areas, the precise nature of the proposed improvements, and the operational parameters governing each site's joint use will be determined in consultation with the City, the Rialto Unified School District (RUSD)[17] and, to the extent applicable, with the San Bernardino City Unified School District (SBCUSD) and/or the Fontana Unified School District (FUSD). As a result of that consultation, the adjoining school facility sites may be enlarged and the size of the "joint-use" sites could diminish

El Rancho Verde Royal Vista Golf Course

The project will include a renovated and reconfigured 18-hole public golf course (El Rancho Verde Royal Vista Golf Course). The golf course will include a new golf clubhouse of not less than 19,000 square feet with pro shop, locker rooms, offices, bar, restaurant, and banquet facilities. Other features will include a tournament lawn, driving range, and cart storage barn. Although the golf course will be surrounded by active-adult housing, the course and clubhouse will be open to public use. Although open to the public, the golf course clubhouse will also serve to supplement the variety of private recreational amenities that will be available to the active-adult residents in Neighborhood II.

[17]/ Under the proposed LCRSP, the Applicant retains the right and ability to develop all or portions of the joint-use sites in accordance with the proposed "Single-Family Density Residential 1, 2, and 3 (SDF-1, 2, 3)" standards should the RUSD or another benefiting school district elect to reduce the amount of land required for the joint-use park or should the RUSD elect not to construct the adjacent school site.

Trail System

A comprehensive trail system is planned. A trail system, designed to accommodate both bicyclists and pedestrians, will be provided in Neighborhood I that will link up to the trail system presently being developed in the adjacent LCNPD (Rosena Ranch). The trail system will include a multi-purpose trail that runs adjacent to Lytle Creek (Neighborhood III). Other trails include a multi-purpose trail along the length of linear paseo (Neighborhood III). The multi-purpose trails will be 8-feet wide and will accommodate both bicycle and pedestrian traffic. An enhanced parkway/trail system will be provided along Riverside Avenue (Neighborhood III). Within a 20-foot wide parkway, a 5-foot wide walkway will be provided.

Grand Paseo

A "Grand Paseo" is proposed which will interconnect the three proposed neighborhood parks and provides a 70 to 110-foot wide non-vehicular greenbelt linking a substantial portion of the project site (Neighborhood II). In addition to its recreational and open space functions, the Grand Paseo will serve as a landscaped drainage corridor. The purpose of the drainage corridor is to accommodate storm water flows. Portions of the Grand Paseo will be designed to function as a large bioswale[18] that will naturally filter out chemicals and other potential pollutants as the water flows through the system.

2.5.4 Open Space Land Uses

Public Open Space

Approximately 328.8 acres will be devoted to open space, neighborhood parks, golf course, and recreation areas. As proposed, the LCRSP project will incorporate an extensive system of green spaces, including neighborhood parks and recreation areas, linked together by a network of trails and greenbelts.

Resource Conservation

By concentrating development along Riverside Avenue, Lytle Creek Road/Sierra Avenue, Glen Helen Parkway, Clearwater Parkway, and the I-15 Freeway, of the approximately 2,447.3 acres located within the project boundaries, a minimum of 829.2 acres (33.9 percent) of the property, including the active stream channel of Lytle Creek, will be preserved as natural (undisturbed) open space. The conservation areas located along Lytle Creek generally ranges from approximately 600-feet to 2,400-feet wide. Undisturbed open space areas include:

- Approximately 612.5 acres, including 444.8 acres within and immediately adjacent to Lytle Creek and 167.7 acres within Neighborhood I adjacent to the SBNF and GHRP;
- Approximately 160.5 acres in Lytle Creek set aside for SBKR conservation (created as part of the adjacent LCNPD's federal permitting process);
- Approximately 52.2 acres of additional SBKR mitigation in Lytle Creek situated adjacent to these 160.5 acres and set aside as part of the LCNPD (Tract 15900); and

[18]/ A bioswale is a shallow depression created in the earth to accept and convey storm water runoff. A bioswale uses natural means, including vegetation and soil, to treat storm water by filtering out contaminants being conveyed in the water.

- About 4.0 acres of additional SBKR habitat in Lytle Creek purchased by the WVWD and set aside as an expansion of the "SBKR Conservation Area."

As proposed, 908.0 acres will be set aside, in perpetuity, as permanent (disturbed and undisturbed) open space. Of those 908.0 acres, 829.2 acres (91.3 percent) will be dedicated as mitigation lands to off-set impacts resulting from development associated with the proposed LCRSP. The remaining 78.8 acres will remain as open space but are not expressly proposed for conservation purposes.

In order to enhance the habitat value of the proposed conservation areas, public access shall be restricted and no general use trails will be provided or authorized. The majority of the natural open space to be dedicated by the LCRSP has been designated as critical habitat for the SBKR by the United States Fish and Wildlife Service (USFWS or Service).

2.5.5 Public Transit and Personal Mobility

The project site is located in close proximity to several major interstate transportation routes, including the I-10 (San Bernardino), I-15 (Ontario), I-210 (Martin A. Matich Highway), and I-215 (Barstow) Freeways. In addition, bus transportation is currently provided by Omnitrans along portions of Riverside Avenue (Bus Route 22). Within the proposed development, bus stops will be provided along the length of Riverside Avenue. Retail, commercial, and office uses are planned along Riverside Avenue. Bus stops will consist of benches and areas allowing for the posting of bus routes and schedules. Omitrans' Route 22 includes stops at or near Carter High School, Kolb Junior High School, Rialto Civic Center, and the Rialto Commuter Rail Station (261 South Palm Avenue, Rialto). Commuter and passenger rail service is available from the Rialto Commuter Rail Station. The Southern California Regional Rail Authority/Metrolink (Metrolink) rail line provides stops in the City of San Bernardino to the east and the Cities of Fontana, Rancho Cucamonga, Upland, Montclair, Claremont, Pomona, Covina, Baldwin Park, El Monte, as well as California State University, Los Angeles and Union Station, to the west.

Convenient access from residential areas to non-residential development, such as that proposed near the intersection of Riverside and Sierra Avenues, will be available by way of the project's internal trail and roadway systems. This shopping center will likely contain a supermarket and other neighborhood retail and service-oriented commercial uses, including both fast-food and sit-down restaurants. Residents will be able to walk or bicycle to this retail center or drive to the center, via the internal roadway network, without placing additional demands on off-site roads.

2.6 Land-Use Categories

Proposed land uses are illustrated in Figure 2-6 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan) and summarized in Table 2-1 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan Summary). Each of the project's four neighborhoods will be comprised of smaller planning areas. Planning areas represent the approximate general configuration of individual development projects based on the proposed street configuration, project boundaries, existing rights-of-way (ROWs), and other existing physical features.

A specific land-use designation and specified acreage has been assigned to each of the project's 103 PAs in the LCRSP. Adjustments to the boundaries of each area may be subject to minor modification, pursuant to the procedures in the LCRSP, allowing boundaries to slightly

expand or contract in order to accommodate precise plans. Presented in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary) is a description of each planning area, by use, allowable density, and projected number of dwelling units or square footage of non-residential use that would be authorized to occur within each PA. The proposed project's general land-use types are briefly described below.

2.6.1 Residential Land Uses

Residential Land-Use Categories

Proposed are five separate categories of residential development, providing a broad array of housing types and residential densities, categorized by the number of dwelling units per acre (du/ac) authorized within each zone.[19] Those residential land-use categories include:

Residential Designation	Dwelling Units by Neighborhood				Total
	I	II	III	IV	
Single-Family Residential 1 (SFR-1) (2-5 du/ac)	476	40	427	-	943
Single-Family Residential 2 (SFR-2) (5-8 du/ac)	-	1,265	643	-	1,908
Single-Family Residential 3 (SFR-3) (8-14 du/ac)	466	1,262	675	-	2,403
Multi-Family Residential (MFR) (14-28 du/ac)	-	-	959	869	1,828
High Density Residential (HDR) (25-35 du/ac)	336	364	625	-	1,350
Total	1,278	2,931	3,329	869	8,407

"Single-Family Residential 1 (SFR-1) (2-5 du/ac)" and "Single-Family Residential 2 (SFR-2) (5-8 du/ac)" land-use categories will contain only single-family detached residential development. "Single-Family Residential 3 (SFR-3) (8-14 du/ac)" will include a combination of single-family detached and single-family attached residential product types.[20] The "Multi-Family Residential (MFR) (14-28 du/ac)" land-use category will include only attached housing products, including townhomes, condominiums, stacked flats, garden courts, apartments, and other higher density residential product types. The "High Density Residential (HDR) (25-35 du/ac)" land-use category will include only attached housing products, including condominiums, stacked flats, podium units, and apartments.

Based on the Applicant's categorization of each residential land-use category, as indicated in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), a total of 3,409 "single-family detached" and 4,998 other types of dwelling units (e.g., single-family attached, condominiums, apartments) could be constructed on the project site. For the purpose of CEQA compliance, unless where otherwise noted, the distinction between dwelling type may not be environmentally significant, such that the Applicant should, from solely a CEQA perspective, retain the ability to substitute one product type for another.

As proposed, about 37.4 percent (939.4 acres) of the project site has been allocated exclusively for residential use with an additional 3.9 percent (95.6 acres) designated "Village Center

[19]/ With regards to the land-use categories presented in the proposed LCRSP, the terms "zone," "district," and "designation" are used interchangeably herein and are not intended to have separate meaning.

[20]/ Attached residential housing types include, but may not be limited to, single-family attached homes, zero lot line homes, townhomes, and condominiums.

Commercial (VC)." A total of 8,407 dwelling units could be developed within the approximately 939.4-acre portion of the site located within the five residential districts.

Like most areas, the baby boomer segment of the County population is approaching retirement age. A portion of Lytle Creek Ranch development (Neighborhood II) is planned as an active-adult community, designed and targeted specifically at households within the demographically expanding active-adult (age 55+ years) population.[21] Adult-oriented communities, providing opportunities for active lifestyle, allow residents of similar age and likely similar interests a place to come together to enjoy an active lifestyle and sense of community. A total of 2,931 dwelling units would be authorized within Neighborhood II.

The zoning and development standards for those residential uses will be as established by the LCRSP. The proposed residential development standards are presented in Table 2-3 (Lytle Creek Ranch Specific Plan - Residential Development Standards).

Single-Family Residential Overlay

In lieu of the underlying land-use designation, as depicted in Figure 2-6 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan), an approximately 210.0-acre portion of the "Open Space/Recreation (OS/R)" district in Neighborhood II (PAs 86-87, 95, 99, and 101) and the "Elementary School (ES)," "Elementary School/Middle School (ES/MS)," and "Open Space/Joint Use (OS/JU)" districts in Neighborhood III (PAs 48-49, 69, and 74), encompassing about 41.0 acres, contains a "Single-Family Residential Overlay" (SFR Overlay) designation The following uses shall be permitted by right therein: (1) residential, single-family detached (2-14 units/acre); (2) model homes; (3) sales and leasing offices and trailers; (4) nursing homes and convalescent facilities; (5) independent and assisted living residential facilities; and (6) home occupations.

As proposed, this SFR Overlay district would allow for the development of single-family residential development, at densities ranging between 2-14 dwelling units per acre, in lieu of the underlying land-use designation if those underlying uses are not implemented. In no event, however, could development of residential uses in these overlay areas exceed the 8,407 dwelling unit maximum established in the proposed LCRSP or allow an exceedance of a gross density of more than 3.44 dwelling units per acre, as calculated for the entire specific plan area.

If an area overlain by the SFR Overlay is developed with residential uses, the development standards established for the "Single-Family Residential 1 (SFR-1) (2-5 du/ac)," "Single-Family Residential 2 (SFR-2) (5-8 du/ac)," or "Single-Family Residential 3 (SFR-3) (8-14 du/ac)" zones shall apply, as follows: (1) for developments with residential densities of 2-5 units per acre, the "Single-Family Residential 1 (SFR-1)" development standards shall apply; (2) for developments with residential densities of 5-8 units per acre, the "Single-Family Residential 2 (SFR-2)' development standards shall apply; and (3) for developments with residential densities of 8-14 units per acre, the "Single-Family Residential 3 (SFR-3)" development standards shall apply.

[21]/ Unless a building qualifies as housing for older persons, it may not discriminate based on familial status. That is, it may not discriminate against families in which one or more children under 18 years of age live with a parent, a person who has legal custody of the child or children, or the designee of the parent or legal custodian. Housing for older persons is exempt from the prohibition against familial status discrimination if: (1) the United States Department of Housing and Urban Development (HUD) determines that it is specifically designed for and occupied by elderly persons under a federal, state, or local government program; or (2) it is occupied solely by persons who are 62 years of age or older or it houses at least one person who is 55 years of age or older in at least 80 percent of the occupied units and adheres to a policy that demonstrates an intent to house persons who are 55 years old or older.

Prior to exercising this authorization, a site plan and tentative tract map would need to be submitted to the City for review and approval.

The SRF Overlay includes the area comprising the existing and reconfigured El Rancho Verde Royal Vista Golf Course (PAs 87, 95, 99, and 101[22]). "Tennis clubs, golf courses, and similar recreation uses, lighted or unlighted" are permitted land uses within the all residentially-designed zones, as well as both the "Village Center Commercial (VC)" and "Open Space/Recreation (OS/R)" districts.

High-Density Residential Overlay

In lieu of the underlying land-use designation, as depicted in Figure 2-6 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan), a "High Density Residential Overlay" (HDR Overlay) designation is proposed for within an approximately 11.2 acre portion of Neighborhood II (PAs 89-91) designated for "Village Center Commercial (VC)" under the proposed LCRSP. Because of the proximity of these planning areas to Riverside Avenue and proximity to PA 92 (which is proposed for "High Density Residential [HDR]"), if these areas are not developed for an authorized "Village Center Commercial (VC)" use, in lieu of the underlying land-use designation if those underlying uses are not implemented, they may be developed for high-density residential products (such as condominiums, stacked flats, podium units, and apartments) with densities ranging from 25-35 dwelling units per acre.

With the exception of the following differences, the development standards established for the "Multi-Family Residential (MRF) (14-28 du/ac)" zone shall apply to all areas being developed under the HDR Overlay: (1) the density range for the HDR Overlay shall be 25-35 dwelling units per acre; and (2) the maximum building height in all HDR Overlay areas shall not exceed 55 feet. Prior to exercising the HDR Overlay option, a site plan and tentative subdivision map would be submitted to the City for review and approval.

2.6.2 Commercial Land Uses

Village Center Commercial

In-lieu of a traditional "commercial" land-use designation, the proposed project would include a "Village Center Commercial (VC)" category in Neighborhood II (PAs 89-91), Neighborhood III (PAs 33 and 78), and Neighborhood IV (PAs 23, 25, 27). Planning areas with a "Village Center Commercial (VC)" designation would allow for the development of retail and other commercial land uses, including shopping centers, freestanding retail and commercial buildings, medical and dental uses, offices, and business park uses. The zoning and development standards for the "Village Center Commercial (VC)" district are described in the proposed LCRSP and outlined in Table 2-4 (Lytle Creek Ranch Specific Plan - Village Center Commercial Development Standards). As noted in the proposed LCRSP, no residential uses of any type shall be permitted within areas designated as "Village Center Commercial (VC)."

[22]/ PAs 87, 95, 99, and 101 collectively comprise approximately 207.0 acres. Although Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Land Use Summary) states that the land-use assumption for those planning areas is "golf course," because the assigned acreage exceeds the size of a typical golf course (around 150 acres), the Lead Agency might realistically anticipate modifications to the boundaries of those and abutting planning areas once formal plans for those areas have been developed.

Village Center Commercial Overlay

In lieu of the underlying land-use designation, a "Village Center Commercial Overlay" (VC Overlay) designation is proposed on an approximately 13.0-acre portion of Neighborhood II (PA 92) and an approximately 75.9-acre portion of Neighborhood III (PAs 30-31, 35-42). Planning areas with a VC Overlay designation would allow for the development of retail and other commercial uses, including shopping centers, freestanding retail and commercial buildings, and office uses, if the underlying uses are not implemented. The development standards presented in Table 2-4 (Lytle Creek Ranch Specific Plan - Village Center Commercial and General Warehouse Standards) shall apply to areas being developed under the VC Overlay.

With the exception of PAs 37 and 40, which are designated "Open Space/Recreational (OS/R), the underlying land-use designation for these planning areas is higher density residential, including "Single-Family Residential 2 (SRF-2)," "Single-Family Residential 3 (SFR-3)," "Multi-Family Residential (MFR)," and "High Density Residential (HDR)." A site plan and tentative subdivision map shall be submitted to the City for review and approval for any development activity seeking to implement the VC Overlay.

General Warehousing Overlay

In lieu of the underlying land-use designation, a "General Warehousing Overlay" (GW Overlay) designation is proposed on an approximately 99.0-acre portion of Neighborhood I (PAs 3-4, 11, 13, and 15), an approximately 43.3-acre portion of Neighborhood III (PA 78), and an approximately 54.0-acre portion of Neighborhood IV (PA 20). If the underlying uses are not implemented, planning areas with a GW Overlay designation would allow for the development of general warehousing, storage, other self-serve uses, and light industrial uses. The GW Overlay expressly allows for the continued use and operation of existing storage, warehousing, and wholesaling uses and related uses within those areas, including Monier Lifetile (3511 N. Riverside Avenue, Rialto). The development standards presented in Table 2-4 (Lytle Creek Ranch Specific Plan - Village Center Commercial and General Warehouse Standards) shall apply to areas being developed under the GW Overlay.

The GW Overlay designation is located along transportation arterials, such as the I-15 Freeway and Riverside Avenue. A site plan and tentative subdivision map shall be submitted to the City for review and approval for any development activity seeking to implement the GW Overlay.

Park Overlay

In lieu of the underlying land-use designation, a "Park Overlay" (Park Overlay) designation is proposed on an approximately 35.7-acre portion of Neighborhood III (PA 72). Should the Park Overlay be implemented, the Lead Agency envisions the development of a community park containing a number of multi-use athletic fields, comfort facilities, on-site parking, and other recreational uses. High-intensity sports and other night lighting could be incorporated into the community park's design and development to allow for organized evening recreational activities.

2.6.3 Institutional Land Uses

The proposed project is located within three different school districts. Unless jurisdictional boundaries are subsequently modified, public school students residing in the north and northeastern portions of the LCRSP area will attend schools operated San Bernardino City

Unified School District (SBCUSD). Students residing in the northwestern portion of the proposed project (Neighborhood IV) will attend schools operated by the Fontana Unified School District (FUSD). Students residing in the southern portion (Neighborhood III) of the LCRSP will attend schools operated by the Rialto Unified School District (RUSD).

The proposed LCRSP includes two institutional land-use designations: "Elementary School (ES)" and "Elementary/Middle School (ES/MS)." As illustrated in Figure 2-6 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan), the approximately 10.0-acre "Elementary School (ES)" zone serves to generally delineate the location of a new elementary school (grades K-6) in Neighborhood III. The approximately 14.0-acre "Elementary School/Middle School (ES/MS)" zone depicts the general location of a new combined elementary and middle school (grades K-8) also within Neighborhood III. Although the location of these facilities has been identified in the LCRSP, the precise location and configuration of the identified school sites remains subject to change and refinement based on a subsequent agreement with the RUSD and the RUSD's application of specific school siting criteria relative to the proposed school sites.[23]

The proposed project neither includes the delineation of any real property dedication to nor includes the construction of any new school facilities for the direct benefit of the SDCUSD and/or the FUSD. As proposed, siting for one new elementary school and siting for a combined elementary and middle school is proposed within the project and RUSD boundaries. If the RUSD elects not to utilize one or more of the designated school sites, the unused site(s) may be developed for residential uses, as permitted by the LCRSP "so long as the maximum number of on-site dwellings does not exceed 8,407 units. If residential development is pursued, only unused dwelling units from elsewhere within Neighborhoods II or III may be transferred to the unneeded school site(s).

Should any additional schools be required, those facilities will be constructed and phased in conformance with agreements, if any, between the Applicant and the corresponding school district(s). With regards to those districts, as proposed, the project will pay its fair share of school impact fees to each district in accordance with and as required by California law.

2.6.4 Open Space Land Uses

As illustrated in Figure 2-7 (Lytle Creek Ranch Specific Plan – Conceptual Parks and Recreation Plan), a variety of open-space opportunities will be provided within the LCRSP area, including open space for recreation, resource conservation, and flood control purposes. Open space areas, inclusive of those designated "Open Space/Recreation (OS/R)," "Open Space (OS)," and "Open Space/Joint Use (OS/JU)," collectively totaling about 1,253.8 acres or about 51.4 percent of the project site. As indicated by the corresponding land-use designation, each of the project's open space categories serves a distinct purpose or functions. As proposed, the LCRSP's open-space designations and their intended functions are separately described below.

[23]/ Sections 17211, 17212, and 17212.5 of the California Education Code (CEC) contains provisions governing the siting of new public schools. In addition, as outlined in the California Department of Education's (CDE) "Guide to School Site Analysis" (CDE, 2000), the CDE provides specific recommendations for school size. In order to manage the school site selection process, the CDE's School Facilities and Planning Division (SFPD) has developed screening and ranking procedures based on criteria commonly affecting school selection (Section 17251[b], CEC; 5 CCR 14001[c]). In addition, CEQA (Section 21151.8), the State CEQA Guidelines (Section 15186[d]), and the CEC (Section 17213[b]) identify additional environmental requirements for school projects. These additional requirements are intended to ensure that, before a school district approves a school project at a given site, the site is evaluated to identify potential health effects that could result from exposure to hazardous materials, wastes, emissions, and substances. The district is required to consult with other agencies before a school project is considered for approval.

Figure 2-5
AERIAL PHOTOGRAPH
Source: Lytle Development Joint Venture III

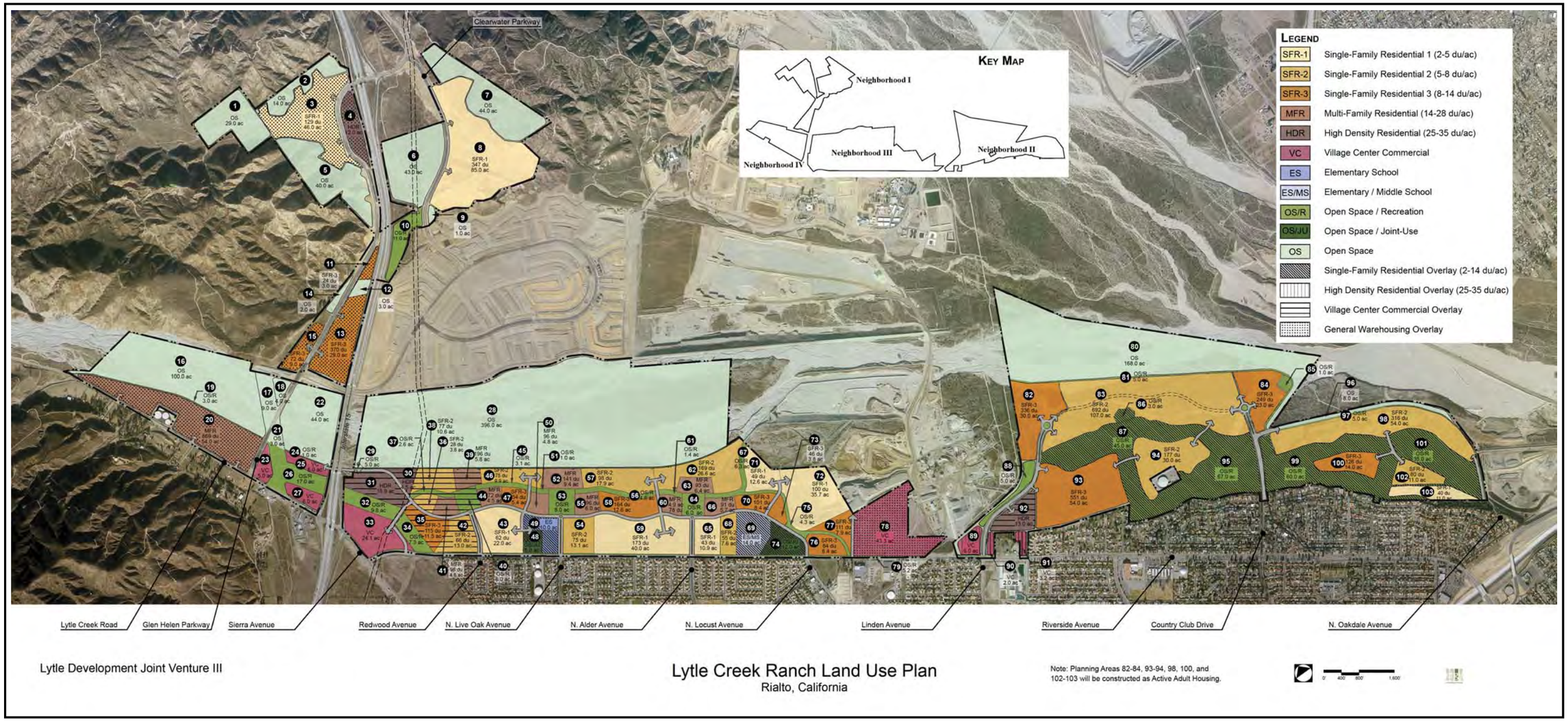

Figure 2-6
LYTLE CREEK RANCH SPECIFIC PLAN CONCEPTUAL LAND-USE PLAN
Source: Lytle Development Joint Venture III

Figure 2-7
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL PARKS AND RECRETION PLAN
Source: Lytle Development Joint Venture III

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Table 2-2
LYTLE CREEK RANCH SPECIFIC PLAN - DETAILED STATISTICAL SUMMARY
NEIGHORHOOD I

PA	Land Use	Approximate Acreage	Product Type	Density Range (DU/ac)	Estimated Aver. Product Density (DU/ac)	Dwelling Units	Square Footage	Assumptions
1	Open Space	29.0	-	-	-	-	-	Natural Open Space
2	Open Space	14.0	-	-	-	-	-	Natural Open Space
3[d]	SFR-1 Residential	46.0	Single-Family Detached	2-5	2.8	129	-	-
4[d]	HDR Residential	12.0	Apartments	25-35	28.0	336	-	-
5	Open Space	40.0	-	-	-	-	-	Natural Open Space
6	Open Space	43.0	-	-	-	-	-	Natural Open Space
7	Open Space	44.0	-	-	-	-	-	Natural Open Space
8	SFR-1 Residential	85.0	Single-Family Detached	2-5	4.1	347	-	-
9	Open Space/Recreation	1.0	-	-	-	-	-	Natural Open Space
10	Open Space/Recreation	11.0	-	-	-	-	-	-
11[d]	SRF-3 Residential	3.0	Single-Family Detached/Attached	8-14	8.0	24	-	-
12	Open Space	3.0	-	-	-	-	-	Natural Open Space
13[d]	SRF-3 Residential	29.0	Single-Family Detached/Attached	8-14	12.8	370	-	-
14	Open Space	2.0	-	-	-	-	-	Natural Open Space
15[d]	SFR-3 Residential	9.0	Single-family Detached/Attached	8-14	8.0	72	-	-
	Roadways	46.2	-	-	-	-	-	-
	Subtotal	417.2	-	-	-	1,278	-	-

Notes:
a. Single-Family Residential (SFR) Overlay
b. High Density Residential (HDR) Overlay
c. Village Center Commercial (VC) Overlay
d. General Warehousing (GW) Overlay
e. Park Overlay

Table 2-2 (Continued)
LYTLE CREEK RANCH SPECIFIC PLAN - DETAILED STATISTICAL SUMMARY - NEIGHORHOOD II

PA	Land Use	Approximate Acreage	Product Type	Density Range (DU/ac)	Estimated Aver. Product Density (DU/ac)	Dwelling Units	Square Footage	Assumptions
80	Open Space	168.0	-	-	-	-	-	Natural Open Space
81	Open Space/Recreation	5.0	-	-	-	-	-	-
82	SFR-3 Residential	30.0	Single-Family Detached/Attached	8-14	11.2	336		Active-Adult Housing
83	SFR-2 Residential	107.0	Single-Family Detached	5-8	6.5	692		Active-Adult Housing
84	SFR-3 Residential	23.0	Single-Family Detached/Attached	8-14	10.8	249	-	Active-Adult Housing
85	Open Space/Recreation	1.0	-	-	-	-	-	-
86[a]	Open Space/Recreation	3.0	-	-	-	-	-	-
87[a]	Open Space/Recreation	45.0	-	-	-	-	-	Golf Course
88	Open Space/Recreation	5.0	-	-	-	-	-	-
89[b]	Village Center Commercial	6.0	-	-	-	-	54,885	-
90[b]	Village Center Commercial	2.0	-	-	-	-	18,295	-
91[b]	Village Center Commercial	3.2	-	-	-	-	29,272	-
92[c]	HDR Residential	13.0	Apartments	25-35	28.0	364	-	-
93	SFR-3 Residential	54.0	Single-Family Detached/Attached	8-14	10.2	551	-	Active-Adult Housing
94	SFR-2 Residential	30.0	Single-Family Detached	5-8	5.9	177	-	Active-Adult Housing
95[a]	Open Space/Recreation	67.0	--	-	-	-	-	Golf Course
96	Open Space	8.0	-	-	-	-	-	-
97	Open Space/Recreation	5.0	-	-	-	-	-	-
98	SFR-2 Residential	54.0	Single-Family Detached	5-8	5.9	316	-	Active-Adult Housing
99[a]	Open Space/Recreation	60.0	-	-	-	-	-	Golf Course
100	SFR-3 Residential	14.0	Single-Family Detached/Attached	8-14	9.0	126	-	Active-Adult Housing
101[a]	Open Space/Recreation	35.0	-	-	-	-	-	Golf Course
102	SFR-2 Residential	11.0	Single-Family Detached	5-8	7.3	80		Active-Adult Housing
103	SFR-1 Residential	11.0	Single-Family Detached	2-5	3.6	40	-	Active-Adult Housing
	Roadways	41.6	-	-	-	-	-	-
	Subtotal	801.8	-	-	-	2,931	102,452	-

Table 2-2 (Continued)
LYTLE CREEK RANCH SPECIFIC PLAN - DETAILED STATISTICAL SUMMARY - NEIGHORHOOD III

PA	Land Use	Approximate Acreage	Product Type	Density Range (DU/ac)	Estimated Aver. Product Density (DU/ac)	Dwelling Units	Square Footage	Assumptions
28	Open Space	396.0	-	-	-	-	-	Natural Open Space
29	Open Space/Recreation	5.0	-	-	-	-	-	-
30[c]	HDR Residential	4.5	Apartments	25-35	31.4	499	-	-
31[c]	HDR Residential	15.9	Apartments	25-35	-	-	-	-
32	Open Space/Recreation	9.8	-	-	-	-	-	SCE ROW
33	Village Center Commercial	24.1	-	25-35	-	-	230,955	-
34	Open Space/Recreation	7.3	-	-	-	-	-	SCE ROW
35[c]	SFR-3 Residential	11.5	Single-Family Detached/Attached	8-14	10.0	115	-	-
36[c]	SFR-2 Residential	3.8	Single-Family Detached	5-8	7.4	28	-	-
37	Open Space/Recreation	2.6	-	-	-	-	-	Grand Paseo
38[c]	SFR-2 Residential	10.6	Single-Family Detached	5-8	7.3	77	-	
39[c]	MRF Residential	5.8	Apartments	14-28	20.0	196		
40[c]	Open Space/Recreation	6.0	-	-	-	-	-	Neighborhood Park
41[c]	MRF Residential	4.8	Single-Family Attached/Apartments	14-28	28.0	96		
42[c]	SFR-2 Residential	13.0	Single-Family Detached	5-8	5.1	66	-	
43	SFR-1 Residential	22.0	Single-Family Detached	2-5	2.8	62	-	-
44	MFR Residential	4.5	Single-Family Attached/Apartments	14-28	16.0	72	-	-
45	Open Space/Recreation	3.1	-	-	-	-	-	-
46	SFR-2 Residential	9.9	Single-Family Detached	5-8	7.6	75	-	-
47	SFR-3 Residential	5.4	Condominiums	8-14	10.0	54	-	-
48[a]	Open Space/Joint Use	5.0	-	2-14	-	-	-	Joint-Use Park
49[a]	Elementary School	10.0	Elementary School	2-14	-	-	-	K-6 School
50	MFR Residential	4.8	Single-Family Attached/Apartments	14-28	20.0	96	-	-
51	Open Space/Recreation	1.0	-	-	-	-	-	Grand Paseo
52	MFR Residential	9.4	Single-Family Attached/Apartments	14-28	15.0	141	-	-

Table 2-2 (Continued)
LYTLE CREEK RANCH SPECIFIC PLAN - DETAILED STATISTICAL SUMMARY - NEIGHORHOOD III

PA	Land Use	Approximate Acreage	Product Type	Density Range (DU/ac)	Estimated Aver. Product Density (DU/ac)	Dwelling Units	Square Footage	Assumptions
53	Open Space/Recreation	8.0	-	-	-	-	-	Neighborhood Park
54	SFR-2 Residential	13.1	Single-Family Detached	5-8	5.7	75	-	-
55	MRF Residential	6.0	Single-Family Attached/Apartments	14-28	16.0	96		
56	Open Space/Recreation	4.8	-	-	-	-	-	-
57	SFR-2 Residential	17.9	Single-Family Detached	5-8	5.5	98	-	-
58	SFR-3 Residential	12.6	Single-Family Attached/Detached	8-14	13.0	164	-	-
59	SFR-1 Residential	40.0	Single-Family Detached	2-5	4.3	173	-	-
60	MFR Residential	4.9	Single-Family Attached/Apartments	14-28	15.9	78	-	-
61	Open Space/Recreation	1.4	-	-	-	-	-	Grand Paseo
62	SFR-2 Residential	26.6	Single-Family Detached	5-8	6.4	169	-	-
63	MFR Residential	6.4	Single-Family Attached/Apartments	14-28	14.5	93	-	-
64	Open Space/Recreation	6.0	-	-	-	-	-	Neighborhood Park
65	SFR-1 Residential	10.9	Single-Family Detached	2-5	3.9	43	-	-
66	MRF Residential	5.7	Single-Family Attached/Apartments	14-28	16	91		
67	Open Space/Recreation	6.3	-	-	-	-	-	-
68	SFR-2 Residential	7.6	Single-Family Detached	5-8	7.2	55	-	-
69[a]	Elementary/ Middle School	14.0	Elementary/Middle School	2-14	-	-	-	K-8 School
70	SFR-3 Residential	8.4	Single-family Attached/Detached	8-14	12.0	101	-	-
71	SFR-1 Residential	12.6	Single-Family Detached	2-5	3.9	49	-	-
72[e]	SFR-1 Residential	35.7	Single-Family Detached	2-5	2.8	100	-	Community Park
73	SFR-3 Residential	3.8	Single-Family Attached/Detached	8-14	12.1	46	-	-
74[a]	Open Space/Joint Use	12.0	-	2-14	-	-	-	Joint-Use Park
75	Open Space/Recreation	4.3	-	-	-	-	-	-

Table 2-2 (Continued)

LYTLE CREEK RANCH SPECIFIC PLAN - DETAILED STATISTICAL SUMMARY - NEIGHORHOOD III

PA	Land Use	Approximate Acreage	Product Type	Density Range (DU/ac)	Estimated Aver. Product Density (DU/ac)	Dwelling Units	Square Footage	Assumptions
76	SFR-3 Residential	8.4	Single-Family Attached/Detached	8-14	10.0	84	-	-
77	SFR-3 Residential	7.9	Single-Family Attached/Detached	8-14	14.0	111	-	-
78[d]	Village Center Commercial	43.3	Unspecified	-	-	-	335,324	-
79	Open Space/Recreation	5.2	-	-	-	-	-	24-ft. wide parkway
	Roadways	39.2	-	-	-	-	-	-
	Subtotal	968.8	-	-	-	3,329	566,279	-

LYTLE CREEK RANCH SPECIFIC PLAN - DETAILED STATISTICAL SUMMARY - NEIGHORHOOD IV

PA	Land Use	Approximate Acreage	Product Type	Density Range (DU/ac)	Estimated Aver. Product Density (DU/ac)	Dwelling Units	Square Footage	Assumptions
16	Open Space	100.0	-	-	-	-	-	Natural Open Space
17	Open Space	9.0	-	-	-	-	-	SCE ROW
18	Open Space	4.0	-	-	-	-	-	Natural Open Space
19	Open Space/Recreation	3.0	-	-	-	-	-	-
20[d]	MFR Residential	54.0	Single-Family Attached/Apartments	14-28	16.1	869	-	-
21	Open Space	3.0	-	-	-	-	-	SCE ROW
22	Open Space	44.0	-	-	-	-	-	Natural Open Space
23	Village Center Commercial	5.0	-	-	-	-	54,450	-
24	Open Space/Recreation	1.0	-	-	-	-	-	-
25	Village Center Commercial	6.0	-	-	-	-	60,889	-
26	Open Space/Recreation	6.0	-	-	-	-	-	SCE ROW
27	Village Center Commercial	6.0	-	-	-	-	65,340	-
	Roadways	7.4	-	-	-	-	-	-
	Subtotal	259.4	-	-	-	869	180,689	

Table 2-2 (Continued)
LYTLE CREEK RANCH SPECIFIC PLAN – DETAILED STATISTICAL SUMMARY
ALL NEIGHBORHOODS

Neighborhood	Approximate Acreage	Total Dwelling Units	Housing Type[1] (DU)			Estimated Average Product Density (DU/ac)	Non-Residential Square Footage[2]	Assumptions
			Single Family Detached	Single Family Attached	Multi-Family (5 or more units)			
I	417.2	1,278	583	359	336	-	-	-
II	801.8	2,931	1,488	1,079	364	-	102,452	Active-Adult
III	968.8	3,329	1,338	1,366	625	-	566,279	-
IV	259.4	869	0	869	0	-	180,689	-
Total	2,447.3	8,407	3,409	3,673	1,325	3.44	849,420[3]	-

Notes:
1. Housing type is derived from broad-based categorization or housing products as described in the proposed LCRSP.
2. The stated square footage is not inclusive of additional non-residential uses, facilities, and other improvements that may be associated with other community-based and institutional uses (e.g., schools and churches), public facilities, infrastructure systems, and public, semi-public, and private recreational facilities (e.g., recreational centers and golf course clubhouse) that would be authorized on the project site under the proposed LCRSP.
3. Although no square footages have been explicitly assigned either by the Applicant or the Lead Agency, institutional, educational, recreational and infra-structure-related uses are addressed through the assignment of acreages to those uses and through the depiction of those facilities and improvements herein. The potential environmental impacts attributable to those acreage-based uses and depicted facilities and improvements are addressed in this EIR. As such, with regards to those uses, facilities, and improvements, the 849,420 square feet of non-residential use identified in the proposed LCRSP and examined herein does not constitute a finite cap, other than with regards to those general commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar uses authorized or conditionally authorized under the proposed LCRSP.

Source: Lytle Development Joint Development III

Table 2-3
LYTLE CREEK RANCH SPECIFIC PLAN – RESIDENTIAL DEVELOPMENT STANDARDS

Development Standard	SFR-1	SFR-2		SRF-3 (Neighborhoods I, III, and IV)				SFR-3 (Neighborhood II)		MFR	HDR
		Single Family Detached	Alley Loaded Detached	Single Family Detached	Alley Loaded Detached	Duplexes Triplexes	Attached	Detached	Attached		
Density	-	-	-	-	-	-	-	-	-	-	-
Minimum size of development area phase	-	-	-	-	-	-	-	2 ac.	2 ac.	2 ac.	2 ac.
Min. lot area per DU (sq. ft.)	5,500	3,750	3,750	2,000	2,000	NA	NA	-	-	-	-
Minimum average lot area per DU (sq. ft.)	6,000	-	-	-	-	-	-	-	-	-	-
Max. DU per net acre	5	8	8	14	14	14	14	14	14	28	35
Lot Dimensions	-	-	-	-	-	-	-	-	-		
Minimum lot width	50 feet	35 feet	35 feet	30 feet	30 feet	85 feet	100 feet	30 feet	NA	NA	NA
Minimum lot width for a flag lot, cul-de-sac, or knuckle at front property line	25 feet	25 feet	25 feet	20 feet	20 feet	20 feet	25 feet	20 feet	NA	-	-
Minimum lot depth	90 feet	80 feet	80 feet	65 feet	65 feet	90 feet	NA	65 feet	NA	NA	NA
Maximum lot coverage	60%	60%	60%	80%	80%	80%	75%	80%	80%	-	-
Setbacks	-	-	-	-	-	-	-	-	-	5 ft.	5 ft.
Required setback adjacent to local/collector/arterial street	-	-	-	-	-	-	-	-	-	10 ft.	10 ft.
Required setback adjacent to residential uses	-	-	-	-	-	-	-	-	-	10 ft.	10 ft.
Required setback adjacent to mixed-use or non-residential use	-	-	-	-	-	-	-	-	-	-	-
Minimum front yard (to main building façade)	10 feet	-	-	10 feet	5 feet	-	-	5 feet	NA	-	-
Minimum front yard (to front porch or deck)	10 feet	10 feet	5 feet	-	-	5 feet	NA	-	-	-	-
Minimum front yard (to porch or main living area)	-	10 feet	5 feet	-	-	-	-	-	-	-	-
Minimum front yard (to main living area)	-	-	-	-	-	5 feet	NA	3 feet	NA	-	-
Minimum garage front yard setback	18 feet from back of sidewalk	18 feet from back of sidewalk	NA	≤5 feet or ≥18 feet	NA	18 feet from curb	NA	-	-	-	-
Minimum side-entry garage setback	10 feet	-	-	-	-	-	-	-	-	-	-

Table 2-3 (Continued)
LYTLE CREEK RANCH SPECIFIC PLAN – RESIDENTIAL DEVELOPMENT STANDARDS

Development Standard	SFR-1	SFR-2		SRF-3 (Neighborhoods I, III, and IV)				SFR-3 (Neighborhood II)		MRF	HDR
		Single Family Detached	Alley Loaded Detached	Single Family Detached	Alley Loaded Detached	Duplexes Triplexes	Attached	Detached	Attached		
Minimum garage rear yard (for alley-loaded garages)	-	NA	0 feet[2]	NA	NA	NA	NA	0 feet	NA	-	-
Minimum corner side yard	10 feet	10 feet	10 feet	5 feet[3]	5 feet[3]	5 feet[5]	NA	5 feet[5]	NA	-	-
Minimum interior side yard	5 feet[1]	0 feet[2]	0 feet[2]	5 feet/0 feet[4]	5 feet/0 feet[4]	0 feet[6]	NA	5 feet/0 feet[4]	NA	-	-
Minimum rear yard	15 feet	10 feet	3 feet	None	None	0 feet	NA	NA	NA	-	-
Landscape Setback	-	-	-	-	-	-	-	-	-	-	-
Minimum front yard landscape setback	-	-	-	-	-	-	-	-	-	5 feet	5 feet
Min. landscaped setback when located adjacent to off-site residential use	-	-	-	-	-	-	-	-	-	5 feet	5 feet
Minimum Building Spacing	-	-	-	-	-		-	-	-	-	-
Building built with front entry to front entry	-	-	-	-	-	NA	20 feet	NA	20 feet	20 feet	20 feet
Building side to building side	-	-	-	-	-	NA	20 feet	NA	20 feet	20 feet	20 feet
Building built with front entry to rear entry	-	-	-	-	-	NA	20 feet	NA	20 feet	20 feet	20 feet
Building built with rear entry to rear entry	-	-	-	-	-	NA	20 feet	NA	20 feet	20 feet	20 feet
Min. distance between main and accessory buildings	-	-	-	-	-	10 feet	10 feet	NA	10 feet	10 feet	10 feet
Maximum Height	3 stories ≤40 ft.	3 stories ≤40 ft.	3 stories ≤40 ft.	3 stories ≤45 ft.	3 stories ≤45 ft.	3 stories ≤45 ft.	3 stories ≤45 ft.	2 stories ≤30 ft.	2 stories ≤30 ft.	3 stories ≤45 ft.[7]	3 stories ≤55 ft.[7]
Min. Dwelling Unit Size	1,600 sq. ft.	1,000 sq. ft.	1,000 sq. ft.	1,000 sq. ft.	1,000 sq. ft.	1,000 sq. ft.	1,000 sq. ft.	-	-	-	-
Minimum Average Floor Area of Each Dwelling Unit	-	-	-	-	-	-	-	-	-	-	-
Bachelor and studio	-	-	-	-	-	-	-	-	-	600	600
One bedroom (sq. ft.)	-	-	-	-	-	-	-	-	-	700	700
Two bedroom (sq. ft.)	-	-	-	-	-	-	-	-	-	850	850
Three bedroom (sq. ft.)	-	-	-	-	-	-	-	-	-	1,000	1,000
Four bedroom (sq. ft.)	-	-	-	-	-	-	-	-	-	1,200	1,200

Table 2-3 (Continued)
LYTLE CREEK RANCH SPECIFIC PLAN – RESIDENTIAL DEVELOPMENT STANDARDS

Development Standard	SFR-1	SFR-2		SRF-3 (Neighborhoods I, III, and IV)				SFR-3 (Neighborhood II)		MDR	HDR
		Single Family Detached	Alley Loaded Detached	Single Family Detached	Alley Loaded Detached	Duplexes Triplexes	Attached	Detached	Attached		
Minimum Private Outdoor Space (Required for each DU)	-	-	-	100 sq. ft. on the ground floor; 60 sq. ft. above ground floor with a minimum of 6 feet	100 sq. ft. on the ground floor; 60 sq. ft. above ground floor with a minimum of 6 feet	100 sq. ft. on the ground floor; 60 sq. ft. above ground floor with a minimum of 6 feet	100 sq. ft. on the ground floor; 60 sq. ft. above ground floor with a minimum of 6 feet	100 sq. ft. on the ground floor; 60 sq. ft. above ground floor with a minimum of 6 feet	100 sq. ft. on the ground floor; 60 sq. ft. above ground floor with a minimum of 6 feet	-	-
Ground level (min. 8-ft width and 6-ft depth)	-	-	-	-	-	-	-	-	-	60 sq. ft.	60 sq. ft.
Outdoor space above ground level (min. 6-ft width and 6-ft depth)	-	-	-	-	-	-	-	-	-	48 sq. ft.	48 sq. ft.

Notes:
1. Ground-level architectural encroachments shall not be permitted into the required side yards with the exception of roofs, eaves, cornices, and other similar features located above the first floor, which may encroach into the side yards a maximum of two feet.
2. The minimum interior side yard shall be zero feet; provided, however, that the minimum spacing between primary buildings on adjacent lots is five feet. No ground-level architectural encroachments shall not be permitted. Roofs, eaves, cornices, and other similar features located above the first floor may encroach into the side yards a maximum of two feet.
3. For corner lots, the minimum interior side yard shall be zero. No ground-level encroachments are permitted. Roofs, eaves, cornices, and other similar features located above the first floor may encroach into the required corner side yard a maximum of two feet; provided, however, that the side yard is no less than five feet in wide.
4. The minimum interior side yard shall be five on one side and zero feet on the other side; provided, however, that the minimum spacing between primary buildings on adjacent lots is no closer than five feet. No ground-level encroachments are permitted. Roofs, eaves, cornices, and other similar features located above the first floor may encroach into the required side yard a maximum of two feet.
5. For corner lots, the minimum interior side yard may be zero. No ground-level encroachments are permitted. Roofs, eaves, cornices, and other similar features located above the first floor may encroach into the required side yard a maximum of two feet.
6. No interior side yard is required.
7. Special architectural features including, but not limited to, chimneys, towers, domes, cupolas, elevator penthouses, etc. shall be permitted up to 55 feet in height and shall not exceed 15 percent of the roof area.

NA – Not applicable.

Source: Lytle Development Joint Venture III

Table 2-4
LYTLE CREEK RANCH SPECIFIC PLAN
VILLAGE CENTER COMMERCIAL AND GENERAL WAREHOUSING STANDARDS

Development Standard	Village Center Commercial (VC)	General Warehousing (GW)
Density	-	-
Minimum size of development area phase	2 acres	2 acres
Maximum floor-area ratio[1]	1.5 FAR	0.5 FAR
Maximum floor-area ratio (excluding industrial uses)	1.5 FAR	1.5 FAR
Lot Dimensions	-	-
Minimum lot wide at front property line	NA	NA
Minimum lot depth	NA	NA
Landscape Setback	-	-
Minimum landscape setback along public streets (measured from right-of-way)	10 feet	10 feet
Minimum Private Outdoor Space (Required for each DU)	-	-
Ground level (minimum 8-foot width and 6-foot depth)	-	-
Outdoor space above ground level (minimum 6-foot width and 6-foot depth)	-	-
Minimum Building Spacing		
Buildings built with front entry to front entry	20 feet	20 feet
Building side to building side	10 feet	10 feet
Buildings built with front entry to rear entry	20 feet	20 feet
Buildings built from front entry to building side	20 feet	20 feet
Buildings built with rear entry to rear entry	20 feet	20 feet
Minimum distance between main and accessory buildings	10 feet	10 feet
Maximum Height	-	-
Maximum Height	3 stories (≤55 feet)	2 stories (≤55 feet)

Notes:
1. FAR calculations do not included structured parking.

Source: Lytle Development Joint Venture III

Open Space/Recreation

As proposed, approximately 328.8 acres within the project boundaries will be designated "Open Space/Recreation (OS/R)" and will be developed for active and/or passive recreation use. This zone is intended to promote a wide range of public, semi-public, and private recreational uses, including an enhanced 18-hole public golf course, recreational centers, community and neighborhood parks, joint-use parks, trails, bike lanes, parkways, and paseos.[24]

- **Golf Course**. The existing El Rancho Verde Royal Vista Golf Course (Neighborhood II) will be redesigned and enhanced to incorporate a different configuration and layout and will include a new approximately 19,339 square foot clubhouse, pro shop, locker rooms, office, bar, restaurant, and banquet facilities.

[24]/ The Applicant may but not necessarily shall be authorized to construct or finance some or all of the park improvements within any of eligible on-site park areas as an offset against other Quimby Act requirements.

- **Recreation Centers**. The four proposed recreation centers, including three private recreational centers (Neighborhood III) and one active-adult recreational center (Neighborhood II), will act as gathering areas for community activities and contain such facilities as tot lots, workout rooms, community rooms, swimming pools, and spas.

- **Community Park**. Planning Area 72 (Neighborhood III), which contains approximately 35.7 acres of land, is designated on the land-use plan with a "Park Overlay" (Park Overlay) designation. All or a portion of PA 72 may be developed with a mixture of community and neighborhood park elements. If developed as a public park, the Applicant and the City will mutually agree on the improvements to be provided within the park area. An illustrative community park plan is presented in Figure 2-8 (Lytle Creek Ranch Specific Plan - Conceptual Community Park Plan).

- **Neighborhood Parks**. The four proposed neighborhood park, including three which will include private recreational facilities (Neighborhood III) and one linked to proposed parklands within the adjoining Rosena Ranch community (Neighborhood I), will offer park users a variety of recreational opportunities. Park facilities will include multi-purpose and sports-specific athletic fields, playgrounds, picnic areas, shade structures, and sitting areas.

- **Joint-Use Parks**. Two joint-use parks (Neighborhood III) are proposed in conjunction with the two proposed public school sites. As proposed, these school/park facilities will contain athletic fields, playgrounds, and informal play areas available for public use when school is not in session. The sizes and uses of these facilities will be determined in consultation with the RUSD and subject to the provisions of a joint-use agreement.

- **Trails, Bike Lanes, Parkways, and Paseos**. The proposed project includes a network of often interconnecting trails, bike lanes, parkways, and paseos. These areas will be accessible to pedestrians and bicyclists. In addition to promoting non-vehicular transportation, the project's Grand Paseo will serve as a bioswale designed to capture storm water flows and provide water quality benefits.

As proposed, the "Open Space/Recreation (OS/R)" designation has been assigned to an approximately 23.1-acre portion of the SCE transmission right-of-way (ROW). The ultimate use of that ROW for that purpose remains subject to approval by the California Public Utilities Commission (CPUC). With the exception of the existing SCE transmission ROW and the El Rancho Verde Royal Vista Golf Course, the project's "Open Space/Recreation (OS/R)" areas will be owned and maintained either the City's Recreation and Community Services Department or the master homeowners' association (HOA). The construction of the proposed parkland will be phased to correspond with the development of the individual neighborhoods and planning areas.

Natural Open Space

As illustrated in Figure 2-9 (Lytle Creek Ranch Specific Plan - Natural Open Space Areas), within the project boundaries, excluding public open space areas (e.g., parks and golf course areas), approximately 908.0 acres will be retained as open space for resource conservation and drainage purposes and designated "Open Space (OS)," including approximately 732.0 acres along and adjacent to Lytle Creek (Neighborhoods II, III, and IV) and approximately 176.0 acres adjacent to the SBNF and GHRP (Neighborhood I).

Of this land, 52.2 acres was set aside as mitigation land by the Lytle Development Company (LDC) in conjunction with the County's 2001 approvals of the adjacent LCNPD (Tract 15900), located south of Neighborhood I and east of Neighborhood II. In addition, 160.5 acres of land has been dedicated by the LDC to provide for conservation of SBKR. In total, approximately 212.7 acres have already been set aside for conservation of the SBKR. In connection with mitigation of the separate WVWD Reservoir Nos. 7-3 and 7-4 construction projects along Lytle Creek Road, this area was expanded by four acres in 2006, thus bringing the entire acreage set aside for SBKR conservation to 216.8 acres. This 216.8-acre area is referred to herein as the "SBKR Conservation Area" and was established as part of the County-approved LCNPD. In order to protect the flora and fauna, no trails will be constructed within these areas and no unrestricted public access will be authorized.

A minimum of 829.2 acres within the proposed LCRSP, including Lytle Creek Wash, will be preserved as natural (undisturbed) open space by clustering development along Riverside Avenue, Lytle Creek Road/Sierra Avenues, Glen Helen Parkway, Clearwater Parkway, and the I-15 Freeway. While the actual acreage included within this natural open space may be adjusted to a limited degree as a result of future reconfiguration and refinement of individual neighborhoods and planning areas, in no event shall the total acreage of natural (undisturbed) open space be less than 829.2 acres for the proposed LCRSP.

As proposed, inclusive of both disturbed and undisturbed areas, 908.0 acres will be set aside, in perpetuity, as permanent open space. Of those 908.0 acres, 829.2 acres (91.3 percent) will be dedicated as mitigation lands to off-set impacts resulting from development associated with the proposed LCRSP. The remaining 78.8 acres will remain as open space but is not expressly proposed for conservation purposes and may be disturbed by grading and grubbing operations.

Improvements may be authorized in the "Open Space (OS)" zone in order to allow for safe limited public access or for control of erosion, geologic stability, flood control, habitat enhancement, or other public safety purposes. The construction of buildings and other structures shall not be permitted within this zone.

Open Space/Joint Use

Approximately 17.0 acres of the project site, located adjacent to the two proposed school sites (Neighborhood III), has been allocated for joint recreational use both by children attending those new RUSD facilities which have been identified by the Applicant as future school sites within the LCRSP boundaries and by the community at large when such student-related use is not deemed to be in conflict with school functions.

If it is determined by the RUSD that the size of the "Open Space/Joint Use (OS/JU)" can be reduced or eliminated, those properties or portions thereof are permitted under the LCRSP to be developed for residential use so long as the number of dwelling units within the LCRSP boundaries do not exceed 8,407 units.

2.6.5 Other Land Uses

Although no corresponding land-use designation has been identified in the LCRSP, an approximately 134.5-acre portion of the project site will be dedicated and improved as "roadways." Roadways are not, in and of themselves, identified as a distinct land-use category in the proposed LCRSP.

2.6.6 Additional Off-Site Areas

In addition to the land uses within the proposed LCRSP, as illustrated in Figure 2-10 (Additional "Off-Site" Areas) and described in Table 2-5 (List of Additional "Off-Site" Areas), the project area also includes the following additional "off-site" areas. Although not included within the proposed LCRSP boundaries, these additional areas are or may be related, directly or indirectly, with the approval, construction, occupancy, use, and/or habitation of the proposed project.

Table 2-5
LIST OF ADDITIONAL "OFF-SITE" AREAS[1]

Additional "Off-Site" Area	Approximate Acreage	Assessor's Parcel Numbers	Owner[2]
SoCalGas Easement	3.6	0239-031-46 0239-031-53	County of San Bernardino
Construction Access	2.6	0264-431-04	County of San Bernardino
I-15 Freeway Easement	2.3	0239-093-31	California Department of Transportation
Levee Improvements	10.1	0239-121-16	Sunbelt Acquisitions
Levee Improvements	0.6	0239-011-05 0264-421-25	Storkson Family Trust BBC Properties
Drainage Improvements	0.7	Lytle Creek Road ROW (Map 0239-054)	County of San Bernardino
Total	19.9		

Notes:
1. In addition to those "off-site" areas explicitly identified herein, infrastructure improvements are anticipated to a number of additional areas located beyond the boundaries of the proposed LCRSP. These improvements constitute master planned facilities (e.g., water and wastewater facilities and street improvements) which have been identified by the City and/or by other governmental entities, will be will implemented by those entities or by others and are not expressly initiated by the Applicant or predicated exclusively by the proposed project, and for which the Applicant bears only a fee payment or other fair-share contribution.
2. Ownership interests are routinely subject to change.

Source: Lytle Development Joint Venture III

- An approximately 3.6-acre utility easement within County-owned property located adjacent to Neighborhood I. The utility easement includes an existing SoCalGas natural gas pipeline that traverses a portion of Neighborhood I and extends off the project site to the north. The total acreage of the applicable portion of the utility easement is approximately 7.5 acres, of which 3.9 acres exist within and 3.6 acres exist beyond the proposed LCRSP boundaries. The easement is approximately 100-feet wide and contains a 16-foot wide maintenance road. That existing maintenance road may be used for construction access, primarily with regards to PA 6.

  The project proposes no improvements within this utility easement; however, it is anticipated that SoCalGas, at a future date and independent of the proposed project, may undertake improvements to the existing maintenance road, including the installation of rip-rap and the construction of a V-ditch in this easement area to address drainage and erosion issues.

  An approximately 20-foot wide existing improved roadway, totaling about 2.6 acres, owned by the San Bernardino County Flood Control District (SBCFCD) extending from

the northeast portion of Neighborhood II to a connection to Highland Street that will provide an interim, secondary point of access to Neighborhood II during construction. If utilized, this existing roadway would constitute a temporary access road which would be used for construction purposes only and would provide a secondary means of access for bringing construction materials onto and exporting construction debris from the site.

- An approximately 2.3-acrea road easement extending beneath the I-15 Freeway. As proposed, within the road easement area, an internal collector road would be developed to link Neighborhoods III and IV.

- Construction of approximately 2,000 linear feet of levee improvements to an existing levee on property owned by Cemex USA located between two sections (Neighborhoods II and III) of the project site. In order to provide enhanced levee protection that is consistent with the levee constructed as part of the project in Neighborhoods II and III, the project includes levee improvements affecting an approximately 10.1-acre area.

- Construction of additional levee improvements north of Neighborhoods II and IV with a combined acreage of approximately 0.6 acres.

- Drainage improvements in the vicinity of Neighborhood IV, totaling approximately 0.7 acres. These improvements include the removal and replacement of existing storm drain facilities adjacent to Neighborhood IV to accommodate larger flows across Lytle Creek Road. Because these improvements will be made within existing improved areas, minimal environmental impacts would be anticipated.

It is noted that those off-site areas identified above are neither presently owned nor controlled by the Applicant. Additionally, the City has not yet been provided with documentation that the Applicant has obtained the consent of each property owner for the proposed use and/or for the inclusion of those properties in this EIR. For the purpose of CEQA compliance, the Lead Agency is, however, exercising its prerogative to include each of these off-site areas herein.

2.7 Backbone Infrastructure Systems

In order to accommodate project demands, provide service to the proposed land uses, and promote the safety of project residents, on-site workers, and others, a number of infrastructure improvements have been identified. Each of the proposed backbone infrastructure systems are briefly described below. All engineering plans should be viewed as conceptual and subject to further refinement based on further engineering analyses.

2.7.1 Conceptual Circulation System

The proposed circulation plan serves to provide direct and convenient access to each of the neighborhoods and individual residential enclaves, employment centers, and other development areas within the project boundaries, promote pedestrian use, and contribute toward the implementation of transportation improvements required to accommodate projected areawide development. The circulation plan includes standards for vehicular and pedestrian circulation, bikeways, parking facilities, and connections to public transit.

As illustrated in Figure 2-11 (Lytle Creek Ranch Specific Plan – Conceptual Circulation Plan), the project's circulation plan includes a network and hierarchy of public streets, consisting of

major roadways and entry, collectors, and local streets. The circulation plan includes both new interior roadways, located within the LCRSP boundaries, and improvements to the existing roadway network. As illustrated in Figure 2-12 (Lytle Creek Ranch Specific Plan – Typical Internal Roadway Cross Sections), the internal roadway system will include a number of new roads. As further illustrated in and Figure 2-13 (Lytle Creek Ranch Specific Plan – Typical Active-Adult Roadway Cross Sections), since Neighborhood II is proposed as a gated and "age-restricted"[25] community, separate roadway cross sections are proposed therein.

- **Entry Streets**. Proposed is the construction of several new entry streets into Neighborhood III from Riverside Avenue. The entry streets will be situated opposite the existing streets of Redwood Avenue, North Live Oak Avenue, North Alder Avenue, and North Locust Avenue. Each entry street will have a 106-foot wide ROW, which consists of a 14-foot wide landscaped median, one 20-foot wide travel lane in each direction, and 26-foot wide landscaped parkway on both side. A 5-foot wide parkway-adjacent sidewalk will be provided within the parkway on each side of the street. Each entry street will be designed with a special landscaped entry treatment adjacent to Riverside Avenue.

- **Active-Adult Entry Street**. The active-adult entry street begins with a 102-foot wide ROW at Riverside Avenue and extends to a point located just east of PA 90, where it transitions into an 84-foot wide ROW adjacent to PAs 88 and 92. The active-adult entry street will consist of a 14-foot wide landscaped median, two 10-foot wide travel lanes, one 6-foot wide in-street (Class II) bike lane in each direction, and an 18-foot wide landscaped parkway and 5-foot wide parkway-adjacent sidewalk on one side (along the 84-foot-wide ROW) or both sides (along the 102-foot-wide ROW) of the street.

- **Collector Streets**. Within Neighborhood III, new collector streets are designed to connect local streets to major roadways and to entry streets. Collector streets will have a 94-foot wide ROW, which consists of one 20-foot wide travel lane in each direction, and a 17-foot wide landscaped parkway on one side of the street and a 23-foot wide parkway on the other side. In addition, both sides of the street will contain a 5-foot wide parkway-adjacent sidewalk.

- **Local Streets**. Within Neighborhoods II and III, new local streets will provide access to individual properties and connect to collector streets. Local streets will have a 46-foot-wide ROW, which consists of one 11-foot wide travel lane, one 7-foot wide parking lane in each direction, and a 5-foot wide curb-adjacent sidewalk on one side of the street and either a sidewalk or landscaping on the other side of the street.

- **Active-Adult Local Street**. Similar to local streets, the active-adult local streets will provide access to individual properties and connect to collector streets. The active-adult local street will have a 42-foot-wide ROW, consisting of one 10-foot wide travel lane, one 6-foot wide in-street (Class II) bike lane in each direction, and a 10-foot landscaped parkway that includes a 5-foot wide parkway-adjacent sidewalk on one side of the street.

- **Alley Drives**. Alley drives in Lytle Creek Ranch will have a 24-foot-wide ROW, which consists of one 12-foot drive lane in either direction.

[25]/ Intended for occupied solely by persons who are 62 years of age or older or housing at least one person who is 55 years of age or older in at least 80 percent of the occupied units and adhering to a policy that demonstrates an intent to house persons who are 55 years old or older.

As proposed, none of the streets to be constructed within the LCRSP, including those located within the gated area of Neighborhood II, would constitute "private streets" for maintenance purposes. The functionality of "public streets" in a gated community, including public access by non-residents, is not specifically addressed in the proposed LCRSP.

The existing roadway network also serves as a key component to the project's circulation plan. Access to Neighborhood I will be provided along Glen Helen Parkway. Primary project entries into Neighborhood II will be provided along Riverside Avenue at Country Club Drive and Linden Avenue. Primary project entries into Neighborhood III will be created along Riverside Avenue at signalized intersection of North Live Oak Avenue and at North Locust Avenue. Secondary entries into Neighborhood III will be located along Riverside Avenue opposite Redwood Avenue and North Alder Avenue. Access to Neighborhood IV will be provided along Lytle Creek Road.

In addition to those new internal roadways located within the LCRSP boundaries, other components of the project's circulation plan are described below and illustrated in Figure 2-14 (Lytle Creek Ranch Specific Plan – Typical External Roadway Cross Sections). Improvements will be required to a number of those roadways to accommodate projected traffic demands.

- **Riverside Avenue**. Riverside Avenue is designated as a "Major Arterial" in the City of Rialto. In the vicinity of Neighborhoods II and III, this roadway forms the southwesterly boundary of the LCRSP. Riverside Avenue terminates at Sierra Avenue, just south of the I-15 Freeway. Presently, the number of lanes in each direction varies from one to two lanes between Sierra Avenue and Country Club Drive. Left-turn pockets are provided at key intersections.

  Within a 127-foot wide ROW, Riverside Avenue will be improved to consist of a 14-foot wide striped median, three travel lanes in each direction (with a collective width of 38 feet), a 24-foot wide landscaped parkway containing a 5-foot wide parkway-adjacent sidewalk on the Lytle Creek Ranch side of the street and a 13-foot wide landscaped parkway with a 4.5-foot wide parkway-adjacent sidewalk along the opposite side of the street.

- **Lytle Creek Road**. As indicated in the "City of Fontana General Plan," Lytle Creek Road is a jogged "Secondary Highway" north of Summit Avenue and a "Collector Street" to the south. In the vicinity of Neighborhood IV, Lytle Creek Road forms the northwesterly border of project site and provides access to Neighborhood IV and to Neighborhood I via Glen Helen Parkway. Lytle Creek Road has a 104-foot-wide ROW north of the I-15 Freeway.

- **Sierra Avenue**. Sierra Avenue is designated a "Major Highway" south of the I-15 Freeway in the City of Fontana. The roadway begins at Lytle Creek Road and continues south pass the San Bernardino (I-10) Freeway. South of the I-15 Freeway, Sierra Avenue will have a 132-foot wide ROW and will be improved by the project to provide a 26-foot wide striped median, three travel lanes in each direction (with a collective width of 41 feet), a 12-foot wide landscaped parkway containing a 5-foot wide street-adjacent sidewalk and a 7-foot wide landscaped parkway.

- **Glen Helen Parkway**. Glen Helen Parkway is designated as a "Major Highway" in the County of San Bernardino. The roadway extends easterly from Lytle Creek Road and provides direct access to Neighborhoods I and IV.

Within a 114-foot-wide ROW, Glen Helen Parkway has been improved to consist of a 14-foot wide striped median, two travel lanes and a breakdown lane (with a collective width of 33 feet) in each direction, and a 17-foot wide landscaped parkway containing a 5-foot wide parkway-adjacent sidewalk on each side of the street. With the exception of the landscaped parkway associated with sidewalks located adjacent to PAs 11-15, these improvements were constructed in 2006 as part of the adjoining Rosena Ranch. This landscaped parkway and associated sidewalk will be constructed to coincide with the development of PAs 11-15 within the LCRSP.

- **Clearwater Parkway**. Clearwater Parkway extends through Neighborhood I, provides access to the adjoining Rosena Ranch development, and provides access to Glen Helen Parkway near the northern end of the project site. Clearwater Parkway has a 104-foot-wide ROW consisting of a 14-foot wide striped median, two travel lanes and a breakdown lane (with a collective width of 33 feet) in each direction, and 12-foot wide landscaped parkways (and no sidewalks) along each side of the street. No additional improvements to Clearwater Parkway are proposed as part of the project.

- **Country Club Drive**. Country Club Drive is designated as a "Major Arterial" south of Riverside Avenue in the City of Rialto and a "Local Street" north of Riverside Avenue in the County of San Bernardino. At its intersection with Riverside Avenue, Country Club Drive has one through lane in each direction and southbound left-turn channelization. With implementation of the proposed project, Country Club Drive will be fully improved and landscaped from Riverside Avenue to the Neighborhood II boundary.

  Between Riverside Avenue and the project boundary, within a 102-foot-wide ROW, Country Club Drive will be improved to consist of 9.5-foot wide raised landscaped median, two travel lanes in each direction (with a collective width of 36 feet), a 10-foot wide landscaped parkways on one side of the street, a 10.5-foot wide landscaped parkway on the other wide with a single 5-foot wide parkway-adjacent sidewalk, and a 12-foot parking lane in each direction. Once inside the LCRSP boundaries, Country Club Drive will vary from a 50-foot wide (adjacent to residential uses) to a 70-foot-wide (adjacent to golf course uses) ROW consisting of a central 10-foot wide raised landscaped median and a 20-foot wide travel lane in each direction. Adjacent to residential uses, a 10-foot wide parkway will be provided along both sides of Country Club Drive and a single 5-foot wide parkway-adjacent sidewalk will be provided along the south side of the road. No parkways will be provided where Country Club Drive abuts the golf course or "Open Space/Recreation (OS/R)" district.

Although not identified as a roadway classification, the LCRSP includes a general discussion of the proposed "roundabouts."[26] As indicated in Figure 2-11 (Lytle Creek Ranch Specific Plan – Conceptual Circulation Plan), the project includes two roundabouts in Neighborhood II and three roundabouts in Neighborhood III. Unless otherwise specified in the LCRSP, all street and intersection improvements shall be provided in accordance with City standards. Excluding those local and collector streets internal to planning area, which will generally conform to the conceptual circulation plan, the following improvements will be constructed.

[26]/ As described by the Federal Highway Administration (FHWA): "Roundabouts are circular intersections with specific design and traffic control features. These features include yield control of all entering traffic, channelized approaches, and appropriate geometric curvature to ensure that travel speeds on the circulory roadway are typically less than 50 km/h (30 mph)" (United States Department of Transportation, Federal Highway Administration, Roundabouts: An Informational Guide, FHWA-RD-00-067, June 2000, p. 5).

- **Neighborhood I**. In 2006, improvements to both Glen Helen Parkway and Clearwater Parkway were constructed as part of the LCNPD (Rosena Ranch). In Neighborhood I, the proposed circulation system improvements will be constructed in accordance with the approval and development of subsequent underlying "B" level tentative subdivision maps, as dictated by the City-imposed conditions of approval for those underlying "B" level tentative subdivision maps. At that time, those newly created subdivisions will be connected to those existing roadways now serving the Neighborhood I area.

- **Neighborhood II**. When the subsequent underlying "B" level tentative subdivision maps for Neighborhood II are approved and subsequently developed, as dictated in the City-imposed conditions of approval for those tentative subdivision maps, improvements will be made to those segments of Riverside Avenue that abut Neighborhood II. Similarly, the improvements for Country Club Drive will be constructed with the approval and development of the underlying "B" level tentative subdivision maps for Neighborhood II, as dictated in the City-imposed conditions for those underlying tentative maps.

- **Neighborhood III**. With regards to Neighborhood III, the improvements to those segments of Riverside and Sierra Avenues that abut Neighborhood III will proceed with the approval and development of the underlying "B" level tentative subdivision maps, as dictated in the City-imposed conditions of approval for those underlying tentative maps.

- **Neighborhood IV**. The improvements to those segments of Lytle Creek Road that abut Neighborhood IV will be made concurrent with the approval and development of the underlying "B" level tentative subdivision maps, as dictated in the City-imposed conditions of approval for those underlying tentative maps.

Unless a different payment schedule is specified by the City, applicable transportation-related mitigation fees will be paid at the time when certificates of occupancy are given for each of the respective residential units and non-residential buildings subject to the payment of those fees.

2.7.2 Levee Improvements

Since the 1940s, a series of spur dykes and levees were built on the southerly bank of Lytle Creek. These spur dykes (known as Groin-1, -2, -3, and -4) were constructed by the United States Army Corps of Engineers (USACE) to form a stable southerly boundary and limit of flooding along the southerly bank of Lytle Creek. As proposed and as illustrated in Figure 2-15 (Lytle Creek Ranch Specific Plan – Location of Proposed On-Site and Off-Site Levee Improvements) and Figure 2-16 (Lytle Creek Ranch Specific Plan – Conceptual Levee Construction Section), a stream bank revetment/lining will be constructed along the northernmost tip of each groin to form a uniform continuous southern bank along Lytle Creek, spanning a distance of approximately seven miles, to protect the proposed development. The proposed levee will extend from approximately 0.9 miles upstream of Glen Helen Parkway to approximately 5.5 miles downstream of the northbound I-15 Freeway bridge, at the eastern boundary between Neighborhoods II and III. This levee would be composed of soil cement capped with grouted riprap and include a 20-foot wide maintenance road on the top. These proposed improvements, which would complete the confinement of the flow path in Lytle Creek, will be designed and built to meet SBCFCD minimum requirements for performance, material, and workmanship and will be dedicated to the SBCFCD for ownership and maintenance.[27]

[27]/ Pacific Advanced Civil Engineering, Inc., Preliminary Master Plan of Drainage and Stormwater Management, Lytle Creek Ranch Project, November 2007, revised October 2008, p. 3.

The revetment bank design will provide a minimum three feet of freeboard over the base elevation. The revetment cross-section has the soil cement or alternative grouted rock riprap at 1.5:1 (horizontal:vertical) side slopes. A 20-foot wide paved road will follow along the top of the revetment and will slope away from the channel to a V-ditch. The road can be used by service vehicles and has ramp access to the creek channel floor. The revetment will include a freeboard over the 100-year water service elevation and a toe-down depth to satisfy the ultimate condition.

In addition to the on-site levee, the project will also construct approximately 2,000 linear feet of levee improvements to an existing levee on property owned by Cemex USA located between Neighborhoods II and III. This work is being conducted in order to provide enhanced levee protection that is consistent with the levee constructed as part of the project within Neighborhoods II and III. The proposed levee improvements in Neighborhoods II, III, and IV will be constructed in accordance with the development of each of those neighborhoods, as dictated by the City-imposed conditions of approval for the underlying "B" level tentative subdivision maps and the levee improvement plans approved by the SBCFCD.

2.7.3 Conceptual Master Drainage Plan

The LCRSP includes a proposed master drainage plan designed to protect the project site from the 100-year flood potential associated with Lytle Creek. The off-site storm drain system was sized to convey or pass debris-laden flows from the off-site tributary watershed to Lytle Creek or Sycamore Creek for the 100-year storm event. The design of the proposed off-site storm channel system is governed by the basic requirement of the SBCFCD to provide a minimum of 1-foot of freeboard to the 100-year water surface elevation and a stable channel section. The design of the proposed on-site storm channel system is governed by the basic requirement of the SBCFCD to provide a minimum of 1-foot of freeboard to the 100-year water surface elevation, a stable channel section, and to maintain a maximum water surface elevation at or below the public street ROW elevation.

The drainage plan for the proposed on-site system, as illustrated in Figure 2-17 (Lytle Creek Ranch Specific Plan – Conceptual Master Drainage Plan), utilizes the proposed street system, storm drains, and the Grand Paseo's bioswale to convey storm waters through the site. All drainage and flood control facilities and improvements shall be provided in accordance with City and SBCFCD standards. In general, the storm water management system for all four neighborhoods comprises a closed-conduit storm drain system capable of conveying debris from the off-site watershed and an on-site closed-conduit storm drain and/or open channel conveyance systems. A water quality management system will also be used to treat non-storm and small-storm runoff before being discharged to Sycamore and/or Lytle Creeks.

Runoff from residential lots will be directed into landscaped areas and vegetated swales, with flows directed over sidewalks and into the parkway areas planted with street trees and turf. Flows in the parkway areas will be directed into the street gutter for conveyance to downstream catch basin interception, eventually leading to the various Best Management Practices (BMP) swales or basins within the project. Extended dry detention basins or catch basins, wet ponds, vegetated swales, biofilters, and water quality filters will be provided throughout the project to capture nuisance flow, runoff from a 2-year storm or less, and the first-flush storm water runoff form storms larger than the 2-year storm event. Table 2-6 (Drainage and Storm Water Controls

– Existing and Developed Conditions)[28] summarizes existing and developed project drainage. The following drainage improvements will be constructed in each neighborhood.

- **Neighborhood I**. In the portions of Neighborhood I located north of the I-15 Freeway, storm waters in Neighborhood I will generally flow from northwest to southeast. In the portions of Neighborhood I located south of the I-15 Freeway, storm waters will generally flow toward the southwest. Water will flow both on streets and in storm drains. Four water quality treatment basins are planned to the north of the I-15 Freeway and two basins are planned south of the freeway.

  In 2006, master plan drainage improvements for Neighborhood I were constructed as part of the LCNPD (Rosena Ranch). The sizing of these improvements took into consideration the future planned development within Neighborhood I. When the subsequent underlying "B" level tentative subdivision maps and local drainage improvements plans for Neighborhood I are created, an updated hydrology study will be submitted to the Lead Agency to ensure that the existing master storm drain system is adequate to carry the flows for the proposed subdivisions. If needed, modifications and upsizing of the existing master drainage facilities will be performed at that time. Once the improvement plans are approved for the localized tracts, as dictated in the City-imposed conditions of approval for those tentative maps, these localized drainage systems will tie into these existing facilities.

- **Neighborhood II**. Water in Neighborhood II will generally flow toward the southern portion of Neighborhood II, both on streets and in storm drains. In addition, the reconfigured golf course will accommodate much of the drainage flow in this neighborhood. Approximately eight vegetated basins and six water quality treatment basins will be provided. These basins and the water flowing between them will act as a series of water features as part of the golf course. The proposed drainage improvements in Neighborhood II will be constructed in accordance with the approval and development of subsequent underlying "B" level tentative subdivision maps, as dictated by the City-imposed conditions of approval for those underlying "B" level tentative subdivision maps.

- **Neighborhood III**. Water runoff in Neighborhood III will generally drain from north to south. Drainage from each of the proposed catchment areas will be collected at node locations, which will channel the water through a system of urban storm drain piping terminating in water quality treatment basins located within the Grand Paseo. Neighborhood III will contain twelve water quality treatment basins within the Grand Paseo. These basins will detain and treat all first flush water runoff, which is then released further downstream through the Grand Paseo and ultimately discharged at the southerly end of the neighborhood into a system of urban storm drain piping within the Riverside Avenue ROW. This piping system will then carry the water runoff east into the Neighborhood II water quality basin system. The proposed drainage improvements in Neighborhood III will be constructed in accordance with the approval and development of subsequent underlying "B" level tentative subdivision maps, as dictated by the City-imposed conditions of approval for those underlying "B" level tentative subdivision maps.

[28]/ Geoscience Support Services, Inc., Evaluation of Ground Water Impacts from the Proposed Lytle Creek Ranch Development, September 30, 2008, pp. 9 and 10.

Table 2-6
DRAINAGE AND STORM WATER CONTROLS
EXISTING AND DEVELOPED CONDITIONS

Neighbor.	Planning Area	Existing Condition	Storm Water Control after Development
I	1-5	On-site and off-site runoff intercepted in natural channels	Open channels discharge to existing freeway culverts that discharge to undeveloped open space adjacent to the I-15 Freeway.
	8	East to west drainage to open space enclosed by the I-15 Freeway on the west, Glen Helen Parkway on the north, and Clearwater Parkway on the east.	Dual storm drain and channel conveyance system to capture and convey runoff to the open space described under existing conditions. On-site non-storm and storm runoff storm drainage system will discharge to dry extended detention basins for treatment and pollutant removal. Once treated, it will be conveyed to open space described under existing conditions.
	13 and 15	Both on-site and off-site flow is intercepted and conveyed west of Glen Helen Parkway via existing channels and culverts, discharging storm runoff into existing dry extended detention basin open space area east of the I-15 Freeway.	Same as existing conditions. On-site flow will be routed through a dry extended detention basin and then to open space after treatment.
II	All	Storm runoff occurs as sheet flow, with some minor natural ditches and swales. Flow is tributary to Lytle Creek.	Storm water conveyance consists of underground storm drains, golf course channels, and detention/conveyance ponds. One dry extended detention BMP basin for on-site storm and nuisance runoff. Southeasterly portion of Neighborhood III will connect to Neighborhood II. The storm drain from Neighborhood III will pass through Neighborhood II and discharge into Lytle Creek.
III	All	Storm runoff occurs as sheet flow, with some minor natural ditches and swales. Flow is tributary to Lytle Creek.	A plastic-lined drainage corridor/channel will convey non-storm, nuisance, and storm runoff from west to east. The corridor will feature a number of small interconnected ponds that include a recirculating stream that will allow for treatment of nuisance flows and small storms. Each pond will have wetland filters and/or biofilters to treat water. Most runoff generated will discharge to Lytle Creek via the drainage corridor. The southeastern portion will pass through Neighborhood III as discussed under Neighborhood II.
IV	All	A large 1,103 acre, generally undeveloped catchment south of the neighborhood which discharges through the development and into Lytle Creek, mainly as sheet flow. Due to the steepness and undeveloped nature of the off-site catchment, considerable debris is expected.	Runoff from the off-site catchment will be intercepted south of Lytle Creek Road and conveyed via a closed-conduit storm drain discharging into Lytle Creek. Non-storm and storm-related on-site runoff will be conveyed to on-site storm drain system, which will discharge to dry extended detention basins for treatment and ultimately to Lytle Creek.

Source: Geoscience Support Services, Inc.

- **Neighborhood IV**. Water will generally drain from north to south in Neighborhood IV, both on streets and in storm drains. Four water quality treatment basins are included in this neighborhood. Drainage improvements in Neighborhood IV will be constructed in accordance with the approval and development of subsequent underlying "B" level tentative subdivision maps, as dictated by the City-imposed conditions of approval for those underlying "B" level tentative subdivision maps.

- As proposed, the regional storm drain system and flood control improvements associated with Lytle Creek will be funded and constructed by a community facilities district[29] (CFD) or other similar mechanism. The local storm drain system shall be funded and constructed by and the cost for the improvements to the local system shall be borne by the Applicant, individual planning area builders, and/or other financing mechanisms as may be deemed acceptable to the City. Regional flood control facilities will be maintained by the City and/or the SBCFCD. Local drainage devices will be maintained by the City or by another public or private entity.

2.7.4 Conceptual Storm Water Quality Management Plan

As specified in Section 12.60.260 (Stormwater Quality Management Plan) of the City Municipal Code, prior to the issuance of any grading or building permit, "qualifying land development/redevelopment projects" shall submit and the City Engineer shall approve a storm water quality management plan (SWQMP).[30,31]

As proposed, the project will implement a "water quality management system"[32] to control the discharge of pollutants to the municipal separate storm sewer system (MS4). The water quality management system is composed of several elements or Best Management Practices (BMPs) that will treat storm and non-storm runoff to reduce pollutants from the on-site watershed to acceptable levels prior discharging to Lytle and/or Sycamore Creeks. The BMPs to be constructed as a part of the proposed project include: (1) dry extended detention basins; (2) wet ponds/basins; (3) wetland filters; (4) a recirculating stream with pond biofiltration system; and (5) vegetated swales. Those structural and treatment control BMPs identified in the SWQMP are briefly described below.

- **Dry Extended Detention Basins**. The purpose of the dry extended detention basin is to aid in the removal of pollutants. Water quality basins provide the following pollutant removal mechanisms: (a) settling or sedimentation; (b) infiltration; (c) adsorption to sediments, vegetation, or detritus; (d) filtration by plants; (e) microbial uptake and/or transformations; and (f) uptake by wetland plants or algae.

- **Wet Ponds/Basins**. The wet retention ponds utilize physical and biological techniques as treatment forms for storm water runoff and nuisance flow. The wet BMP basins will

[29]/ The establishment of a community facilities district is not a "project" for purposes of CEQA compliance (Kaufman and Broad-South Bay, Inc. v. Morgan Hill Unified School District).

[30]/ "Qualifying land development/redevelopment projects" include home subdivisions of ten units or more.

[31]/ As further specified therein: "Following the approval of the SWQMP by the city engineer, the owner of the qualifying project and the city shall enter into a recordable Storm Water Quality Management Plan Agreement which shall contain enforceable mechanisms to ensure that the operations and maintenance costs of post-construction BMPs are paid in perpetuity. The Storm Water Quality Management Plan Agreement shall be recorded in the office of the county recorder for the county of San Bernardino against the project lands in their entirety."

[32]/ PACE Advanced Water Engineering, Water Quality Management Plan (WQMP) for Lytle Creek Ranch Neighborhood I-4, February 2008.

consist of aquatic vegetation essential to promote pollutant removal by sedimentation and root penetration. As runoff bypasses aquatic vegetation in wet BMPs, flow velocity is reduced allowing pollutants to settle for enhanced percolation or be absorbed by the plant root structure (vadose zone) through biological uptake. A minimum detention period is necessary to allow wet BMPs to improve storm water quality. Pollutants captured in the soil are allowed to degrade or recharge into the ground water.

Wet retention ponds will be constructed in existing natural depressions and/or excavated depressions to create ponds. Wet ponds are expected to be replenished by irrigation water drawn from on-site wells and/or from the local water purveyor. Continuous base flow is necessary in wet ponds to sustain a habitat for vegetative growth which is required for pollutant removal.

Between storm events, the evaporation process results in concentrated levels of pollutants, salts, and algae. With subsequent storm events, existing pond water is flushed and diluted with the influent storm water runoff. Wet BMP basins are designed to remain permanent ponds during dry conditions between storm events.

The wet BMP basins are distinguished from the existing ground water infiltration ponds which, depending upon their locations, may be retained or relocated as part of the proposed project. Infiltration ponds are not expressly intended to serve a water quality purpose but are intended to replenish the underlying ground water basins. Currently, there are four ground water infiltration ponds located in the area of Neighborhood II which will be incorporated into the golf course design for Neighborhood II.

- **Wetland Filters and Recirculating Stream with Pond Biofiltration System**. The conceptual wetland filters and biofiltration system is depicted in Figure 2-18 (Wetland Filters and Recirculating Stream with Pond Filtration System). The system will incorporate submerged gravel bed biofilters. Water is drawn from one end of the lake by a biofilter pump and discharged via pipelines under the lake to each biofilter. The heart of the biofilter is the filter media, which has a high surface area to provide as much biological activity as possible. As the biofilter matures, the biomass of bacteria steadily increases and the layer of bacteria that cover all surfaces becomes thicker. Only the outermost layer of the bacteria will be operating at peak efficiency and if the layer becomes thick enough, the inside layer may become anaerobic. The total surface area available for bacterial growth is a good predictor of the biofilter to convert ammonia.

  Resistance to plugging or clogging is important since this is a serious problem for biofilters. Plugging or clogging of a filter can occur through mechanical trapping of particles. Plugging can also result from growth of the biomass and bridging across the spaces within the media. Light attenuation is important for the biofilter since nitrifying bacteria are sensitive to light.

  The biofilter ponds are typically 3-4 feet deep, filled with gravel, and submerged 18-24 inches below the lake water surface. Water is distributed through the biofilter gravel bed via a herringbone-slotted pipe system. A naturally occurring biological mass (microorganisms) will coat the gravel and serve to strip the water passing through the filter of nutrients (such as nitrogen and phosphorous) that would otherwise promote algae growth within the lake. Biofilters are situated in locations in the lake where circulation is limited. Pumping reintroduces oxygen into the lake system, thereby

increasing the overall dissolved oxygen (DO) levels and promoting a healthy natural environment. The combination of a limited food supply and aerobic conditions within the lake creates an inhospitable environment for undesirable organisms and reduces the potential for eutrophication. Biofilters have the ability to accomplish the following functions: (a) convert ammonia to nitrites and then to nitrogen gas; (b) reduce biological oxygen demand (BOD); (c) add oxygen; (d) remove carbon dioxide; (e) remove excess nitrogen and other inert gases; (f) remove turbidity and clarify water; and (g) remove various organics.

- **Vegetated Swales**. Vegetated swales are an accepted method of treating runoff. Vegetated swales are open, shallow channels with vegetation covering the side slopes and bottom that collect and slowly convey runoff flow to downstream discharge points. They are designed to treat runoff through filtering by the vegetation in the channel, filtering through a subsoil matrix, and/or infiltration into the underlying soils. Swales, which can be natural or manmade, trap particulate pollutants (suspended solids and trace metals), promote infiltration, and reduce the flow velocity of storm water runoff. Vegetated swales can serve as part of a storm water drainage system and can replace curbs, gutters, and storm sewer systems. If properly designed, vegetated, and operated, swales can serve as an aesthetic, inexpensive urban development or roadway drainage conveyance measure with significant collateral water quality benefits.

Each of the BMP types were placed or selected to coincide logically with the land-use plan. Treatment capacity and pollutant removal efficiency along with expected pollutant loading from a particular typical land use were the primary considerations in selecting and placing BMPs. The wet pond and dry extended detention BMPs were preliminarily sized according to the requirements of the County's NPDES permit. The wetland filters and recirculating stream with biofiltration have much higher treatment capacity and removal efficiency than the standard NPDES permit BMPs provided in the California Stormwater Quality Management Association's (CASQA) "California Stormwater Best Management Practices Handbook for New Development and Redevelopment"[33] (CASQA Handbook). These BMPs have been preliminarily sized based upon data from long-term studies of the performance of these BMPs as constructed on past projects throughout California.

Because it will receive polluted runoff discharged from the on-site storm drain system, the water quality management system will treat the first-flush storm volume and/or dry weather non-storm runoff from the on-site watershed only. Because the basins are not on a passive bypass storm drain system but rather on a direct connection to the main storm drain system, each basin will be surcharged in a larger storm event with a runoff volume potentially exceeding the basin capacity. Each basin will include an overflow spillway to discharge excess captured runoff safely downstream to a receiving channel to be conveyed eventually to Lytle or Sycamore Creeks. Each water quality basin spillway will be constructed from a suitable armoring material, such as site rock, grout, concrete, turf reinforcement matting, or similar, or combination thereof.

The proposed water quality management system for each of the project's neighborhoods is briefly described below.

- **Neighborhood I**. The conceptual water quality management system for PAs 1-5, 8, 13, and 15 are separately described below.

[33]/ California Stormwater Quality Management Association, California Stormwater Best Management Practices Handbook for New Development and Redevelopment, January 2003, updated September 30, 2004.

◊ **Planning Areas 1-5**. In the existing condition, both on-site and off-site runoff is intercepted in a natural channel. The vertical profile of the existing channel has a high point- such that a portion of the channel drains south and discharges to an existing 12-foot by 8-foot (W x H) box culvert. The other portion of the channel drains north and discharges to an existing 60-inch reinforced concrete pipe (RCP) culvert beneath the I-15 Freeway. Both culverts convey storm runoff underneath the I-15 Freeway from the west side to the east side and discharge to an undeveloped open space area adjacent to the freeway (between Clearwater Parkway and the I-15 Freeway). This area drains from north to south and discharges to the north fork of Sycamore Creek at the existing Clearwater Parkway/Sycamore Creek North Fork culvert. As proposed, this area will remain as undeveloped open space.

In the proposed condition, storm water runoff from the open space areas within the 2,447.3-acre project site and tributary open space areas located beyond the project boundaries will be intercepted in proposed trapezoidal open channels. The north channel will have a 5-foot base width, 2-foot wall height, and 2:1 side slopes. The south channel will have a 10-foot base width, 3.5-foot wall height, and 3:1 side slopes. Storm water runoff conveyed in the channels will be discharged to the existing freeway culverts. The north channel will discharge to the existing 60-inch freeway culvert and the south channel will discharge to the existing 12-foot by 8-foot freeway culvert. The freeway culvert alignments and discharge points will remain the same as the existing condition. Storm water runoff generated in the proposed development (on-site) area will be captured via curb opening catch basins and discharged to the on-site subterranean storm drain system. The on-site storm drain system was preliminarily sized to convey the 25-year storm peak flow rate from the on-site watershed.

The proposed streets will be designed and utilized to convey storm water runoff within the roadway ROW exceeding the 25-year storm peak flow rate up to the 100-year flow rate, thus creating a combined 100-year conveyance system (storm drain and street section surcharge). The resultant level of protection provided to the development pads will be 100-year plus a minimum of 1-foot of freeboard, in compliance with FEMA and SBCFCD design requirements.

The proposed Neighborhood I concept-level storm drain and water quality system improvements and configuration for PAs 1-5 are shown in Figure 2-17 (Lytle Creek Ranch Specific Plan – Conceptual Master Drainage Plan). As illustrated, the proposed on-site storm drain pipes will range in size from 18-81 inches in diameter. The proposed storm drains will be constructed in the public ROW, within the street section of streets that will be dedicated to the County. The storm drains will, therefore, be designed and constructed to meet the County's minimum standards for performance, materials, and workmanship.

Storm drain manholes will be provided at the maximum allowable spacing to provide access for maintenance and inspection of the underground facilities. The on-site storm drain system will be connected to a water quality basin or a series of basins to treat on-site generated non-storm-related and first-flush storm water runoff. All storm water runoff generated on the project site will be treated in at least one BMPs prior to being discharged to Lytle and/or Sycamore Creeks.

◊ **Planning Area 8**. In the existing condition, the entire watershed of PA 8 drains from east to west to the open space area enclosed by the I-15 Freeway on the west, Glen Helen Parkway on the north, and Clearwater Parkway on the east. As illustrated in Figure 2-17 (Lytle Creek Ranch Specific Plan – Conceptual Master Drainage Plan), storm water runoff is conveyed through this area from north to south to the existing Sycamore Creek north fork culvert at Clearwater Parkway. The existing culvert is a reinforced concrete Con/Span® soft bottom arch structure. The culvert is 12-feet wide and 10-feet tall and drains directly to Sycamore Creek. The open space areas, the Clearwater Parkway culverts, and Sycamore Creek will remain unchanged.

In the proposed condition, there will be a dual storm drain and channel conveyance system to capture and convey storm water runoff through the proposed development area to the open space area between the I-15 Freeway and Clearwater Parkway. The off-site open channel conveyance system will be designed to capture runoff from the 100-year storm event, including a 50 percent bulking factor to allow for debris bulking in the flow and convey it through the development area in an above-ground open channel and discharge it to a proposed culvert at Clearwater Parkway. The channel cross sections have been preliminarily sized for the 100-year peak flow rate. The open channel section will end at the east side of Clearwater Parkway and will discharge to a close conduit culvert that will discharge to the open space area described above, at, or near the existing condition discharge point. The flow patterns in the open space area will remain unchanged from the existing condition. Runoff generated from on-site open space areas will be intercepted into the proposed closed conduit storm drain system preliminary sized for the 25-year storm clear water runoff. The closed conduit storm drain will be designed for the 25-year storm and surcharge the street cross section up to the street ROW in order to provide a combined 100-year storm drain and street cross section conveyance system.

Non-storm and storm water runoff captured in the on-site storm drain system will be conveyed and discharged to a water quality basin(s) for treatment and pollutant removal. Once discharged from the basin, the runoff will be joined together with the proposed off-site system storm drain culvert via a storm drain lateral at Clearwater Parkway and conveyed to the open space area between the I-15 Freeway and Clearwater Parkway. The on-site storm drain pipes will range in size from 18-36 inches. As indicated in "Basis of Design Report – Lytle Creek Area Clearwater Parkway Culverts,"[34] the existing Clearwater Parkway/Sycamore Creek north fork culvert was designed to intercept and convey the developed condition runoff from Neighborhood I

◊ **Planning Areas 11, 13, and 15**. In the existing condition, concentrated flow from the tributary watershed is intercepted and conveyed to the west of Glen Helen Parkway via existing channels and culverts. The culverts discharge storm water runoff into an open space area on the east side adjacent to the I-15 Freeway. Both on-site and off-site runoff will be intercepted into existing culverts under the I-15 Freeway, then outlet into an existing dry extended detention basin open space area on the east side of the I-15 Freeway.

[34]/ RBF Consulting, Basis of Design Report – Lytle Creek Area Clearwater Parkway Culverts, November 2004.

Figure 2-8
LYTLE CREEK RANCH SPECIFIC PLAN – CONCEPTUAL COMMUNITY PARK PLAN
Source: Lytle Development Joint Venture III

Figure 2-9
LYTLE CREEK RANCH SPECIFIC PLAN
NATURAL OPEN SPACE AREAS
Source: Lytle Development Joint Venture III

Figure 2-10
ADDITIONAL "OFF-SITE" AREAS
Source: Lytle Development Joint Venture III

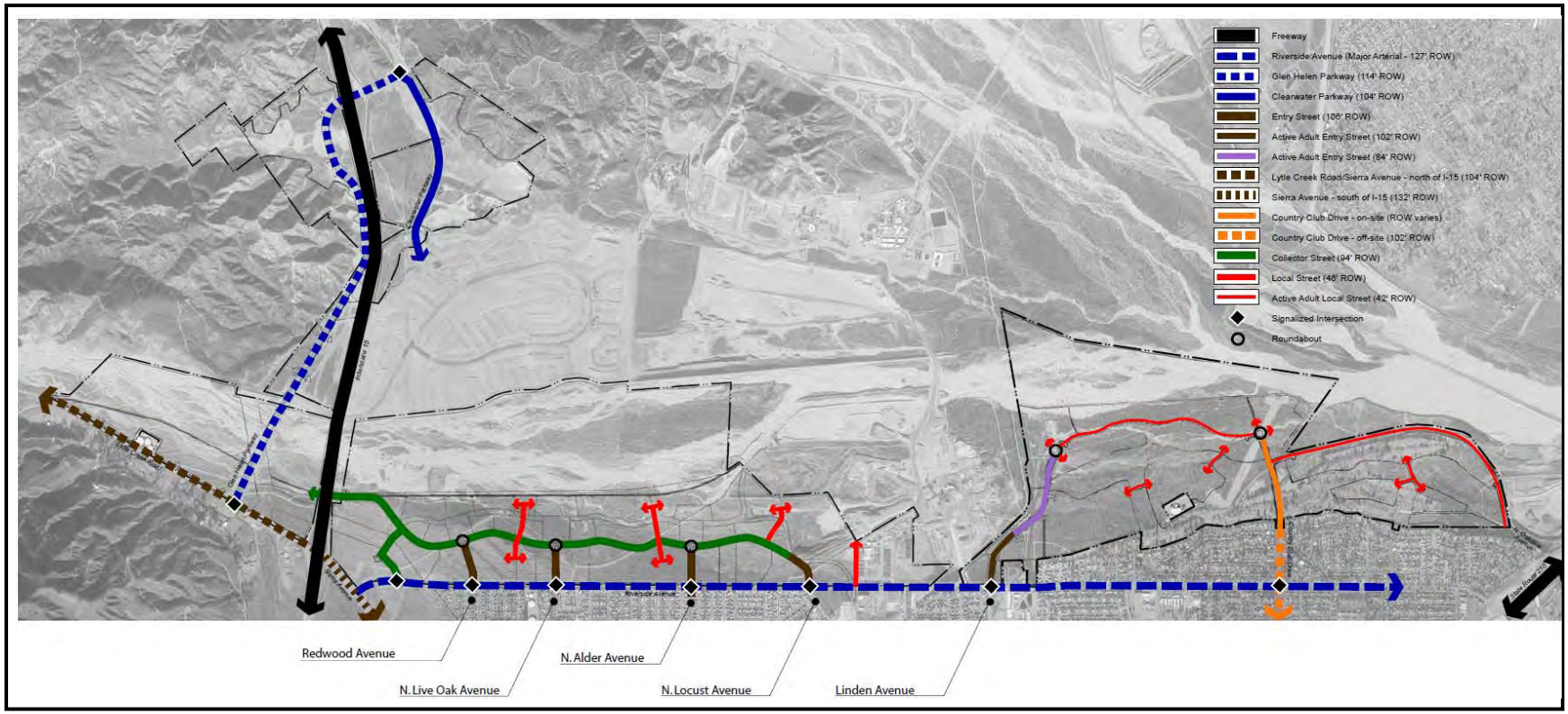


Figure 2-11
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPUTAL CIRCULATION PLAN
Source: Lytle Development Joint Venture III

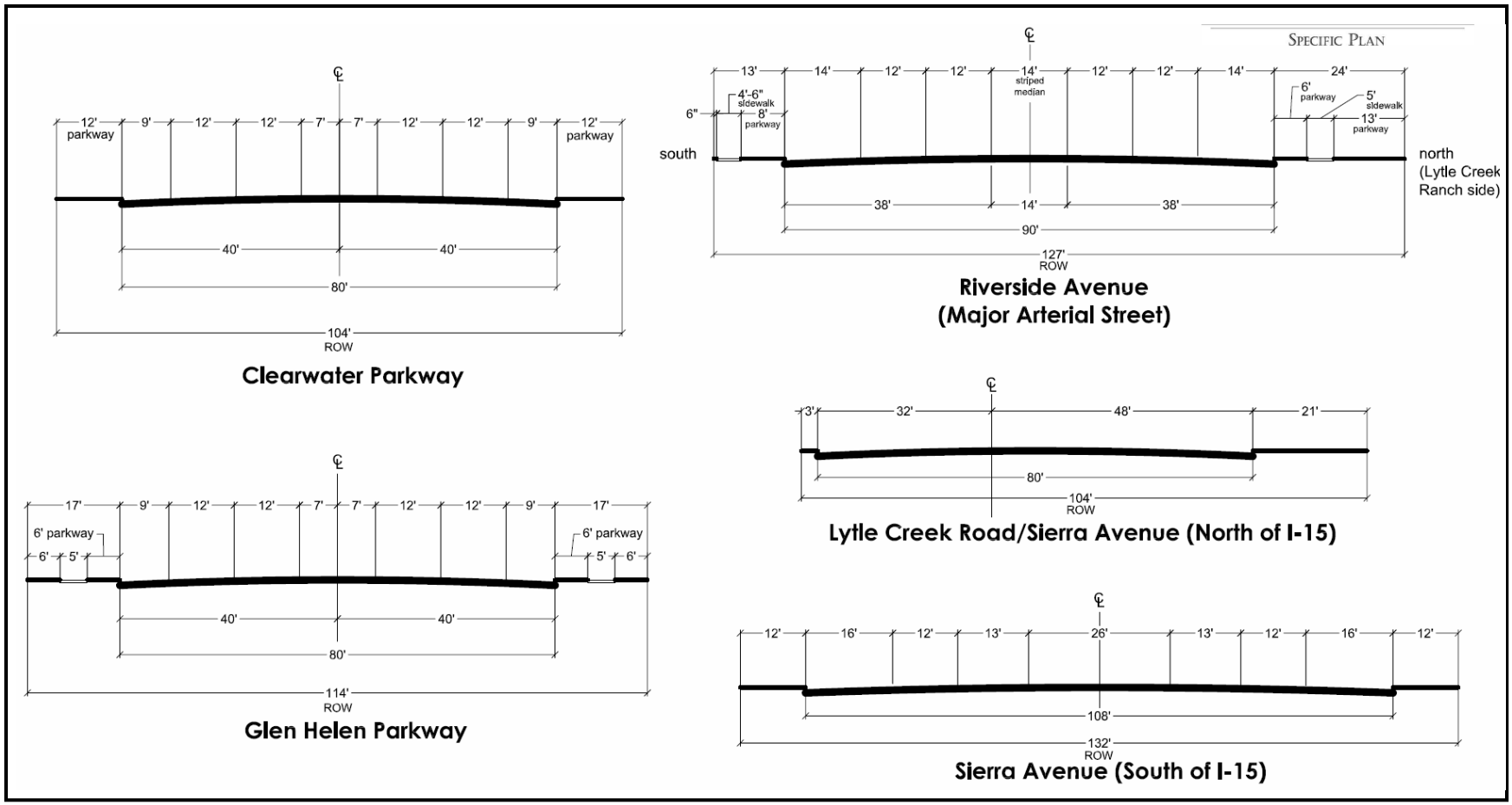
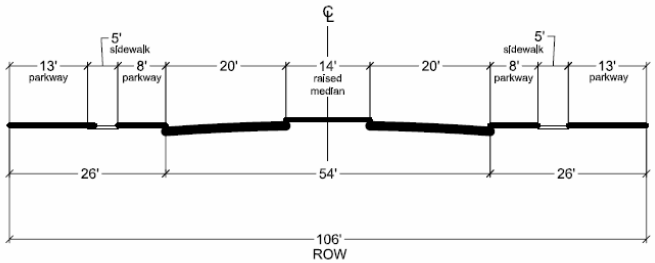
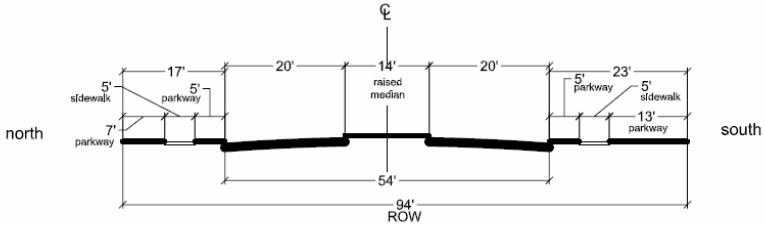


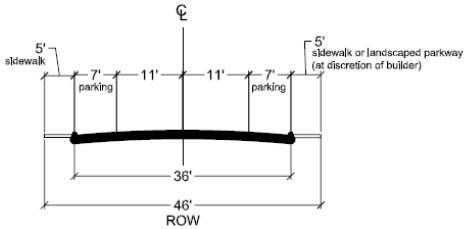
Figure 2 12 (1 of 3)
LYTLE CREEK RANCH SPECIFIC PLAN
TYPICAL INTERNAL ROADWAY CROSS SECTIONS
Source: Lytle Development Joint Venture III



Entry Streets
(Neighborhood III Only)

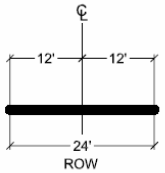


Collector Streets



Local Streets*

*To be constructed with rolled curbs



Alley Drives

Figure 2-12 (2 of 3)
LYTLE CREEK RANCH SPECIFIC PLAN
TYPICAL INTERNAL ROADWAY CROSS SECTIONS
Source: Lytle Development Joint Venture III

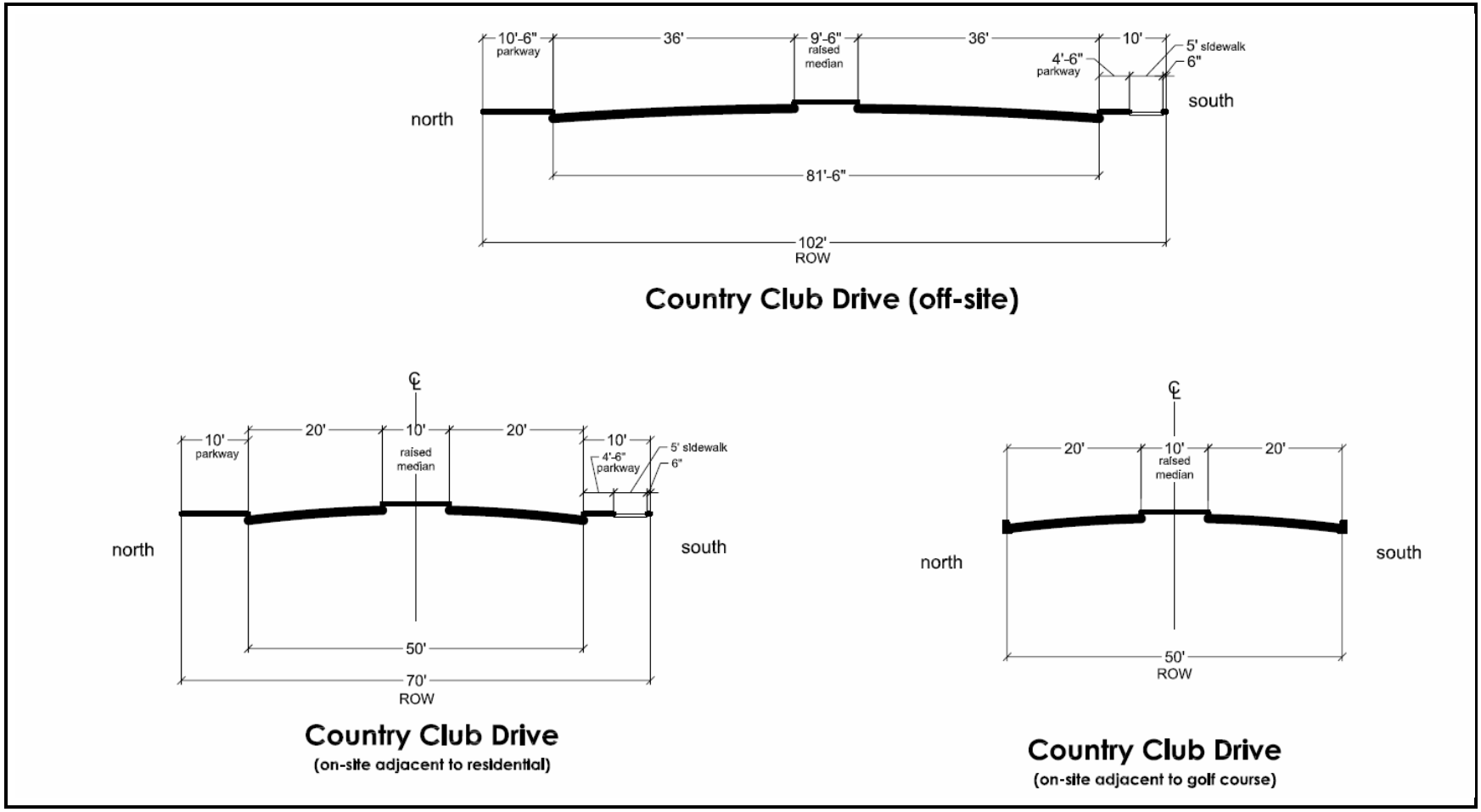
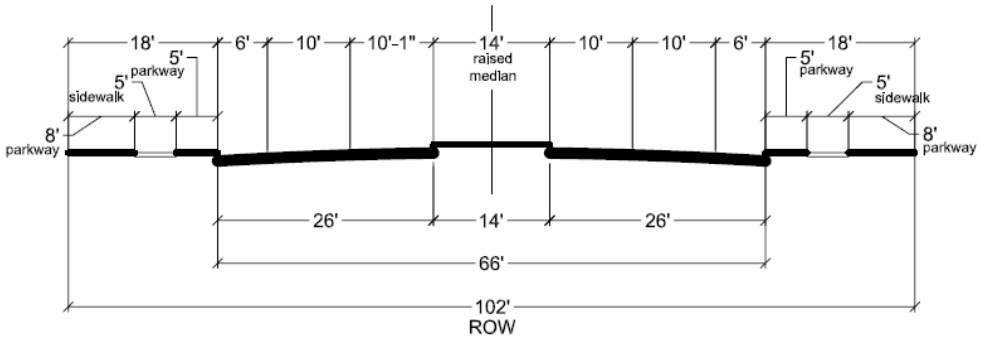
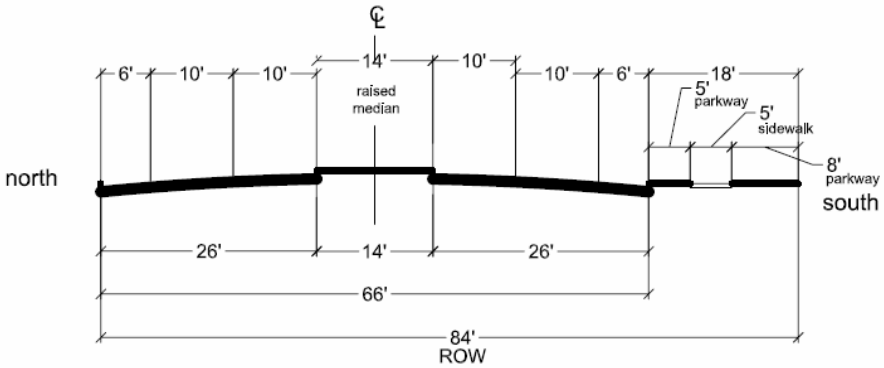


Figure 2-12 (3 of 3)
LYTLE CREEK RANCH SPECIFIC PLAN
TYPICAL INTERNAL ROADWAY CROSS SECTIONS
Source: Lytle Development Joint Venture III



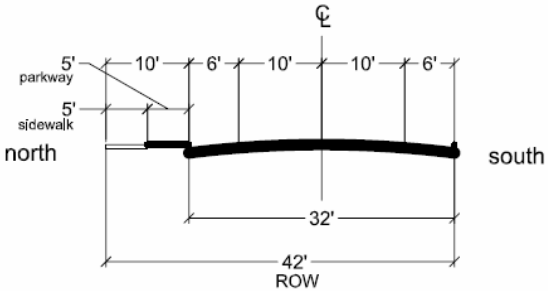
Active Adult Entry Street

(at project entry and adjacent to Planning Areas 89 and 90)



Active Adult Entry Street

(adjacent to Planning Area 92 and residential, open space/recreation, or golf course areas)



Active Adult Local Streets*

*To be constructed with rolled curbs

Figure 2-13
LYTLE CREEK RANCH SPECIFIC PLAN
TYPICAL ACTIVE-ADULT ROADWAY CROSS SECTIONS
Source: Lytle Development Joint Venture III

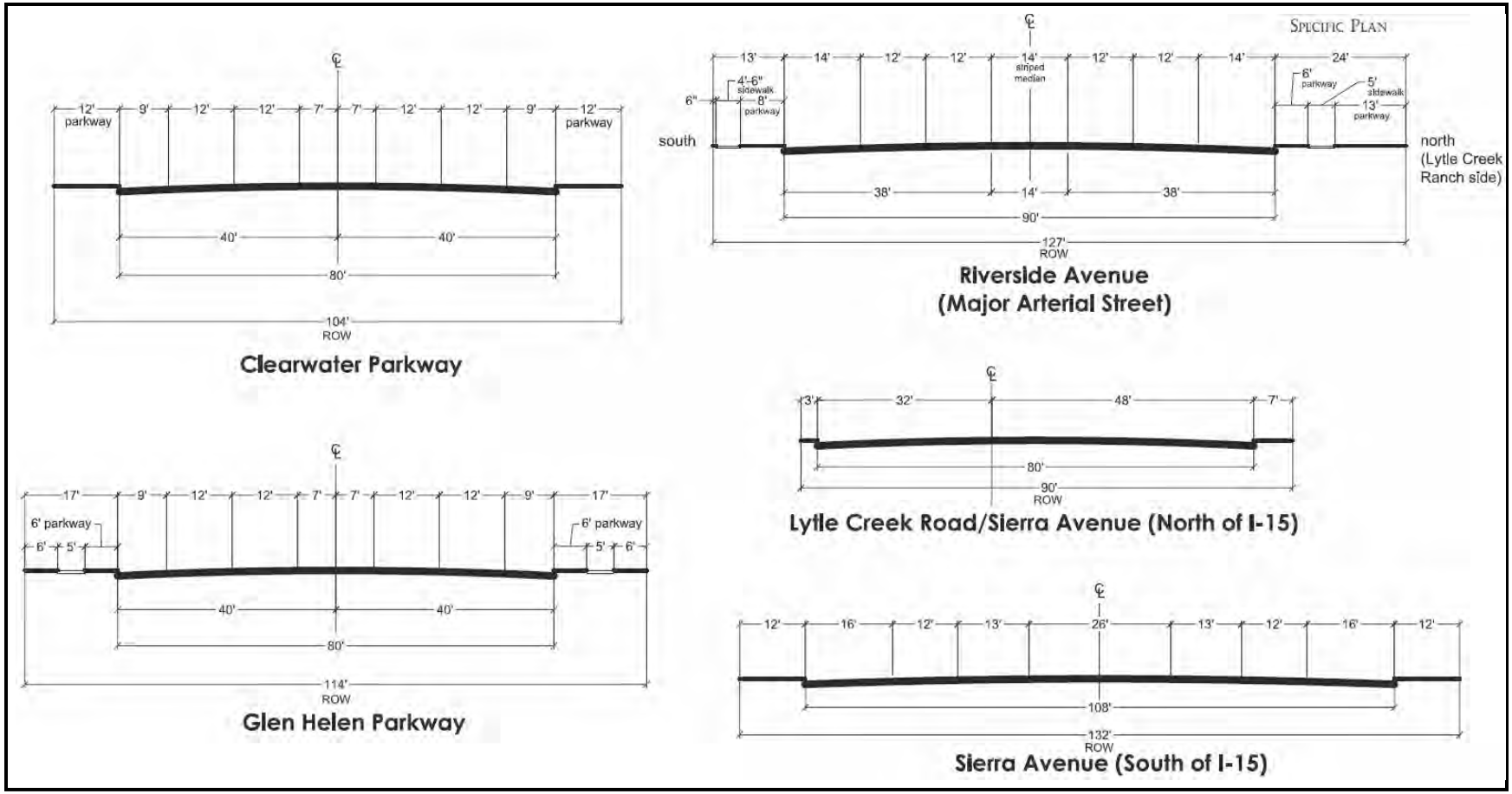


Figure 2-14
LYTLE CREEK RANCH SPECIFIC PLAN
TYPICAL EXTERNAL ROADWAY CROSS SECTIONS
Source: Lytle Development Joint Venture III

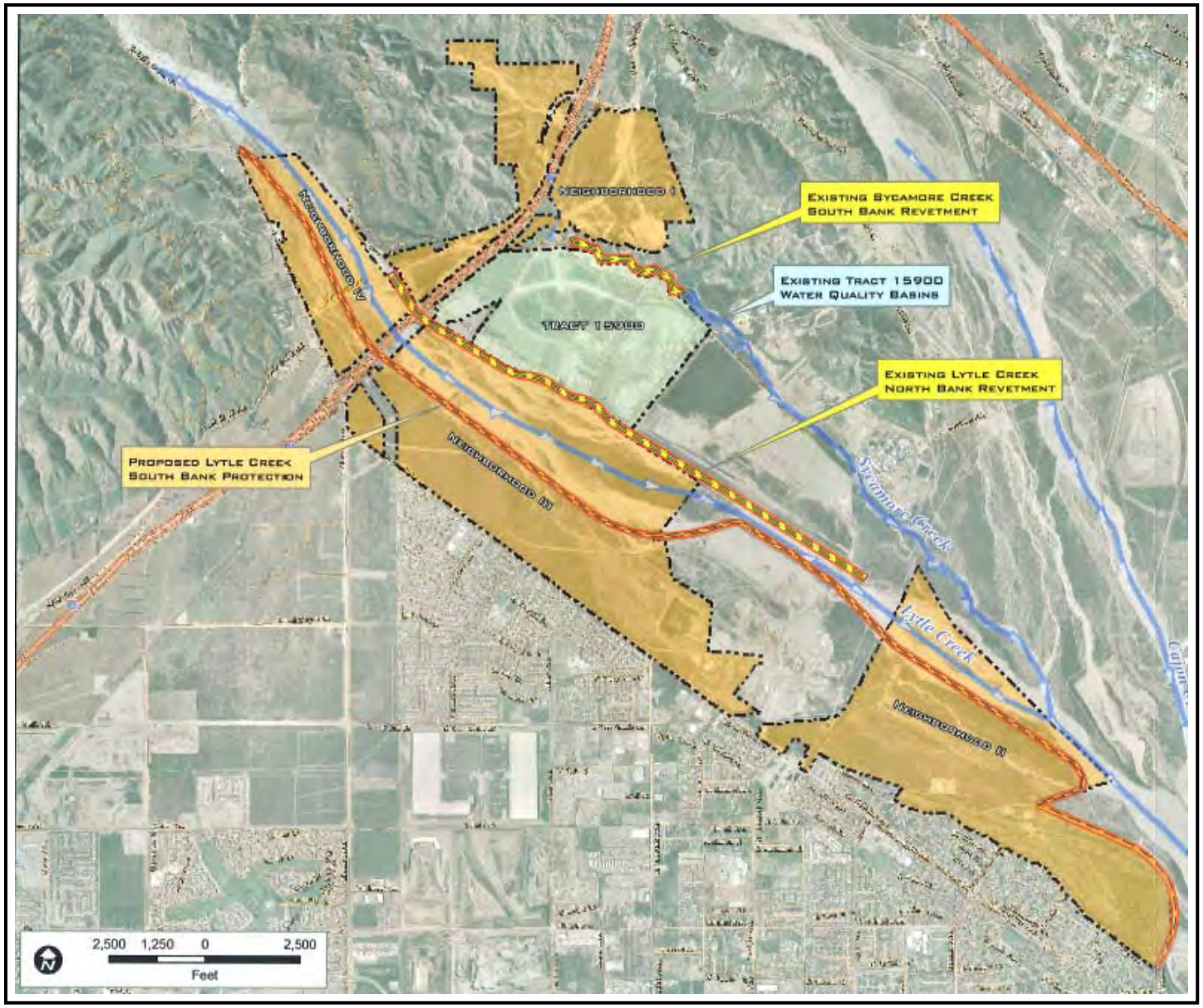


Figure 2-15
LYTLE CREEK RANCH SPECIFIC PLAN LOCATION OF PROPOSED ON-SITE AND OFF-SITE LEVEE IMPROVEMENTS
Source: Lytle Development Joint Venture III

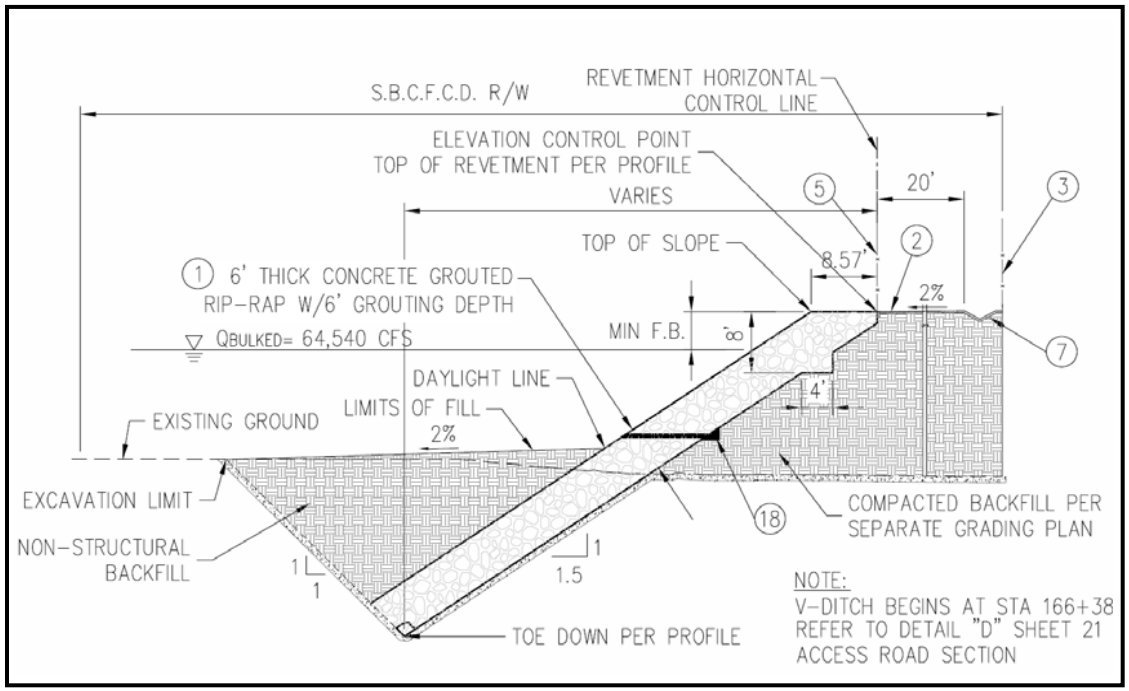


Figure 2-16 (1 of 2)
LYTLE CREEK RANCH SPECIFIC PLAN CONCEPTUAL LEVEE CONSTRUCTION SECTION
Source: Lytle Development Joint Venture III

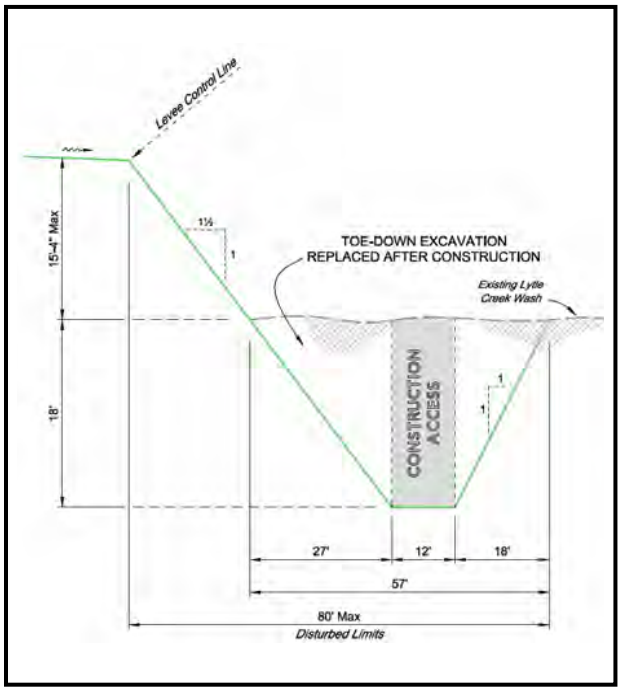


Figure 2-16 (2 of 2)
LYTLE CREEK RANCH SPECIFIC PLAN CONCEPTUAL LEVEE CONSTRUCTION SECTION
Source: Lytle Development Joint Venture III

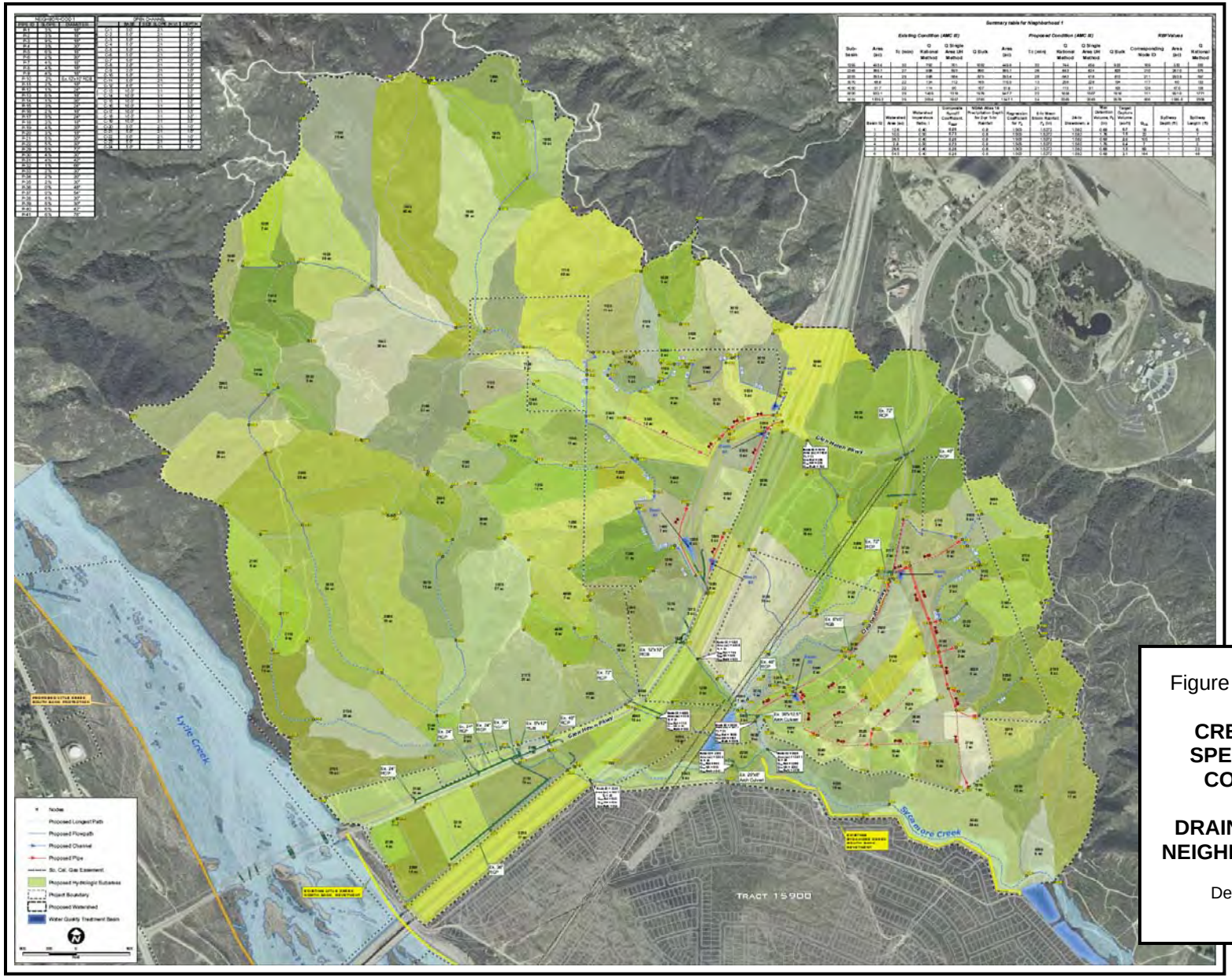
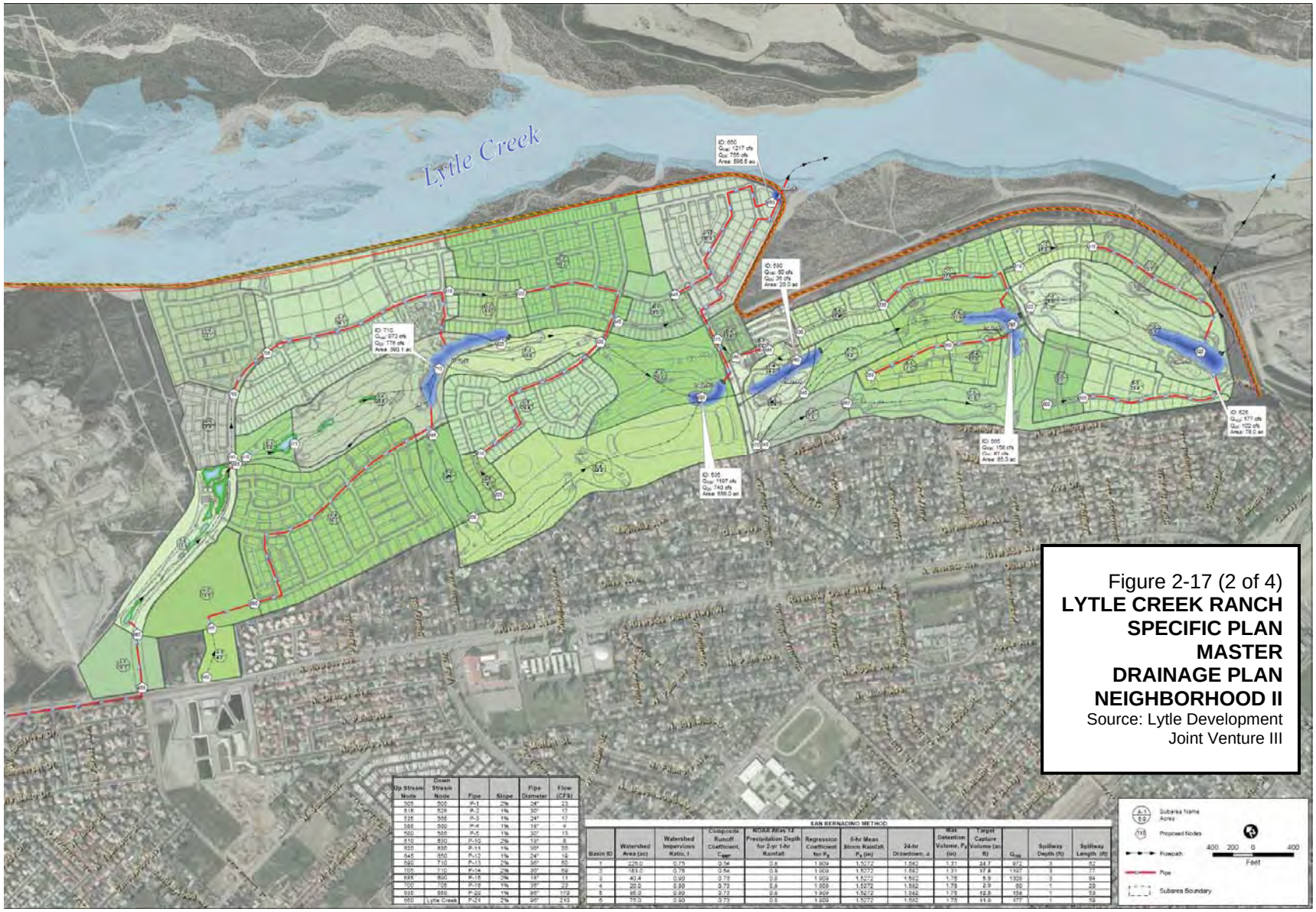


Figure 2-17 (1 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN CONCEPTUAL MASTER DRAINAGE PLAN NEIGHBORHOOD I
Source: Lytle Development Joint Venture III



Up Stream Node	Down Stream Node	Pipe	Slope	Pipe Diameter	Flow (CFS)
505	505	P-1	2%	24"	23
515	525	P-2	1%	30"	17
525	555	P-3	1%	24"	17
555	555	P-4	1%	18"	4
555	555	P-5	1%	30"	13
610	620	P-10	2%	18"	8
620	630	P-11	1%	36"	55
645	650	P-12	1%	24"	16
690	710	P-13	2%	36"	60
705	710	P-14	2%	30"	59
695	690	P-15	2%	18"	11
700	705	P-16	1%	36"	23
695	660	P-20	1%	66"	179
660	Lytle Creek	P-21	2%	90"	210

SAN BERNARDINO METHOD

Basin ID	Watershed Area (ac)	Watershed Impervious Ratio, I	Composite Runoff Coefficient, C_{comp}	NOAA Atlas 14 Precipitation Depth for 2-yr 1-hr Rainfall	Regression Coefficient for P_6	6-hr Mean Storm Rainfall, P_6 (in)	24-hr Drawdown, a	Max Detention Volume, P_6 (in)	Target Capture Volume (ac ft)	Q_{100}	Spillway Depth (ft)	Spillway Length (ft)
1	225.0	0.75	0.54	0.6	1.909	1.5072	1.582	1.31	24.7	972	3	52
2	183.0	0.75	0.54	0.6	1.909	1.5072	1.582	1.31	17.8	1107	3	72
3	40.4	0.99	0.73	0.6	1.909	1.5072	1.582	1.75	5.3	130	1	64
4	20.0	0.99	0.73	0.6	1.909	1.5072	1.582	1.75	2.9	90	1	35
5	85.0	0.99	0.73	0.6	1.909	1.5072	1.582	1.75	12.0	156	1	58
6	79.0	0.99	0.73	0.6	1.909	1.5072	1.582	1.75	11.0	177	1	59

Figure 2-17 (2 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN MASTER DRAINAGE PLAN NEIGHBORHOOD II
Source: Lytle Development Joint Venture III

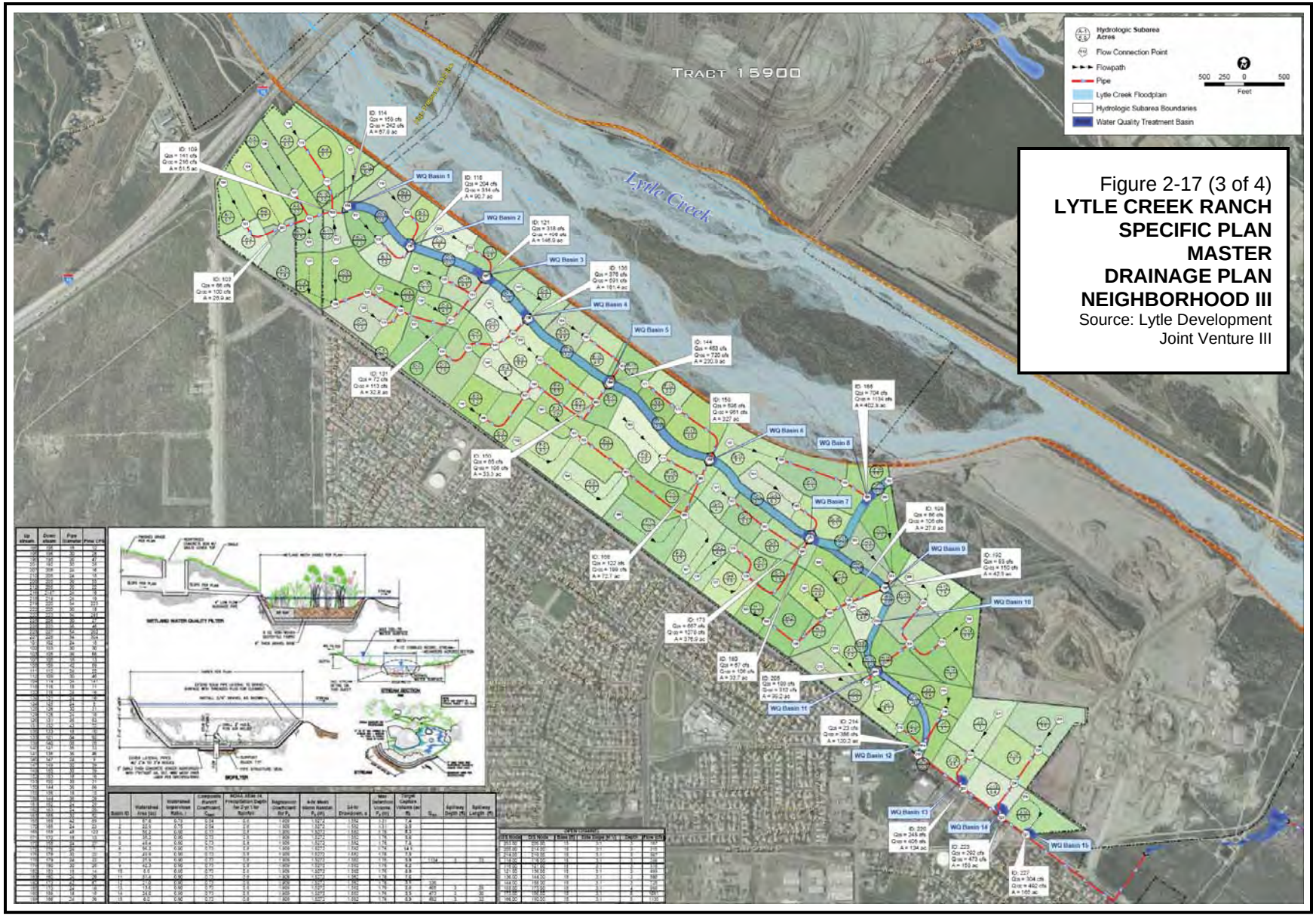


Figure 2-17 (3 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN MASTER DRAINAGE PLAN NEIGHBORHOOD III
Source: Lytle Development Joint Venture III

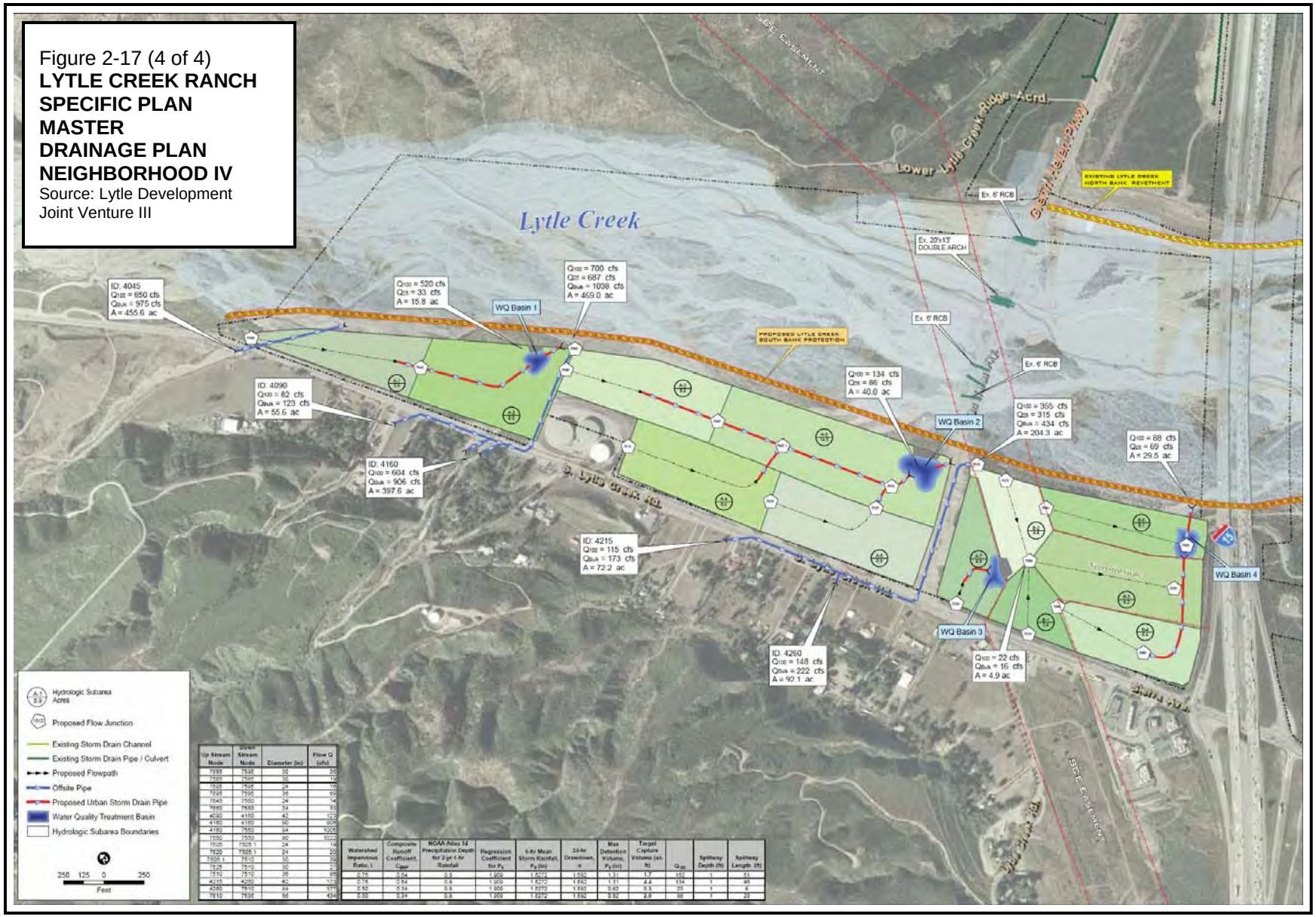


Figure 2-17 (4 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN MASTER DRAINAGE PLAN NEIGHBORHOOD IV
Source: Lytle Development Joint Venture III

Up Stream Node	Down Stream Node	Diameter (in)	Flow Q (cfs)
7685	7685	30	36
7555	7555	30	19
7595	7595	24	19
7545	7595	36	69
7545	7550	24	14
7660	7660	24	33
4090	4160	42	123
4160	4160	90	906
4160	7550	84	1005
7550	7550	90	1022
7505	7505.1	24	19
7520	7505.1	24	22
7505.1	7510	30	39
7525	7510	30	21
7510	7510	36	65
4215	4200	42	173
4260	7510	84	377
7510	7535	66	434

Watershed Impervious Ratio, i	Composite Runoff Coefficient, C_{100}	NOAA Atlas 14 Precipitation Depth for 2-yr 1-hr Rainfall	Regression Coefficient for P_6	6-hr Mean Storm Rainfall, P_6 (in)	24-hr Drawdown, d	Max Detention Volume, P_6 (in)	Target Capture Volume (ac-ft)	Q_{100}	Spillway Depth (ft)	Spillway Length (ft)
0.75	0.54	0.8	1.000	1.6272	1.682	1.31	1.7	152	1	51
0.75	0.54	0.8	1.000	1.6272	1.682	1.31	4.4	134	1	45
0.85	0.34	0.8	1.000	1.6272	1.682	0.82	0.3	39	1	8
0.85	0.34	0.8	1.000	1.6272	1.682	0.82	2.8	88	1	29

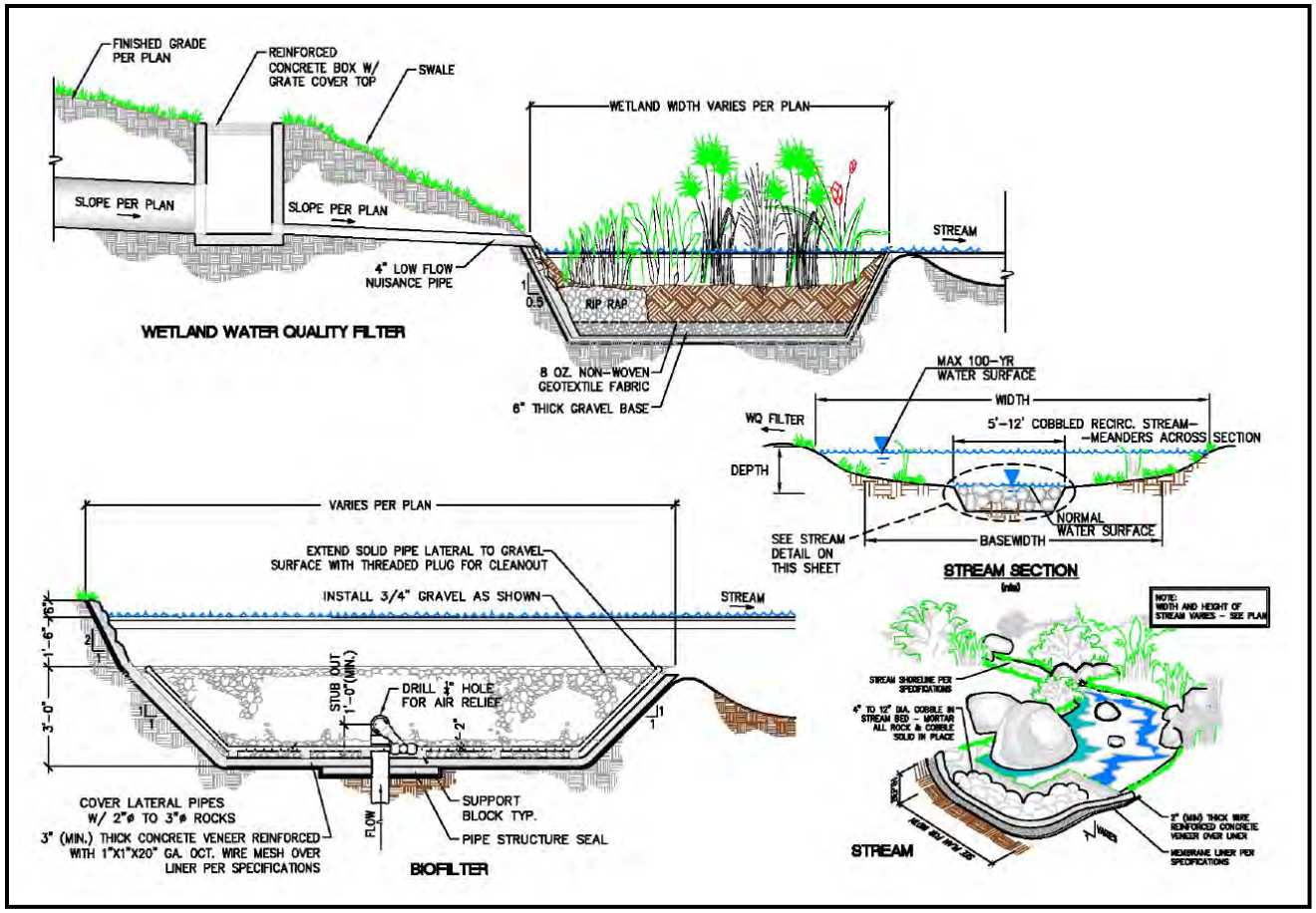


Figure 2-18
WETLAND FILTERS AND RECIRCULATING STREAM WITH POND FILTRATION SYSTEM
Source: PACE Advanced Water Engineering

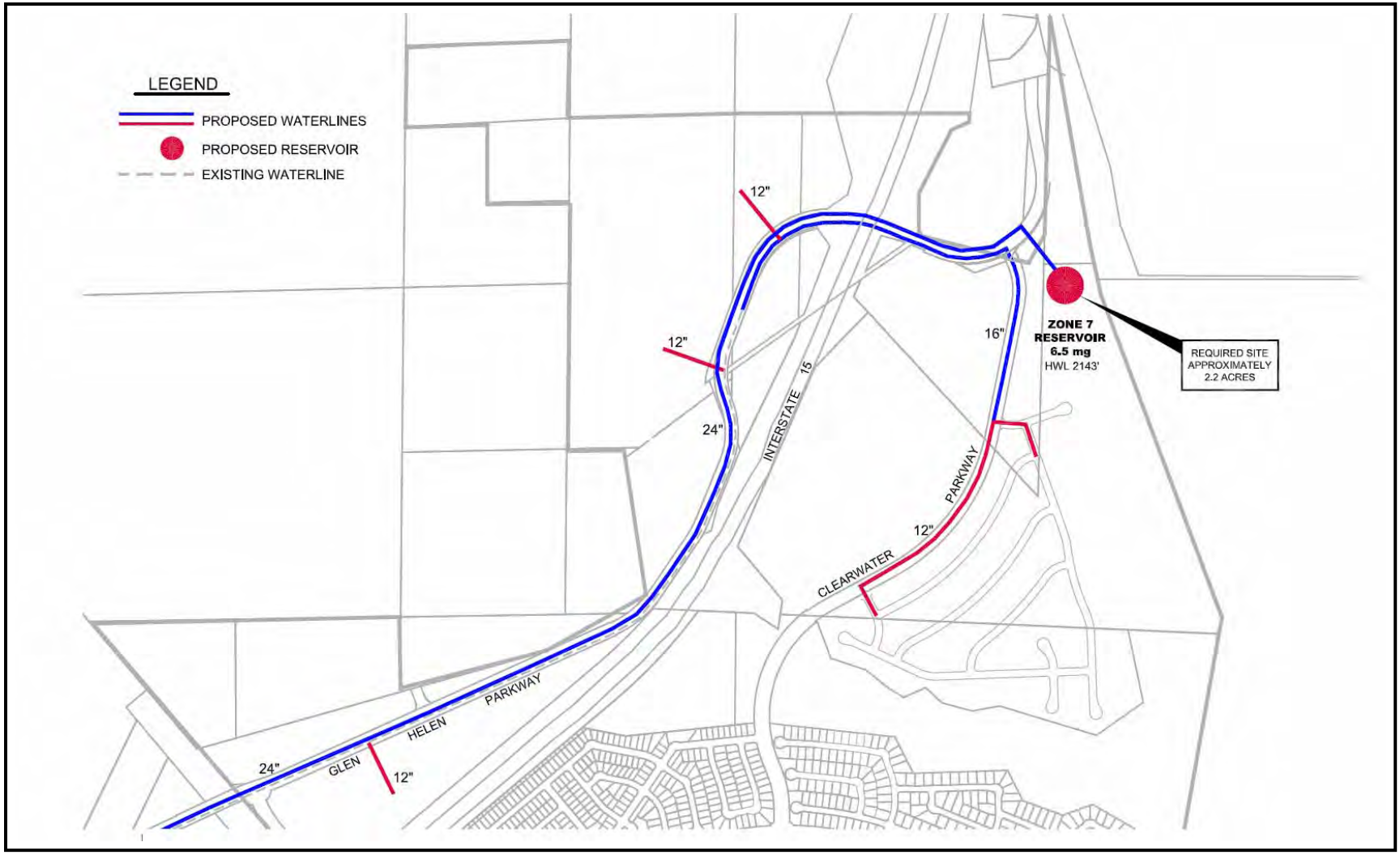


Figure 2-19 (1 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
WATER MASTER PLAN – NEIGHBORHOOD I
Source: Lytle Development Joint Venture III

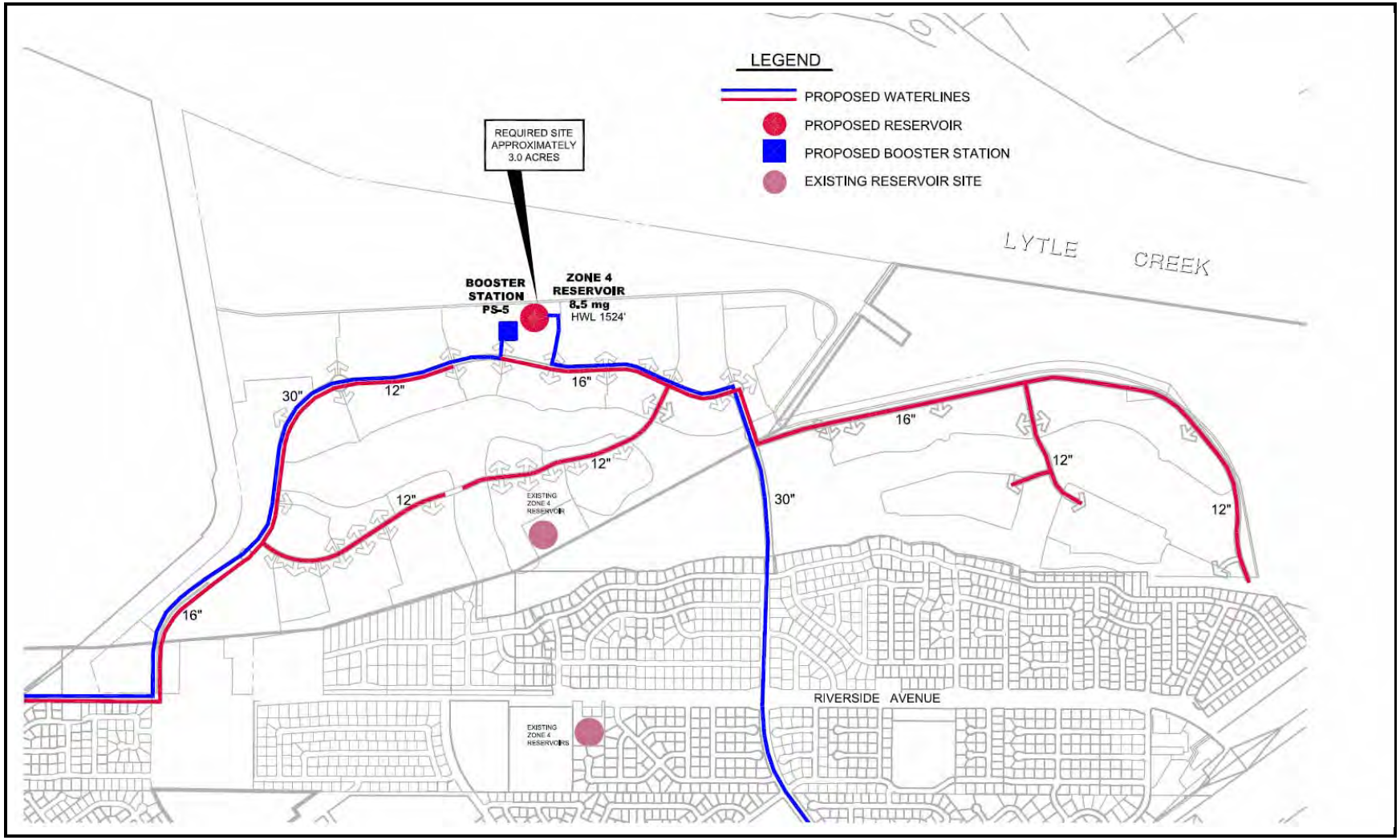


Figure 2-19 (2 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
WATER MASTER PLAN – NEIGHBORHOOD II
Source: Lytle Development Joint Venture III

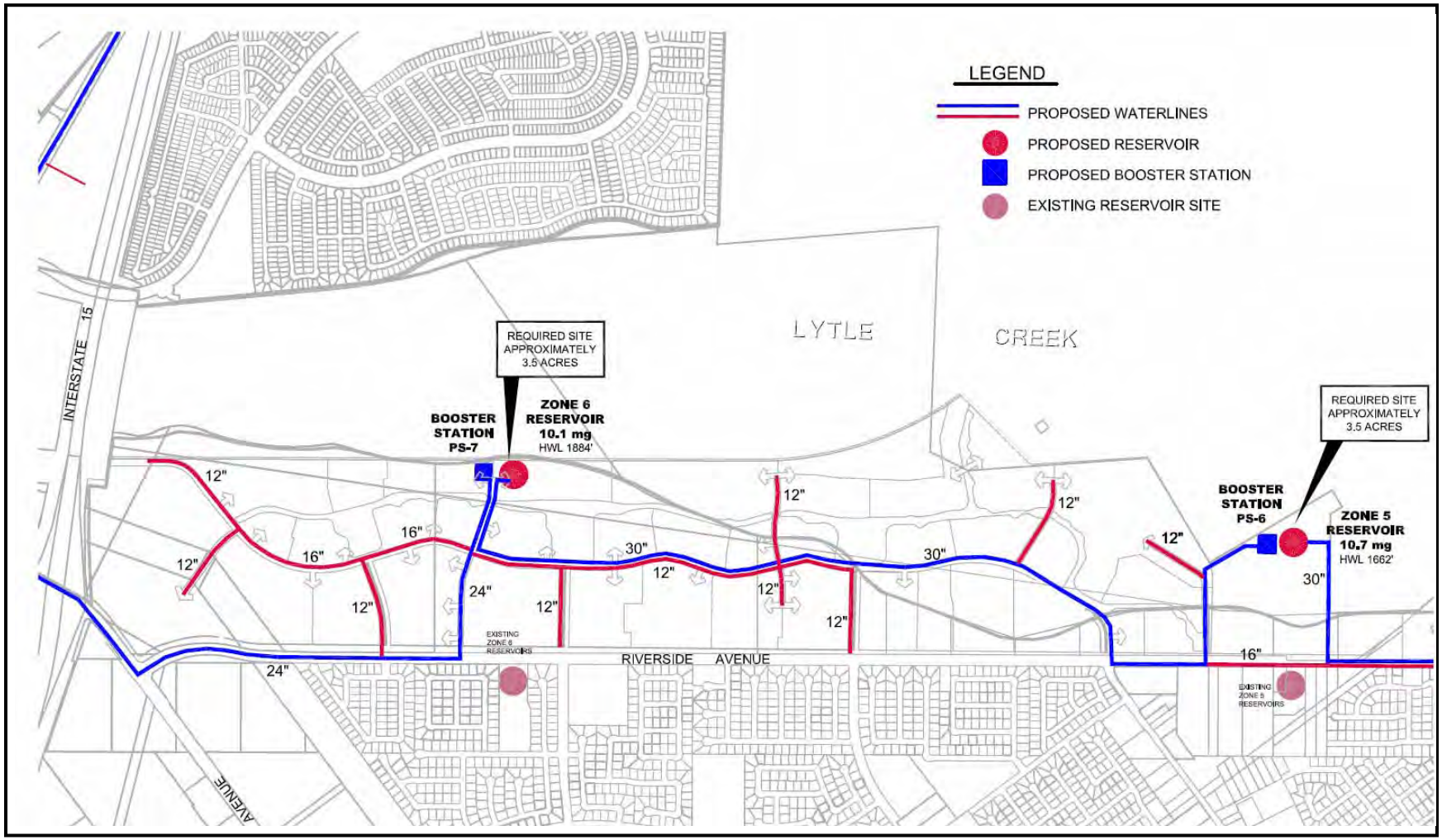


Figure 2-19 (3 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
WATER MASTER PLAN – NEIGHBORHOOD III
Source: Lytle Development Joint Venture III

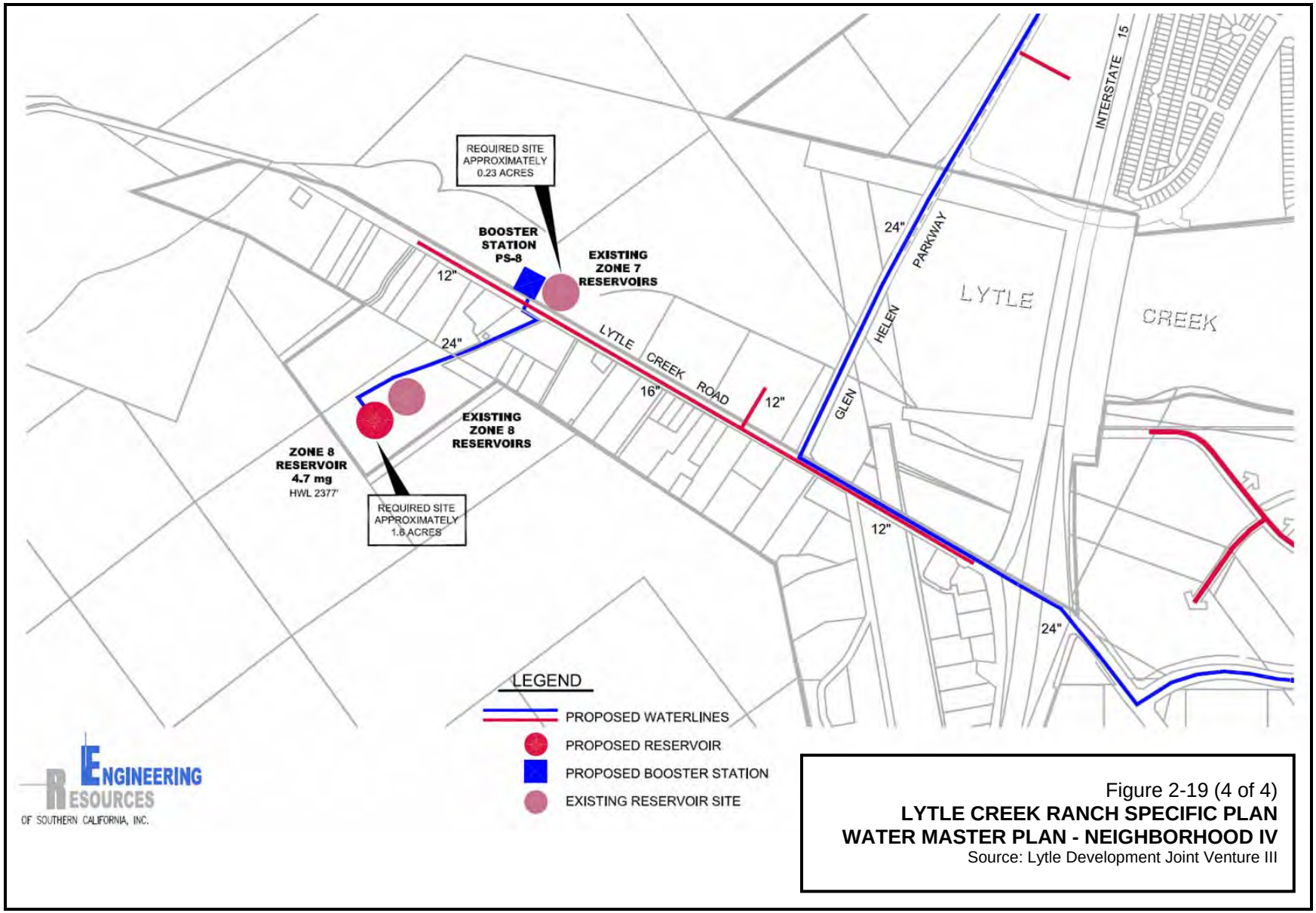


Figure 2-19 (4 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
WATER MASTER PLAN - NEIGHBORHOOD IV
Source: Lytle Development Joint Venture III

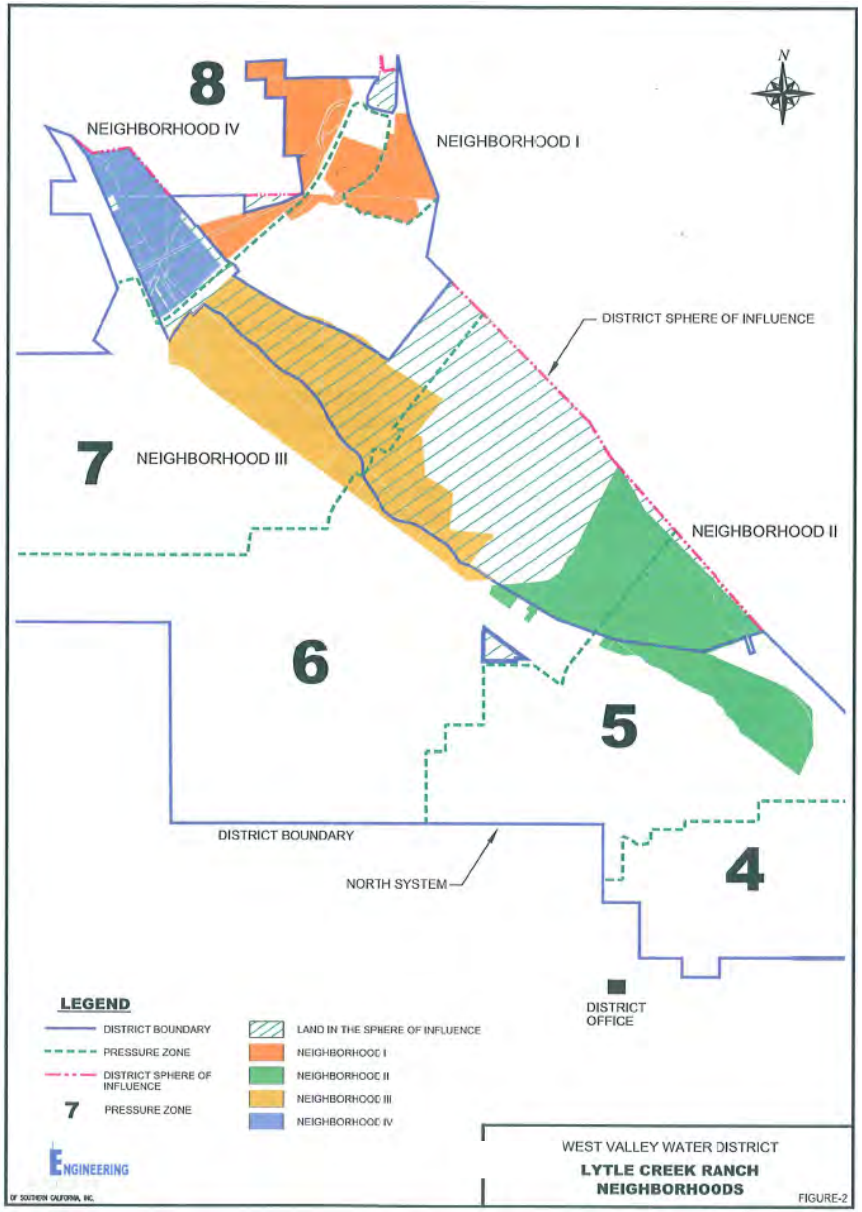


Figure 2-20
WEST VALLEY WATER DISTRICT WATER PRESSURE ZONES
Source: West Valley Water District

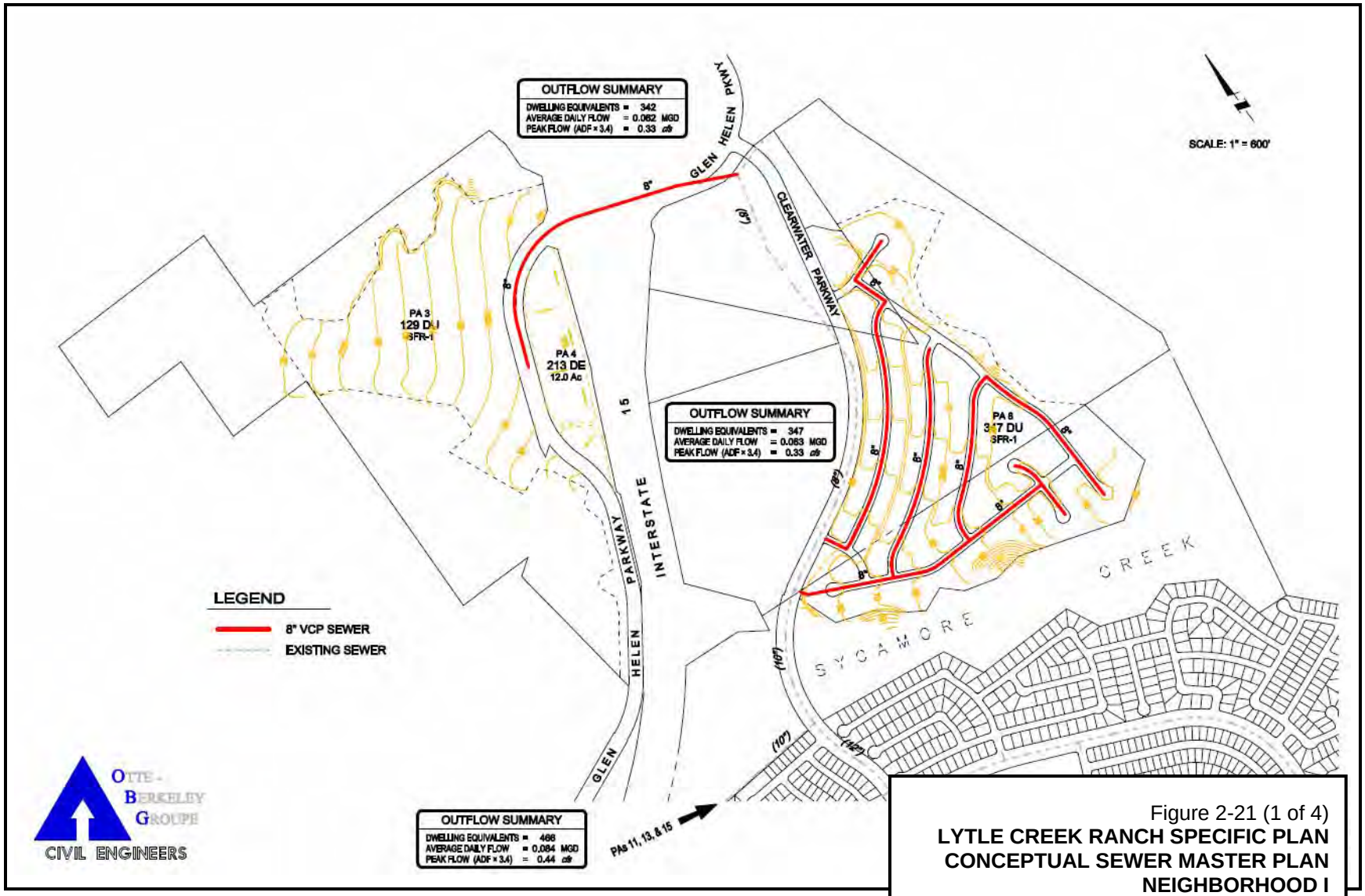


Figure 2-21 (1 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL SEWER MASTER PLAN
NEIGHBORHOOD I
Source: Otte-Berkeley Groupe, Inc.

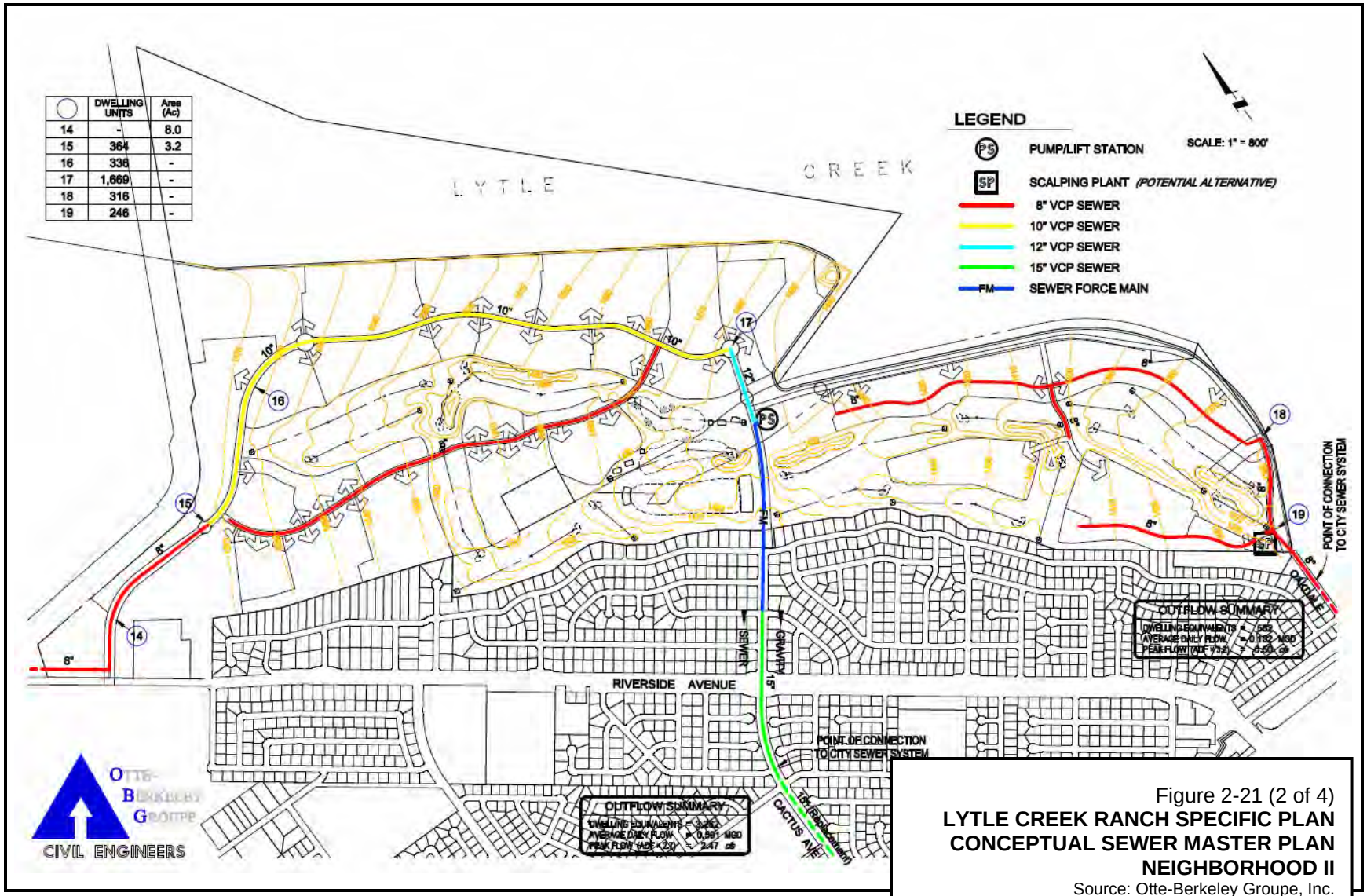
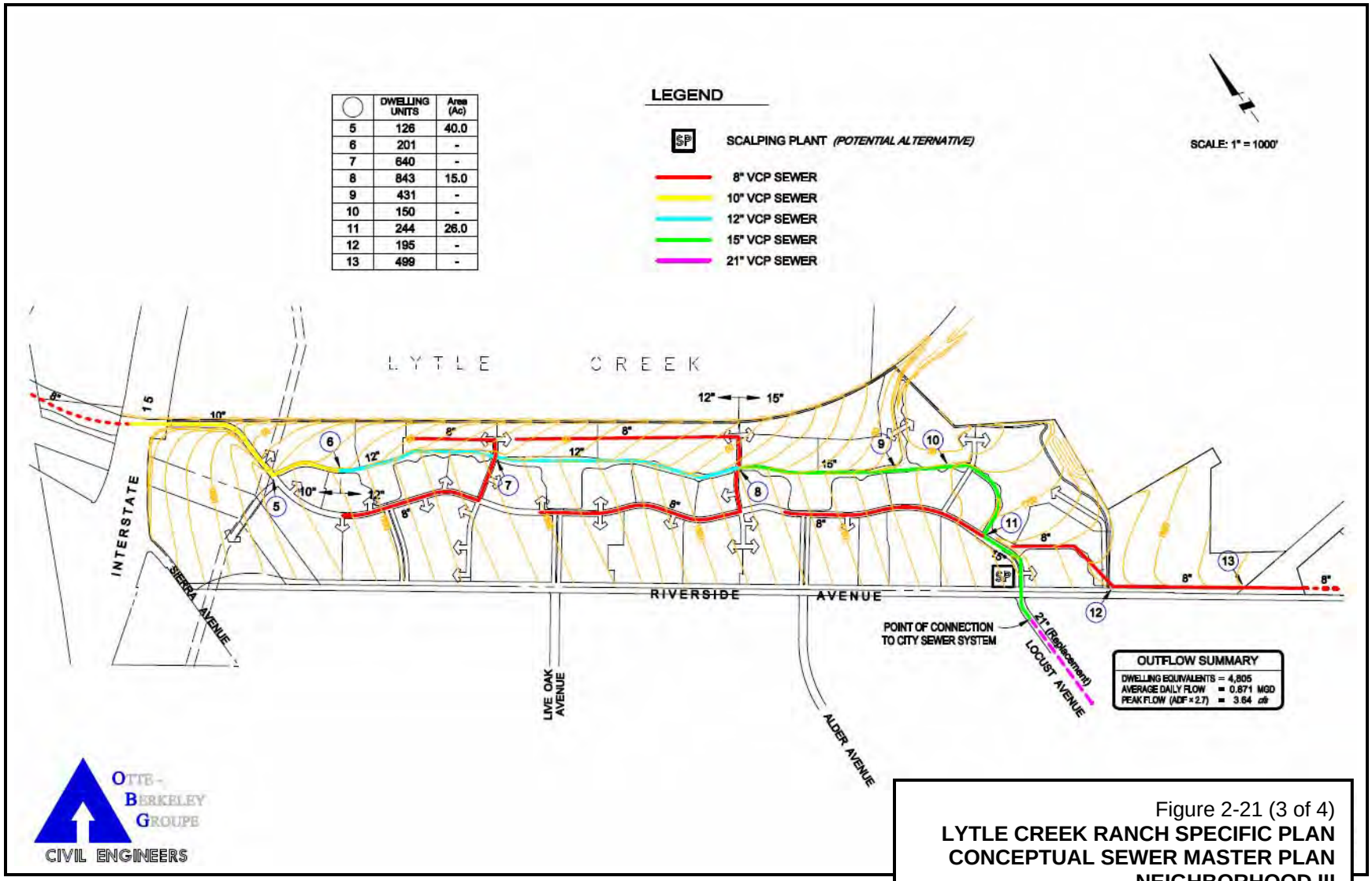
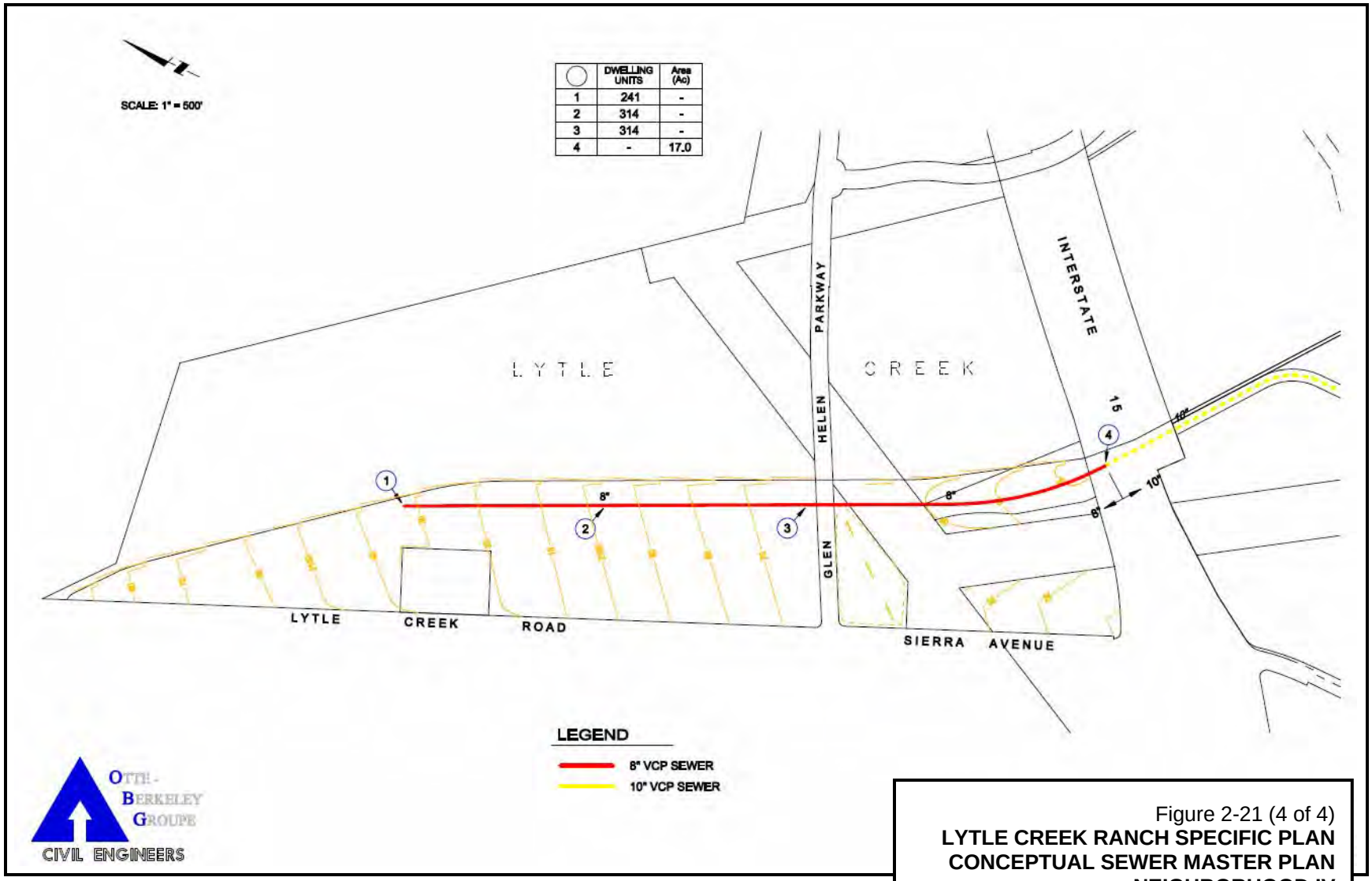


Figure 2-21 (2 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL SEWER MASTER PLAN
NEIGHBORHOOD II
Source: Otte-Berkeley Groupe, Inc.



	DWELLING UNITS	Area (Ac)
5	126	40.0
6	201	-
7	640	-
8	843	15.0
9	431	-
10	150	-
11	244	26.0
12	195	-
13	499	-

Figure 2-21 (3 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN CONCEPTUAL SEWER MASTER PLAN NEIGHBORHOOD III
Source: Otte-Berkeley Groupe, Inc.



	DWELLING UNITS	Area (Ac)
1	241	-
2	314	-
3	314	-
4	-	17.0

Figure 2-21 (4 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL SEWER MASTER PLAN
NEIGHBORHOOD IV
Source: Otte-Berkeley Groupe, Inc.

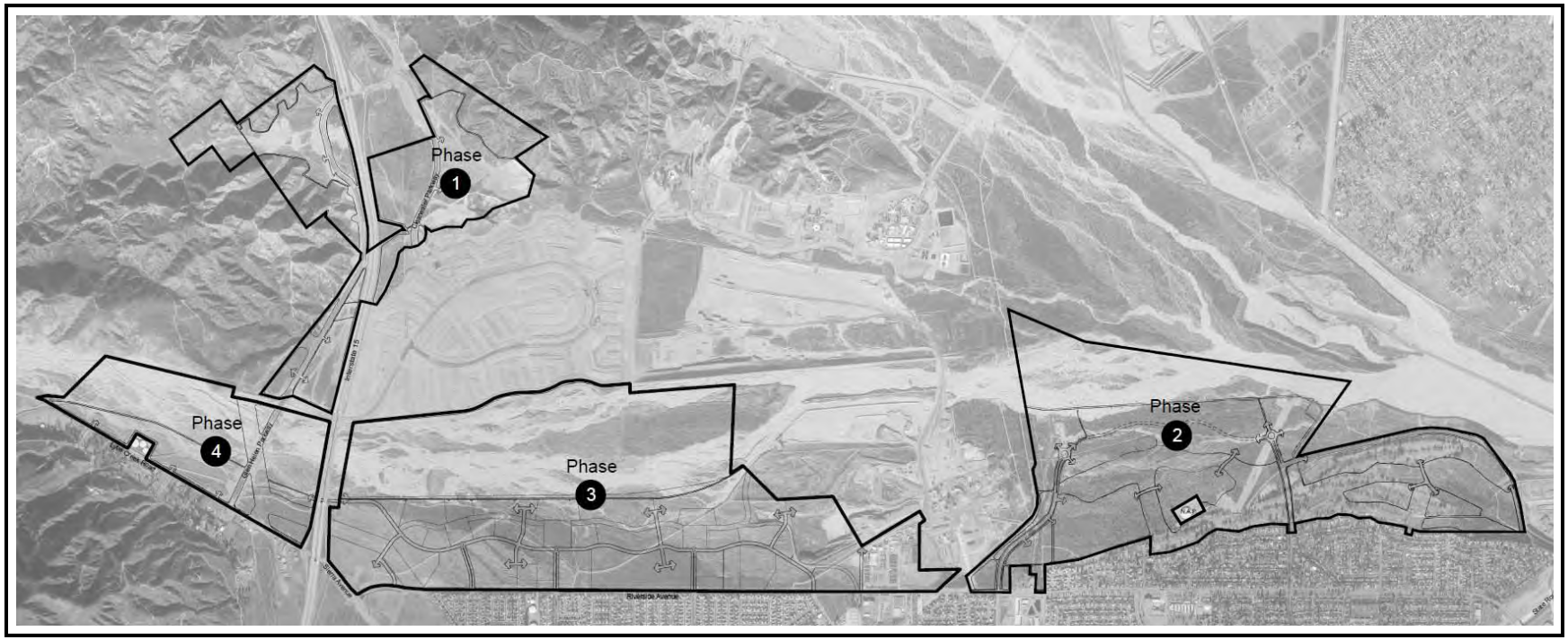


Figure 2-22
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL PHASING PLAN
Source: Lytle Development Joint Venture III

Figure 2-23
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL ANNEXATION PLAN
Source: Lytle Development Joint Venture III

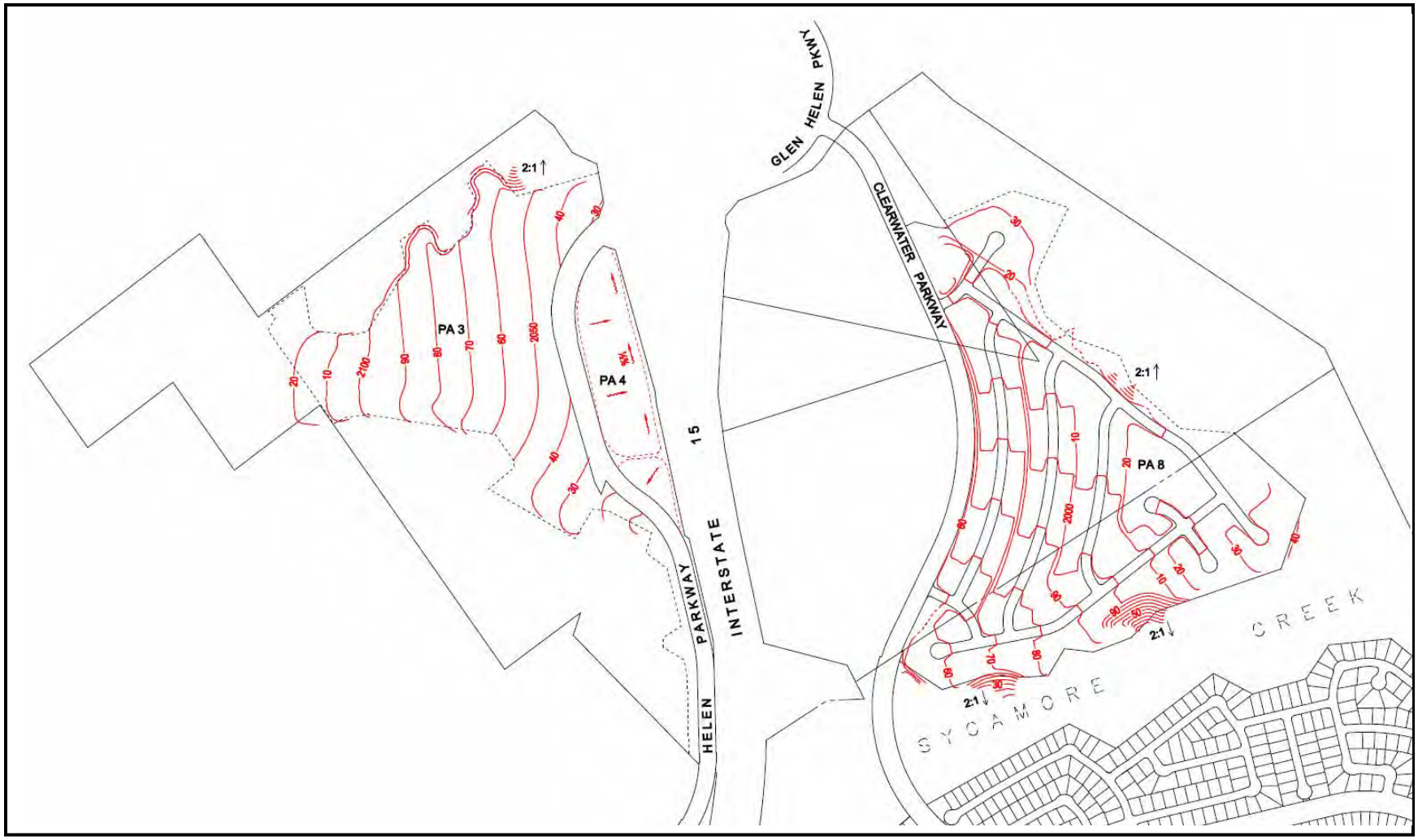


Figure 2-24 (1 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL GRADING PLAN – NEIGHBORHOOD I
Source: Lytle Development Joint Venture III

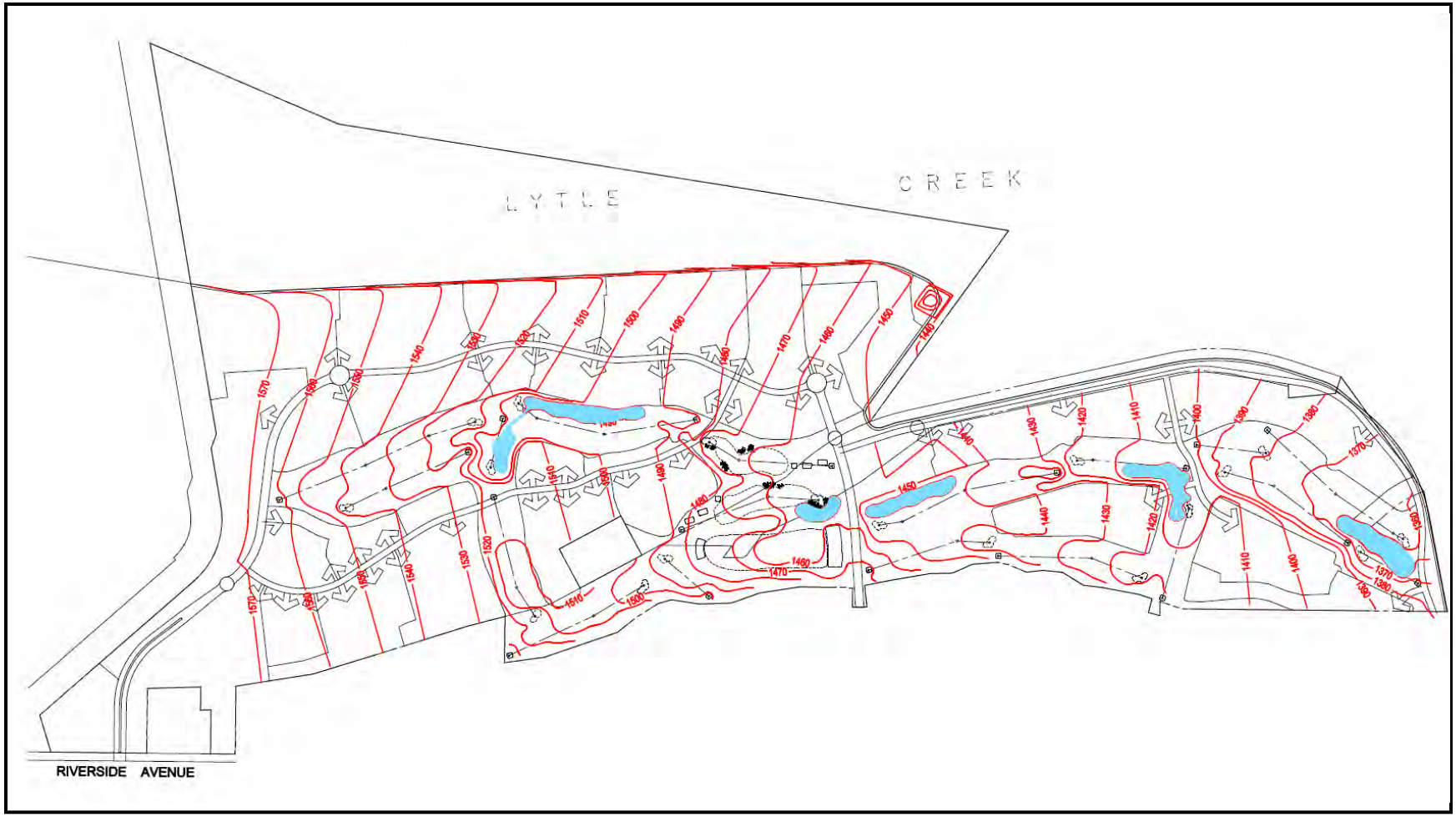


Figure 2-24 (2 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL GRADING PLAN – NEIGHBORHOOD II
Source: Lytle Development Joint Venture III

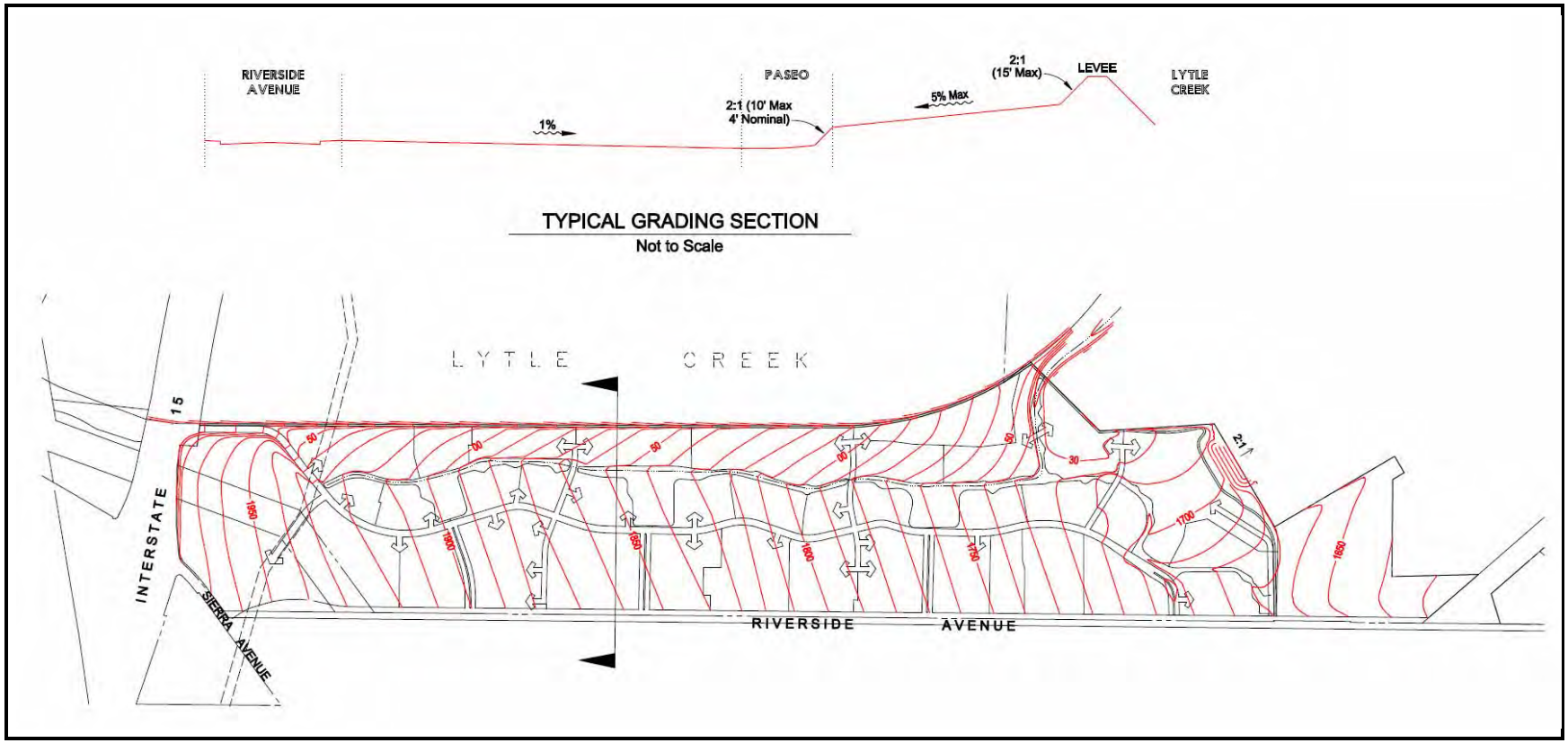


Figure 2-24 (3 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL GRADING PLAN – NEIGHBORHOOD III
Source: Lytle Development Joint Venture III

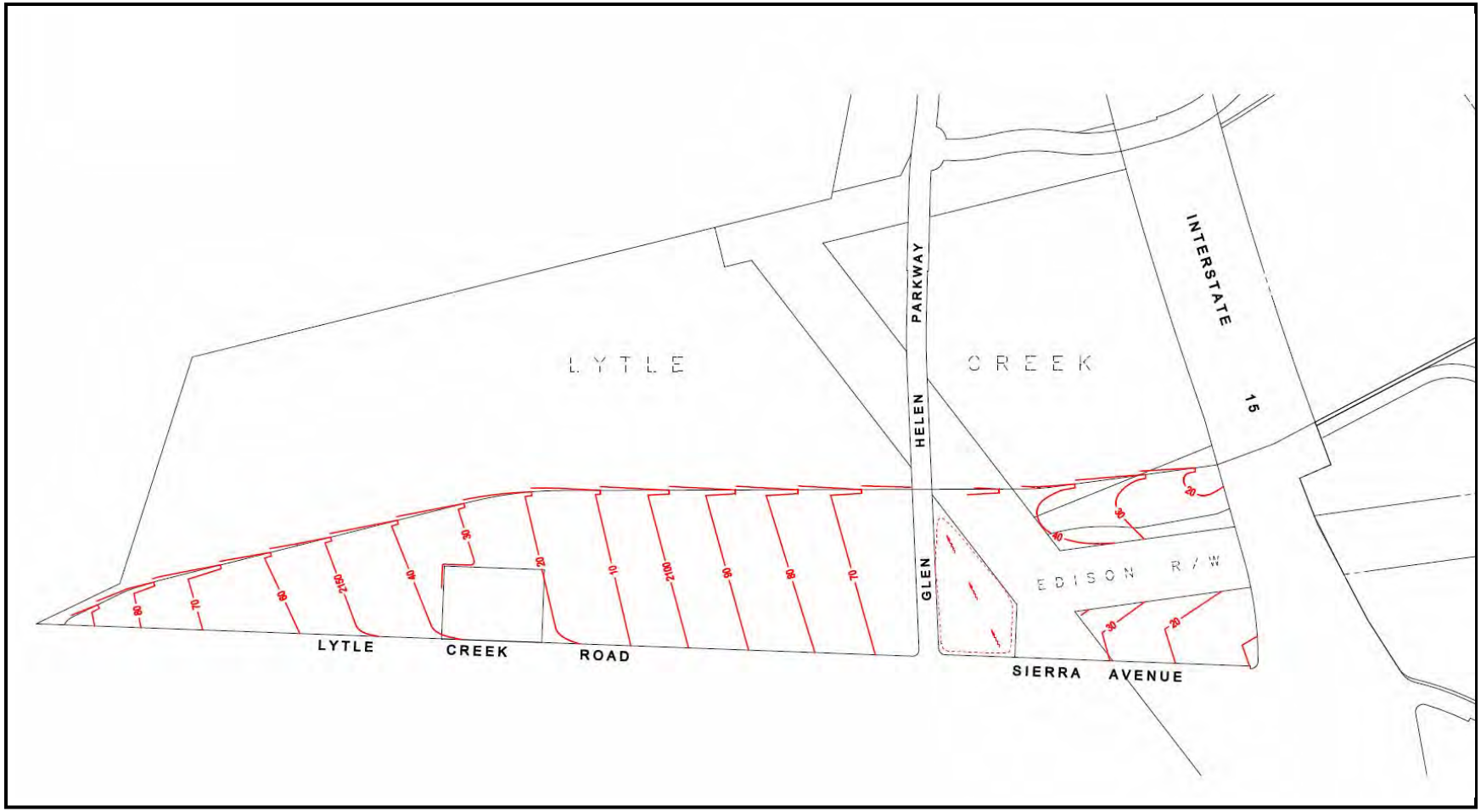


Figure 2-24 (4 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL GRADING PLAN –NEIGHBORHOOD IV
Source: Lytle Development Joint Venture III

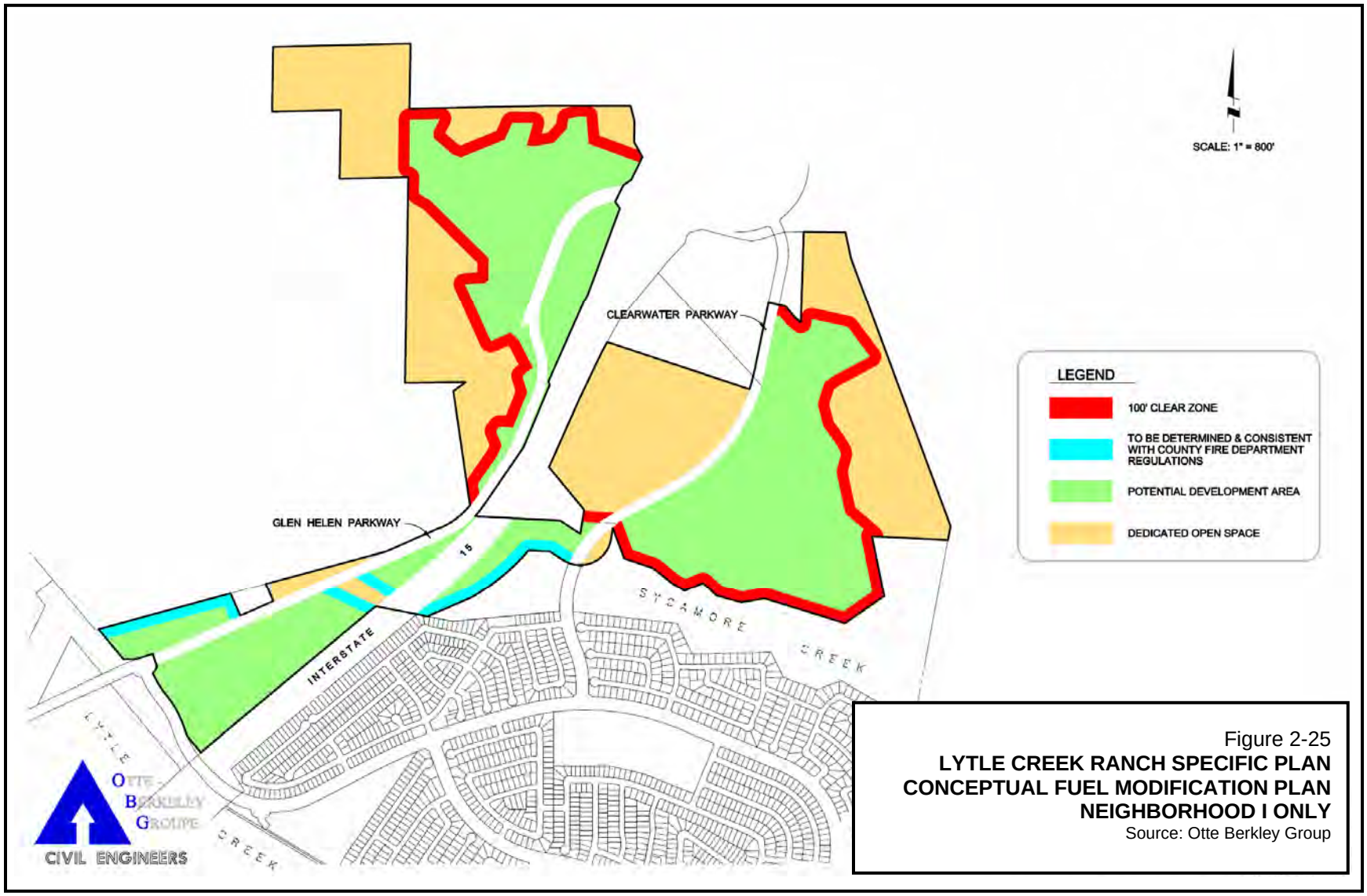


Figure 2-25
LYTLE CREEK RANCH SPECIFIC PLAN CONCEPTUAL FUEL MODIFICATION PLAN NEIGHBORHOOD I ONLY
Source: Otte Berkley Group

As illustrated in Figure 2-17 (Lytle Creek Ranch Specific Plan – Conceptual Master Drainage Plan), storm water runoff discharged from the basin will be conveyed to the east side of the I-15 Freeway via an existing 48-inch RCP culvert. This culvert discharges to an existing swale in an open space area that currently drains to the existing Tract 15900 water quality Basin No. 4. Treated runoff is then discharged from this basin to the north fork of Sycamore Creek, just upstream of Clearwater Parkway. In the proposed condition, the proposed off-site flow path will remain the same as in the existing conditions. The open space adjacent to the freeway will remain undeveloped. The on-site flow will be intercepted into a storm drain system and then routed through a water quality basin. The flow will then be intercepted into existing culverts underneath the freeway, identical to the existing conditions.

- **Neighborhood II**. In the existing condition, storm water runoff from this area is conveyed mostly via sheet flow through the site, with an exception of a few small natural drainage ditches and swales. All storm water runoff from this area is tributary to Lytle Creek. In general, this site drains from south to north and from west to east.

  In the proposed condition, the storm conveyance system will consist of underground storm drains, golf course channels, and detention/conveyance ponds. The layout of the storm drain system is intended to maximize the use of surface flow channels and swales through the golf course and minimize the use of underground storm drains. The storm drain reaches were minimized to the extent practicable and were preliminarily designed to discharge runoff to either a golf course basin or channel.

  The fairways, tees, and greens of the golf course will discharge storm water runoff as sheet flow either to a golf course channel/swale or a lake/basin. The lakes will serve multiple purposes. They will provide aesthetic benefits of the golf course, function as water hazards to the golf course, and will be utilized as water quality basins for nuisance, low flow, and irrigation runoff from the course and tributary areas. The basins will also function as reservoirs for irrigation water for the golf course and potentially the local greenbelt areas. Some of the lakes are interconnected by storm drain or channels and will ultimately discharge to Lytle Creek. An overflow spillway and path has been preliminarily sized for each water quality basin. In the event of an overflow, the overflow path will discharge to Lytle Creek. There will be one dry extended detention BMP water quality basin that will be located in the northeast portion of Neighborhood II adjacent to Lytle Creek. This basin will receive storm and nuisance runoff from the tributary developed area.

  The proposed storm drain sizes in this area range from 18-96 inches. Each of the storm drains will be located within the public ROW beneath the roadway surface and have been preliminarily sized for the 25-year storm event. The storm drain system along with the streets will provide 100-year storm protection and will function as a dual system. The locations and sizes of the proposed storm drain and lakes are shown in Figure 2-17 (Lytle Creek Ranch Specific Plan – Conceptual Master Drainage Plan)

  A proposed regional storm drain will connect Neighborhoods II and III. This storm drain will convey runoff from the southeasterly portion of Neighborhood III in a proposed storm drain that located in the public ROW beneath Riverside Drive. The storm drain will connect to Neighborhood II and the southwesterly most corner (adjacent to the quarry),

traverse through Neighborhood II, and discharge to Lytle Creek. This storm drain has been preliminarily sized to convey the 100-year clear water peak-flow rate.

- **Neighborhood III**. In the existing condition, storm runoff from this area is conveyed mostly via sheet flow through the site, with an exception of a few small natural drainage ditches and swales. All storm runoff from this area is tributary to Lytle Creek. In general, this site drains from south to north and from west to east.

  In the proposed condition, as illustrated in Figure 2-17 (Lytle Creek Ranch Specific Plan – Conceptual Master Drainage Plan), a drainage corridor/channel will traverse the area conveying non-storm and storm runoff from west to east across the site and ultimately discharge to Lytle Creek. This drainage corridor will feature a series of interconnected small ponds, vegetated corridors, and walking trails that connect a series of parks and open space areas. The drainage corridor will provide the main conveyance for nuisance runoff and storm water runoff up to the 100-year event. The channel system has been preliminarily sized for the tributary 100-year storm peak flow rate. The ponds and stream system will feature a recirculating stream that provides treatment of the nuisance flows and small storms. Each pond in the system functions as a wet BMP basin and will include vegetated wetland filters and/or biofilters to provide superior water quality treatment. The low-flow section of the channel will be lined with grouted site rocks/cobbles and underlain with a plastic liner system to achieve a natural looking stream consistent in appearance with the site. The plastic liner system is intended to prevent excessive water loss from the stream system. When nuisance and storm runoff is insufficient to maintain flows in the stream system, the ponds and stream will be supplemented with irrigation water. The stream and pond system will also function as a reservoir system for irrigation water.

  Nuisance flows and storm water runoff will be intercepted into curb opening catch basins and conveyed to the channel/drainage corridor through an underground storm drain system. This system has been preliminarily sized for the 25-year storm event and will work in combination with the street surface to provide 100-year capacity and protection to the development pads consistent with FEMA/SBCFCD flood protection requirements. The street section will either discharge 100-year storm runoff to the channel corridor or Lytle Creek, which will outlet into water quality basins along the drainage corridor. Most of the runoff generated in Neighborhood III will be discharged to Lytle Creek adjacent to Neighborhood III at the terminus of the drainage corridor. The remaining portion of Neighborhood III will be captured in a proposed storm drain and conveyed easterly beneath Riverside Drive roadway to Neighborhood II, as discussed above.

  The proposed locations and sizes for of the storm drain pipes are shown in Figure 2-17 (Lytle Creek Ranch Specific Plan – Conceptual Master Drainage Plan). As illustrated, the proposed storm drain sizes range from 18-54 inches.

- **Neighborhood IV**. In the existing condition, there is an approximately 1,103-acre watershed tributary to the southerly boundary of Neighborhood IV. This area is largely undeveloped natural foothills with some low-density residential adjacent to Lytle Creek Road. These tributary areas discharge storm and nuisance runoff that is generated off the project site, across Neighborhood IV, and then to Lytle Creek.

In general, storm water runoff is conveyed across the site from south to north as sheet flow to Lytle Creek. The off-site undeveloped hillsides are capable of producing a considerable amount of debris due to the steepness of the terrain, existing soil types, type of vegetation, and the susceptibility to wildfires.

In the proposed condition, the off-site watershed will not be changed. Runoff will be intercepted on the upstream side (southerly) of Lytle Creek Road and conveyed via a proposed closed conduit storm drain within the public ROW beneath Lytle Creek Road.

The proposed Lytle Creek Road off-site storm drain has been preliminarily sized to intercept and convey the 100-year bulked peak-flow rate. The clear water peak flow rate is bulked by 50 percent, as required by SBCFCD, to account for the presence of debris in the runoff from the off-site watershed. The alignment of the off-site storm drain systems will cut across Neighborhood IV, either within the ROW of proposed public roadways or within easements to be dedicated for public use.

Non-storm and storm water-related runoff from the on-site watershed will be captured in curb opening catch basins and conveyed to the on-site storm drain system. The on-site storm drain system has been preliminarily sized for the 25-year storm peak-flow rate and will utilize a combined conveyance system to surcharge the street section below the street ROW in a larger storm event up to and including the 100-year event. The on-site storm drains will discharge runoff to the proposed water quality basins for treatment. Runoff will be discharged from the water quality basins to Lytle Creek. Storm water flow tributary to the basins and exceeding the 2-year storm event and/or the capacity of the basins will be discharged to Lytle Creek via an overflow spillway provided at each basin.

The locations and sizes for of the storm drain pipes are shown in Figure 2-17 (Lytle Creek Ranch Specific Plan – Conceptual Master Drainage Plan). As illustrated, the proposed storm drain sizes range from 24-90 inches.

The proposed drainage improvements in Neighborhoods II, III, and IV will be constructed in accordance with the approval and development of each of those neighborhoods, as dictated by the City-imposed conditions of approval for the underlying “B” level tentative subdivision maps.

2.7.5 Conceptual Water Master Plan

The backbone water facilities shall be owned, operated, and serviced by the West Valley Water District (West San Bernardino County Water District). The fair-share cost of designing and constructing those water system improvements needed by and for the proposed project shall be borne by the Applicant and/or through such other alternative financing mechanisms as may be acceptable to the City. All water systems and facilities will be designed and installed in accordance with the requirements and specifications of the West Valley Water District (WVWD). The proposed water infrastructure plan is illustrated in Figure 2-19 (Lytle Creek Ranch Specific Plan – Conceptual Water Master Plan) and described below. The corresponding WVWD water zones are illustrated in Figure 2-20 (West Valley Water District Water Zones).[35]

[35]/ West Valley Water District (Engineering Resources of Southern California, Inc.), Water Master Plan, November 2004, Figure 2.1.

- **Neighborhood I** (Pressure Zone 8).[36] The water system for Neighborhood I is within WVWD Zone 8 and will consist of a series of new 16 to 24-inch diameter water mains connected to a new 4.7-million gallon above-ground reservoir located on an approximately 1.6-acre site south of Lytle Creek Road and adjacent to Neighborhood IV. This additional reservoir is an obligation of LCNPD (Rosena Ranch) and it is anticipated that it will be constructed in 2011. Additionally, a 6.5-million gallon (mg) above ground reservoir, located on an approximately 2.2 acre site located along Glen Helen Parkway (northeast of Neighborhood I) will also be constructed as part of the LCNPD (Rosena Ranch). This tank is a Pressure Zone (PZ) 7 tank and, with the exception of a pressure reducing connection between PZ 8 and PZ 7 pipes should water be needed to supplement the Zone 8 system, does not serve Neighborhood I.

  The remaining master water improvements for Neighborhood I (16- and 24-inch master pipelines) were primarily constructed in 2006 as part of the LCNPD (Rosena Ranch). When subsequent underlying "B" level tentative maps and the associated water improvement plans are approved and subsequently developed, as dictated in the conditions of approval and as determined by the City and WVWD, the newly improved water infrastructure will be connected to these existing master water improvements.

  With the exception of Neighborhood II, since the City has no existing facilities within the project limits to provide reclaimed water, the Applicant does not anticipate distribution of and internal use of reclaimed water in Neighborhood I in the near term. No infrastructure improvement plans are currently presented in the proposed LCRSP to accommodate any future availability of reclaimed water in Neighborhood I.

  When the subsequent underlying "B" level tentative subdivision maps are approved and subsequently developed, requisite improvements will be made to the master water system as dictated in the conditions of approval and as determined by the City and WVWD in order to adequately supply water and fire protection for each underlying tentative subdivision maps.

- **Neighborhood II** (Pressure Zones 5 and 6). The water system for Neighborhood II is within WVWD PZ 5 and PZ 6 and will consist of a series of new 12 to 20-inch diameter water mains connected to a new 8.5-mg) above-ground reservoir located on an approximately 3.0-acre site east of the El Rancho Verde Royal Vista Golf Course (PA 83). A new booster station will be constructed in conjunction with the water reservoir.

  Currently, the need for reclaimed water within Neighborhood II is offset through an agreement with WVWD that supplies the existing El Rancho Verde Royal Vista Golf Course with surplus reuse water from its backwash operations at the Oliver P. Roemer Water Treatment Plant (Oliver P. Roemer Wastewater Filtration Plant) (3010 N. Cedar Avenue, Rialto), located south of the intersection of Linden and Riverside Avenues.[37] The use of this water falls within the guidelines established by the California Regional

[36]/ The 3.6-acre off-site utility easement is located in PZ 7.

[37]/ The WVWD notes: "The District is utilizing non-potable raw SPW [State Project Water] and decanted backwash water from the Oliver P. Roemer Water Filtration Facility to supply the El Rancho Verde Golf Course (its largest user). Records show that the golf course consumed 1,357 acre-feet [of reclaimed water] in 2003" (Source: West Valley Water District [Resource Engineering of Southern California, Inc.], Urban Water Management Plan, January 2006, p. 9).

Water Quality Control Board, Santa Ana Region (SARWQCB) for spreading within the Lytle Creek watershed.

The City is considering several alternatives to using reuse water from the Oliver P. Roemer Wastewater Treatment Plant (Oliver P. Roemer Wastewater Filtration Facility) for golf course irrigation. One alternative being examined by the City would be to use reclaimed water that may be available from a City-identified alternate scalping plant within the southernmost section of Neighborhood II which would replace the surplus reuse water from the WVWD and would be contained within the limits of the proposed golf course itself. If this alternative is implemented, then reuse water from the Oliver P. Roemer Wastewater Filtration Facility (Oliver P. Roemer WFF) would be used for ground water recharge within the LCRSP site. Another alternative identified by the City would be to convey all sewer effluent to the downstream wastewater treatment plant for treatment and distribution within the southern section of the City where existing facilities are in place. Under this alternative, irrigation and/or recharge water would be provided by the City from an existing well and pipeline adjacent to Neighborhood II to offset the loss of reclaimed water now being provided to the golf course.

When the subsequent underlying "B" level tentative subdivision maps are approved and subsequently developed, requisite improvements will be made to the master water system as dictated in the conditions of approval and as determined by the City and WVWD in order to adequately supply water and fire protection for each underlying tentative subdivision maps.

- **Neighborhood III** (Pressure Zones 6 and 7). The water system for Neighborhood III will consist of a series of new 12 to 30-inch diameter water mains connecting to two new above-ground reservoirs and accompanying booster stations. Within PZ 6, a new 10.7-mg reservoir will be constructed on an approximately 3.5-acre site north of the Cemex USA quarry (PA 78). Within PZ 7, a 10.1-mg reservoir will be constructed on an approximately 3.5-acre site west of Lytle Creek (PA 46).

  With the exception of Neighborhood II, since the City has no existing facilities within the project limits to provide reclaimed water, the Applicant does not anticipate distribution of and internal use of reclaimed water in Neighborhood III in the near term. No infrastructure improvement plans are currently presented in the proposed LCRSP to accommodate any future availability of reclaimed water in Neighborhood III.

  The master water improvements needed for Neighborhood III will proceed with the approval and development of the underlying "B" level tentative maps, as dictated in the conditions of approval and as determined by the City and WVWD in order to adequately supply water and fire flow protection to each underlying tentative subdivision maps.

- **Neighborhood IV** (Pressure Zone 8). The water system for Neighborhood IV will consist of a series of new 12 to 24-inch diameter water mains connected to a new 4.7-mg above-ground reservoir and booster station located on an approximately 1.6-acre site west of Lytle Creek Road.

  The master water improvements needed for Neighborhood IV will proceed with the approval and development of the underlying "B" level tentative maps, as dictated in the conditions of approval and as determined by the City and WVWD in order to adequately supply water and fire flow protection to each underlying tentative subdivision maps.

With the exception of Neighborhood II, since the City has no existing facilities within the project limits to provide reclaimed water, the Applicant does not anticipate distribution of and internal use of reclaimed water in Neighborhood IV in the near term. No infrastructure improvement plans are currently presented in the proposed LCRSP to accommodate any future availability of reclaimed water in Neighborhood IV.

Due to the proximity of the LCRSP to the Lytle Creek Groundwater Basin and existing water quality standards imposed by the SARWQCB, without additional treatment and/or dilution, the on-site use of reclaimed or grey water may not be permitable by the SARWQCB. The Applicant and the City are, therefore, exploring a range of possible alternatives in order to utilize project-generated reclaimed water in a manner that promotes the conservation of potable water resources and furthers the attainment of established beneficial uses.

In response to an application filed by the San Bernardino County Special Districts Department (SBCSDD) to obtain a discharge permit for the Lytle Creek North Wastewater Recycling Plant (18101 Institution Road, San Bernardino), the SARWQCB responded that while the effluent is treated to the level accepted by the California Department of Public Health for use as irrigation water, the salinity is above the standard set for discharge into the Lytle Creek Groundwater Basin. Prior to the use of the existing reclaimed water, additional treatment would need to be provided to reduce the salinity to the SARWQCB-mandated level for discharge due to the porosity of the basin. To offset this expected level of salinity of the reclaimed water, the SARWQCB is allowing the County to provide for dilution of the salinity by increasing ground water recharge within the basin with natural stream flows and/or the introduction of other waters with an acceptable level of salinity. The proposed spreading ponds within the Cemex USA Lytle Creek Plant will provide the increased basin recharge necessary to dilute the salinity to the SARWQCB's acceptable level.

The Lytle Creek Water Conservation Association has a historic basin recharge of approximately 13,000 acre/feet per year (AFY) and the new spreading ponds within the Cemex USA quarry will provide for an overall expected recharge to the basin in the range of 20,000 to 24,000 AFY. This additional capacity developed through recharge will allow the County to utilize the expected discharge volume from the Lytle Creek North Wastewater Recycling Plant (Lytle Creek North WRP) for irrigation within GHRP.

As discussed below, the City and the Applicant are also exploring the feasibility of developing an on-site scalping plant.[38] While the scalping plant alternative would provide additional opportunity for reclaimed water at the project site, the cost effectiveness of constructing and operating a new scalping plant has to be weighed against other available solutions to identifying and using other sources of reclaimed water. The intent of using reclaimed water is to conserve current potable domestic water supplies. Arguably, the increased volume available within the ground water basin would allow greater pumping capacity to be realized by the local purveyors, thus accomplishing the intended goal without relying on increased supply of State Water Project (SWP) water.

[38]/ A scalping plant is a small wastewater treatment facility located within a sewer collection system that treats a portion of the available wastewater flow to water reuse standards then distributes the wastewater to a local reuse customer, such as a golf course. Typically, scalping plants are utilized in areas that have two necessary conditions: a high volume of flow and user needing to maintain large areas of landscape or an industrial end user. The project includes a golf course, abuts two existing mining operations that have an existing industrial use for water, and is located north of the newly constructed I-210 Freeway which requires water for landscape irrigation.

Neighborhood II provides for reuse water on the El Rancho Verde Royal Vista Golf Course that is surplus to the Oliver P. Roemer WFF that meets the SARWQCB's basin goals and water quality objectives. The project also provides for the spreading of surplus water from the Southern California Edison Company's (SCE) hydroelectric plant (3144 N. Riverside Drive, Rialto) throughout Neighborhood II. This concept of ground water recharge and spreading within the basin is one of the alternatives under consideration by the City within which the City could then utilize reclaimed water in the southern area of the community where distribution facilities exist and provide well water (raw water) for irrigation and spreading within Neighborhood II.

2.7.6 Conceptual Sewer Master Plan

The backbone sewer facilities shall be owned and operated by the City. The fair-share cost of designing and constructing those sewer system improvements needed by and for the proposed development will be borne by the Applicant and/or through such other alternative financing mechanisms as may be acceptable to the City. All sanitary sewer systems and facilities will be designed and installed in accordance with the requirements and specifications of the City and/or San Bernardino County Special Districts Department (SBCSDD).

Wastewater from the project will be conveyed by an on-site collection system and treated at either the existing 1.75-mgd Lytle Creek North Wastewater Recycling Plant[39] (18101 Institution Road, San Bernardino) in the adjoining LCNPD (Tract 15900) community or the City of Rialto Wastewater Treatment Plant (501 E. Santa Ana Avenue, Rialto). Sewage flows generated from Neighborhood I (projected to be approximately 0.429 mgd at build-out) will be transported to the SBCSDD's 1.75-mgd Lytle Creek North Wastewater Recycling Plant (Lytle Creek North WRP),[40] located in County Service Area (CSA) 70-GH, via an existing main line constructed as part of the LCNPD (Tract 15900). Sewage flows from Neighborhoods II, III, and IV (projected to be approximately 3.46 mgd at built-out) will be transported to the City of Rialto Wastewater Treatment Plant (Rialto WTP) via a network of existing and proposed transmission mains.

Within Neighborhood II, the project proposes may include the construction of a scalping plant to allow for reuse of wastewater to irrigate the golf course. As noted above, the construction of a scalping plant is one of three alternate means of providing non-potable water for golf course and other landscape irrigation in Neighborhood II. The other alternatives include using well water (raw water) to irrigate the golf course while pumping wastewater to the Rialto WTP for treatment and reuse in the southern portion of the City where distribution lines are present, and using surplus reuse water from the Oliver P. Roemer WFF.

The proposed sewer infrastructure plan is illustrated in Figure 2-21 (Lytle Creek Ranch Specific Plan – Conceptual Sewer Master Plan) and described below.

- **Rialto Wastewater Treatment Plant**. The Rialto WTP has an existing treatment capacity of 11.7 mgd.[41,42] While the City's facility has some existing reserve capacity,

[39]/ California Regional Water Quality Control Board, Santa Ana Region, Waste Discharge and Producer/User Water Recycling Requirements for the San Bernardino County Special Districts Department – Lytle Creek North Wastewater Recycling Plant, Order No. R8-2007-0004, April 20, 2007, p. 2

[40]/ Formally the Glen Helen Wastewater Treatment Plant.

[41]/ California Regional Water Quality Control Board, Santa Ana Region, Renewal of Wastewater Discharge and Producer/User Reclamation Requirements for the City of Rialto's Municipal Treatment Plant, Order No. R8-2007-006, NPDES No. CA0105295, San Bernardino County, March 2, 2007, p. 5.

[42]/ For the purpose of this EIR, the plant's stated capacity is based on the SARWQCB's wastewater permit (Order R8-2007-0006).

full build-out of the proposed project would require an expansion of the facility. The expansion of the Rialto WTP would be undertaken by the City, independent of the proposed project. The City's Public Works Department had previously considered the expansion of the Rialto WTP's capacity to 16 mgd but is not actively pursing expansion plans at this time. Additional, other than the payment of applicable fees, supplemental funding for the expansion of the Rialto WTP is not a part of the proposed LCRSP.

The Rialto WTP currently provides tertiary treatment and discharges most treated wastewater to the Santa Ana River. The plant produces some recycled water that meets Title 22 requirements. That water is used by the California Department of Transportation (Caltrans) for irrigation and maintenance purposes.

- **Improvements to Existing Lift Stations**. The City has determined that they can accept the expected sewer flows generated by the proposed project by directing those flows to multiple existing lift stations along the southern side of the I-210 Freeway at Ayala, Cactus, Lilac, and Sycamore Avenues. The City has identified and the Applicant has incorporated into the project description the following necessary collection system upgrades and modifications to mitigate the project's additional flows.

  - ◊ Upgrade Ayala Avenue, Cactus Avenue, Lilac Avenue, and the Sycamore Avenue Lift Stations to increase pumping capacity by 100 percent;
  - ◊ Majority of the expected flows shall be tributary to the Ayala Avenue Lift Station; the expected connection point for this tributary reach would be the existing manhole within Locust Avenue just southerly of Riverside Avenue; and
  - ◊ Remaining flows may be directed to the (a) Cactus Avenue Lift Station with a connection point located at Cactus Avenue and Riverside Avenue, (b) the Lilac Avenue Lift Station with a connection point located at Cactus Avenue and Casmalia Avenue, and (c) at the Sycamore Avenue Lift Station with a connection point located at Oakdale Avenue.

  Unless otherwise negotiated with the City, all of the improvements will be implemented and constructed by the City and are located in areas where existing facilities are already present. The proposed project's obligations are generally limited to the payment, by the Applicant to the City, of applicable development impact fees as the project's pro-rata contribution to these improvements.

- **Improvements to Transmission Mains**. Numerous existing transmission main lines have been identified as having deficiencies that will require upgrading in order to serve the proposed project development.[43] Approximately 9,135 linear feet of existing 12-inch to 30-inch diameter transmission main line will be upgraded downstream from the four identified and existing lift stations located along the southerly side of the I-210 Freeway to facilitate expected flows.

  Existing transmission mains extending from those four lift stations to the proposed project connection points will also be upgraded as follows.

  - ◊ **Ayala Lift Station**. The existing 12-inch diameter transmission main extending northerly up Locust Avenue to the proposed connection point 250 feet southerly

[43]/ TRC, City of Rialto Wastewater Collection System Analysis, September 2005.

of Riverside Avenue will either be replaced with a 21-inch diameter main or an additional 18-inch diameter main will be installed parallel to the existing main. This upgrade would accommodate 2.23 million gallons per day (mgd) of the expected flows, the majority of which will emanate from the proposed project, and deliver those flows to the Ayala Lift Station.

◊ **Cactus Avenue Lift Station**. The existing 10-inch diameter transmission line extending northerly up Cactus Avenue from the Cactus Avenue Lift Station to the intersection with Riverside Avenue will be replaced with a 15-inch diameter main. This upgrade would accommodate 0.86 mgd of the expected project flows.

◊ **Lilac Lift Station**. The existing 8-inch diameter transmission line extending northerly from the Lilac Lift Station to Casmalia Avenue will be replaced with a 15-inch and parallel 12-inch diameter mains installed westerly along Casmalia to Cactus Avenue to intercept a portion of the existing tributary flows and redirect those flows through a diverter structure to the Lilac Avenue Lift Station. This upgrade would accommodate 0.66 mgd of the expected project flows.

◊ **Sycamore Avenue Lift Station**. The existing combination 8-inch and 10-inch diameter transmission line extending from the Sycamore Avenue Lift Station northerly to the proposed connection point north of Arbeth Avenue will be replaced with a 15-inch diameter main. This upgrade would accommodate 0.86 mgd of the expected project flows.

Unless otherwise negotiated with the City, in lieu of full fee payment, all of the improvements will be implemented and constructed by the City and are located in areas where existing facilities are already present. The proposed project's obligations are generally limited to the payment, by the Applicant to the City, of applicable development impact fees as the project's pro-rata contribution to these improvements.

- **Scalping Plant**. In an effort to reduce the amount of capital improvements required to service the proposed project (including additional treatment capacity, increasing lift station pumping capacity, and upgrading of the collection system transmission mains), the Applicant is considering the construction of a scalping plant that would treat wastewater that would be used to irrigate the golf course in Neighborhood II. If implemented, the scalping plant is proposed to be located at the terminus of Oakdale Avenue. Although additional scalping plants may be considered in the future, at this time, only one such plant is being considered.

  If there is a dedicated use for the removed volume, scalping plants can typically remove up to 75 percent of the volume of water tributary to the plant. If the maximum reduction could be used for this project, the expected flow rate from the project could be reduced from 4.2 to 1.05 mgd. This reduction would be directly proportional at the Rialto WTP and would result in a substantial capital improvement reduction at the identified lift stations and within the sewer collection system.

  The construction of a scalping plant is one of three alternate means of providing non-potable water for golf course irrigation in Neighborhood II. The other alternatives include using well water (raw water) to irrigate the golf course while pumping wastewater to the Rialto WTP for treatment and reuse in the southern portion of the City where distribution lines are present, and using surplus reuse water from the Oliver P. Roemer WFF.

- **Wastewater Collection System**. The following collection system improvements have been identified.

  - ◊ **Neighborhood I**. The sewer collection system for Neighborhood I will consist of new 8-inch diameter vitrified clay pipe (VCP) sewer mains and direct the flows into existing 8-inch to 10-inch diameter sewer lines located within Clearwater Parkway. These flows will be conveyed, via gravity flow, to the existing Lytle Creek North WRP constructed as part of the LCNPD (Tract 15900) and operated by the SBCSSD (CSA-70-GH).

    Service areas within Neighborhood I are all tributary to an existing sewer facility within and adjacent to Clearwater Parkway. These facilities were constructed as part of the LCNPD within the County and are maintained by the SBCSDD. Adequate wastewater treatment capacity for Neighborhood I has been reserved at that existing facility.

    As proposed, the area west of the I-15 Freeway is comprised of 342 dwelling unit equivalents[44] will gravity flow under the I-15 Freeway bridge through an 8-inch diameter sewer line to a point of connection into the existing sewer line located near the Clearwater Parkway/Glen Helen Parkway intersection. An average daily flow of 0.064 million gallons per day (mgd) is expected to produce a peak flow of 0.062 mgd is expected to produce a peak flow of 0.211 mgd or 0.33 cubic feet per second (cfs) applying a 3.4 peaking factor.

    The 347 dwelling units equivalents east of the I-15 Freeway shall connect to the sewer main located beneath Clearwater Parkway. The 8-inch diameter sewer lines constructed herein are anticipated to generate 0.063 mgd of average daily flow with a 0.214 mgd (0.33 cfs) peaked rate of flow.

    A 10-inch diameter dry sewer line constructed just north of the LCNPD (Tract 15900) and connecting to the main sewer line in Clearwater Parkway has been specifically installed to convey the flows of 466 dwelling units (PAs 11, 13, and 15) adjacent to Glen Helen Parkway and west of the I-15 Freeway. Average daily flows of 0.084 mgd are anticipated to produce 0.287 mgd (0.44 cfs) when a peaking factor of 3.4 is applied.

    In 2006, master sewer improvements for Neighborhood I were constructed as part of the LCNPD (Tract 15900). When the subsequent underlying "B" level tentative subdivision maps and local sewer improvement plans for Neighborhood I are approved and subsequently developed, as dictated in the City-imposed conditions of approval for those tentative maps, localized sewer infrastructure will tie into these existing facilities.

  - ◊ **Neighborhood II**. The wastewater collection system in Neighborhood II will be located within the neighborhood's street system and consist of 8 to 15-inch diameter VCP sewer mains. If constructed, the scalping plant will be located at the southern portion of Neighborhood II, within the El Rancho Verde Royal Vista Golf Course. If this alternative is pursued, the plant will remove water from the

[44]/ This is a standard definition to define how many houses the treatment plant can handle. Commercial and industrial buildings are typically assigned a number of "dwelling unit equivalents" (DUEs) depending on usage.

sewage and, through the use of micro-filtration and reverse osmosis, will reuse the water to irrigate the golf course and potentially provide for I-210 Freeway landscape irrigation. To the north, this system would connect to the sewer collection system located in Neighborhood III.

The predominant land-use feature in Neighborhood II is a redesigned municipal golf course surrounded by clusters of active senior housing. Two discrete sewer systems, located within the proposed street network and comprised of 8-inch to 15-inch diameter pipe, will outlet their respective waste products into existing City facilities in Cactus Avenue and Oakdale Avenue.

As proposed, the 2,568 dwelling unit equivalents tributary to the Cactus Avenue sewer within Neighborhood II, combined with the 694 units from Neighborhood III, shall feed a lift station centrally located within the El Rancho Verde Royal Vista Golf Course. Pressurized flows will be lifted to the crest within County Club Drive then continue via gravity flow to the connection point in Cactus Avenue.[45] A lift station within PA 84 may be needed to sewer discrete residential sites due to their elevation below the adjacent sewer main.

An average daily flow of 0.591 mgd is expected from the proposed project alone with a peak flow rate of 1.60 mgd (2.47 cfs) applying a peaking factor of 2.7. Tributary to the City's Oakdale sewer are 562 dwelling unit equivalents generating an average daily flow of 0.102 gpm while peaking at a flow rate of 0.50 cfs. A scalping plant located at the southerly terminus of Neighborhood II is being considered pursuant to a potential need for irrigation water.

When the subsequent underlying "B" level tentative subdivision maps are approved and subsequently developed, requisite improvements will be made to the master sewer system, as dictated by the City-imposed conditions of approval for those underlying "B" level tentative subdivision maps.

◊ **Neighborhood III**. The backbone sewer system within this neighborhood is comprised of 8-inch to 15-inch diameter VCP sewer mains located primarily within the central collector street and the Grand Paseo. To the north, this system will extend beneath the I-15 Freeway and connect to the sewer collector system located in Neighborhood IV. To the south, this system will connect to the sewer collector system in Neighborhood II.

The intent is to locate the main line within the proposed multi-use paseo generally running through the middle of Neighborhood III. The main line sewer will consist of 10-inch, 12-inch, and 15-inch diameter pipe sizes with 8-inch diameter sewer lines conveying the flows from various tributary planning areas. As proposed, the 3,635 dwelling unit equivalents within Neighborhood III are anticipated to generate an average daily flow of 0.659 mgd while peaking at 1.78 mgd (2.75 cfs) using a peaking factor of 2.7. The combined tributary flows from both Neighborhoods III and IV, upon completion of ultimate build-out, are

[45]/ An opportunity may be available to provide sewering capacity to existing residences along and upstream of Country Club Drive. This may include constructing a gravity line parallel to the force main and pumping these additional tributary flows as well. Further analysis may be needed to determine the adequacy of the indicated pipe sizes due to the demands of any potential additional residences.

expected to generate 0.871 mgd average daily flow with a cumulative peak flow of 2.35 mgd (3.64 cfs). These expected flows will be directed to the City's identified collection point approximately 250 feet south of the Locust Avenue intersection with Riverside Avenue.

A design alternative to construct a scalping plant within the open space parcel at the northwest corner of Riverside and Locust Avenues is being considered in order to reduce the amount of capital improvements required to service the proposed project (including additional treatment capacity, increase in lift station pumping capacity, and upgrading of the collection system transmission mains). If the City deems a scalping plant to be feasible, the plant may significantly reduce the burden on the City's existing collection system in terms of transmission line, lift station, and treatment facility upgrades.

A small remainder of the Neighborhood III tributary area lying downstream of the point of connection in Locust Avenue will convey its flows into Neighborhood II. An average daily flow of 0.126 mgd, representing 694 dwelling unit equivalents, is anticipated to achieve a peak flow rate of 0.403 mgd (0.62 cfs) applying a peaking factor or 3.2.

When the subsequent underlying "B" level tentative subdivision maps are approved and subsequently developed, requisite improvements will be made to the master sewer system, as dictated by the City-imposed conditions of approval for those underlying "B" level tentative subdivision maps.

◊ **Neighborhood IV**. The sewer collector system for this neighborhood consists of 8-inch diameter VCP sewer mains west of the Lytle Creek levee. To the south, this system will connect to the sewer collection system in Neighborhood III.

As proposed, an estimated 1,171 dwelling unit equivalents is expected to develop an average daily flow of 0.212 mgd. Applying a peaking factor of 3.0, the peaked flow rate expected is 0.636 mgd (0.98 cfs).

When the subsequent underlying "B" level tentative subdivision maps are approved and subsequently developed, requisite improvements will be made to the master sewer system, as dictated by the City-imposed conditions of approval for those underlying "B" level tentative subdivision maps.

2.8 Public Services and Utilities

2.8.1 Public Service Providers

Public services include police and fire protection, public education, public libraries, and solid waste disposal. As planned, those services will be provided by the following entities.

- **Police Protection**. Law enforcement services shall be provided by the City of Rialto Police Department (RPD) and by the San Bernardino County Sheriff's Department (SBCSD), operating under a mutual aid agreement. As proposed, no new RPD and/or SBCSD facilities will be constructed as part of the proposed project.

- **Fire Protection and Paramedic Services**. Fire protection and emergency response services for the project area will be provided by the City of Rialto Fire Department (RFD) and/or the San Bernardino County Fire Department (SBCFD), operating with the other under a mutual aid or other form of service agreement. As proposed, although improvements to existing facilities may be undertaken, no new RFD and/or SBCFD facilities will be constructed as part of the proposed project.

- **Public Schools**. The proposed project is located within three different school districts. Students in a portion of Neighborhood I will attend existing schools in the San Bernardino City Unified School District (SBCUSD). Students in the northwestern portion of Neighborhood IV will attend schools in the Fontana Unified School District (FUSD). The remainder of the project is located within the Rialto Unified School District (RUSD). Because portions of Neighborhood I fall within the boundaries of the RUSD and SBCUSD, the Applicant, in cooperation with those school districts, may seek to modify school district boundaries within that and/or other neighborhoods.

  The proposed project will satisfy its school mitigation obligations through the payment of State-imposed school impact fees. As proposed, however, two future school sites will be set aside within Neighborhood III, including a separate elementary school (PA 49) and a combined elementary/middle school (PA 69) sites. Both school sites are located within the jurisdiction of the RUSD. Should the RUSD elect to acquire one or both of those school sites for new school facilities, the Applicant and the RUSD will enter into a school facilities funding and mitigation agreement which may modify the nature of those school impact fees.

- **Public Libraries**. Library services will be provided by the San Bernardino County Public Library System. No new library facilities are planned or proposed on the project site.

- **Solid Waste Collection and Disposal**. Trash collection and waste disposal is available through EDCO Disposal, presently operating under an exclusive franchise agreement with the City. In the future, over the life of the proposed project, the City may grant exclusive franchise agreements to other providers. It can be concluded that any alternative waste hauler would also possess trash collection and disposal capacity to serve the project site.

- **Park Maintenance**. New on-site public park facilities will be maintained by the City's Public Works Department, the Master Homeowners' Association, or by another entity approved by the City. At this time, there has been no final decision as to which entity will assume park maintenance obligations and responsibilities. This determination will be made during the subdivision map approval process at the time each subdivision map area that includes public park lands is submitted and approved by the City.

  Other dedicated open space areas will be maintained by an appropriate conservation group or by the Master Homeowners' Association.

- **Street Lighting**. On-site street lights will be maintained by the City's Public Works Department or by another entity, such as a lighting and landscape district, should one be approved by the City to assume these responsibilities. At this time, the City is the primary entity responsible for street lighting.

- **Landscape Maintenance**. Landscape maintenance will be performed by the City's Public Works Department, the Master Homeowners' Association, or by another entity approved by the City. At this time, there has been no final decision as to which entity will assume landscape maintenance obligations and responsibilities. This determination will be made during the subdivision map approval process at the time each subdivision map area is submitted and approved by the City.

2.8.2 Utility Purveyors

It is anticipated that utilities will be provided to the project site by those existing public utility companies which presently serve the general project area and/or by other service purveyors as may subsequent enter the market place. While subject to change, the following utility provides are identified herein as evidence of the availability of the following services.

- **Electricity**. Electrical service is currently available in the general project area and by the Southern California Edison Company (SCE). Electrical service will be provided in accordance with the SCE's policies and extension rules on file with the California Public Utilities Commission (CPUC) at the time contractual arrangements are made. As proposed, all new electrical distribution lines required to serve the proposed project will be placed underground. In addition, the project proposes to underground the existing overhead lines along Riverside Avenue which are located within the project boundaries.

- **Natural Gas**. Natural gas service is currently available in the general project area and provided by the Southern California Gas Company (SoCalGas). Natural gas service will be provided in accordance with the SoCalGas' policies and extension rules on file with the CPUC at the time contractual arrangements are made.

- **Cable Services**. Cable services are currently available in the general project area and provided by Time Warner Cable. Services include cable television, high-speed internet, and digital telephone service. Subsequent franchise negotiations with the City could result in future changes to the cable service provider.

- **Telephone Service**. Telephone service to the site is available from AT&T Inc. Cellular telephone, internet, and related service may be available from a number of providers.

2.9 Resource Conservation

2.9.1 Ground Water Recharge Basins

Four existing ground water infiltration ponds, presently being used by the Fontana Water District, are located in Neighborhood II within the areas of PAs 82, 91 and 92. The areas in which those infiltration ponds are located are presently proposed for residential and non-residential development. Concurrent with the development of those planning areas, the ground water infiltration ponds or, more specifically, there existing capacity will be relocated, reconfigured, and incorporated into the El Rancho Verde Royal Vista Golf Course redesign within Neighborhood II.

2.9.2 Avoidance and Long-Term Preservation

As part of the County-approved LCNPD, an approximately 212.7-acre portion of Lytle Creek was set aside to promote the conservation of the SBKR. This 212.7-acre area encompasses the 160.5-acre SBKR conservation area previously set aside by LDC for the long-term preservation of the species and the 52.2-acre SBKR conservation area set aside by the LDC as mitigation in connection with the County's approval and adoption of the LCNPD. In connection with mitigation of the WVWD's Reservoir Nos. 7-3 and 7-4 construction projects along Lytle Creek Road, this 212.7-acre area was expanded by four acres in 2006 to provide mitigation for those WVWD projects. The resulting 216.8-acre area is referred to in this EIR as the "SBKR Conservation Area."

A total of approximately 908.0 acres located within the project boundaries, including portions within Lytle Creek, will be preserved as open space and set-aside as a habitat preserve and/or as a lasting aesthetic amenity.[46] These retained lands presently support several sensitive plant and wildlife species, including San Bernardino kangaroo rat (SBKR), Los Angeles pocket mouse, northwestern San Diego pocket mouse, and Plummer's mariposa lily. A large population of Parry's spineflower plants, estimated at over 120,000 individuals, will be preserved within proposed on-site conservation areas.

2.9.3 Conservation of the SBKR/RAFSS Habitats

The proposed project has been designed to contribute to the conservation and recovery of the SBKR and to assist with the conservation and recovery of other sensitive species which could utilize portions of the project site either now or in the future. In order to contribute to the long-term conservation of lands designated as critical habitat and to allow those lands to continue to provide conservation benefits to protected species, in identifying natural open space areas proposed to be set aside under the LCRSP project, areas designated or formerly designated as critical habitat by the USFWS for the SBKR and California gnatcatcher (CAGN) were considered.

An additional objective of the project has been to preserve a significant portion of the RAFSS habitat that now exists on the project site, including representative areas of the pioneer, intermediate, and mature associations of this plant community and habitat. Although some areas of RAFSS are proposed to be removed, the majority is designated as natural open space.

Selection of the areas of natural open space to be conserved also was based, in part, on considerations of the location of other past natural open space dedications benefiting the SBKR and RAFSS habitat in the general area. In particular, the project has been designed to make a synergistic contribution to SBKR conservation and recovery by designating suitable SBKR habitat as natural open space which will be contiguous to, expand upon, and augment other SBKR conservation areas and areas containing RAFSS habitat, through a combination of habitat set asides and active habitat restoration and enhancement.

[46]/ This acreage includes: (1) 443.1 acres within and immediately adjacent to Lytle Creek; (2) 167.7 acres within Neighborhood I (adjacent to the San Bernardino National Forest and Glen Helen Regional Park); (3) 160.5 acres plus an additional 52.2 acres in Lytle Creek set aside for SBKR conservation as part of the LCNPD; (4) 4.0 acres of SBKR habitat in Lytle Creek purchased by the West Valley Water District and set aside as an expansion of the SBKR conservation area.

As proposed, the project would retain and contribute an additional 612.5 acre of natural open space to be preserved in perpetuity. Of that, 443.1 acres are immediately adjacent to the existing 216.8-acre "SBKR Conservation Area." This additional 443.1 acres will result in the expansion of the protected SBKR area in Lytle Creek to 659.8 acres.

The approximately 443.1 acres of open space and RAFSS habitat in and adjacent to Lytle Creek which would be contiguous with: (1) a previous dedication of 52-acre area set aside for SBKR conservation by the LDC in connection with the County's approval of the LCNPD; and (2) another 160.5 acres of RAFSS and SBKR habitat in Lytle Creek which had been identified as contributing to SBKR conservation through consultations with federal agencies as part of the LCNPD.

The majority of the natural open space to be dedicated by the Applicant (and managed in perpetuity by an appropriate management entity) under the LCRSP project has also been designated as critical habitat for the SBKR by the USFWS. Importantly, the natural open space proposed to be dedicated by this project would link with and expand upon previous conservation dedications by the LDC for the SBKR and CAGN and with hundreds of acres of SBKR conservation lands located both immediately downstream and in the area of Cajon Creek, including SBKR mitigation areas already established by Vulcan Materials Company (CalMat), Cemex USA, and the County. In total, these set aside lands would secure a large amount of connected, occupied, and suitable SBKR habitat and RAFSS habitat within the Lytle Creek and Cajon Creek systems, thereby securing a substantial amount of functional habitat for the species in this critical habitat unit and enhancing the likelihood that those species would persist in this area over time.

In addition, the project proposes to extend the scope of its SBKR habitat restoration, enhancement, and monitoring program, as currently being applied to 216.8-acre "SBKR Conservation Area," comprised of wash and upland refugia habitat within Lytle Creek. The USFWS has previously approved a habitat restoration and enhancement plan for approximately 40 acres of upland refugia habitat within a large island in Lytle Creek. The project proposes to expand this restoration program to increase the amount and quality of occupied SBKR habitat within Lytle Creek, thereby further enhancing the long-term conservation and recovery of this species within the Lytle Creek and Cajon Creek systems. The CAGN would also be expected to be able to benefit from this restoration program, helping to ensure that Lytle Creek can continue to provide opportunities for the potential movement of this species, as well as others, through the general project area.

2.9.4 Maintenance of Wildlife Movement Corridors

On-site portions of Lytle Creek function as a regional wildlife corridor. Preservation of the majority of the wash as a natural watercourse will promote the continued viability of this wildlife corridor. As proposed, the off-site conservation area extending across Lytle Creek ranges in width from about 600 to 2,400 feet, inclusive of on-site and off-site portions upstream of the confluence of Lytle and Cajon Creeks. The width, at its narrowest point, is 600 feet (off-site) between the Cemex USA quarry and 2,500 feet to the north where it passes through Neighborhood III. As proposed, the on-site conservation area extending across Lytle Creek is 1,200-feet wide at its narrowest point at the I-15 Freeway underpass.

Lytle Creek provides wildlife cover through scattered islands and patches of vegetated habitat. The existing mitigation areas contribute to wildlife movement and refuge immediately north of

Neighborhood II (SBKR Conservation Area). Natural open space, as proposed to be set aside as part of the LCRSP project, will link directly with other natural open space preservation areas with similar habitats in the areas of Lytle Creek and Cajon Creek.

Through the implementation of long-term management activities by an appropriate conservation group or the HOA within the preserved habitat areas for the preservation of the SBKR, a means for long-term regional corridor movement management will be provided. These activities include, but may not be limited to, the implementation of a five-year monitoring program and management, in perpetuity, by an appropriate management entity. Maintenance (e.g., fence and sign repair) and habitat management will also be part of the long-term management plan. This plan will be funded through a combination of up-front capital costs and revenue-generating, non-wasting endowment funded by the Applicant. The plan (including adaptive management activities will be implemented on or before impacts occur and will be carried out by the appropriate long-term management entity.[47] The management of these activities will be phased in as the project is developed.

2.9.5 Riparian Habitat Preservation/Restoration for Least Bell's Vireo

Within Neighborhood I, an existing riparian area (Sycamore Flat East) will be preserved and enhanced as part of the proposed project. In addition, mitigation for riparian habitat impacts elsewhere in the project area will include restoration and enhancement of approximately 5.2 acres out of an available 18.9 acres of the existing Sycamore Flat East riparian corridor and adjacent floodplain to improve the quality of habitat for the least Bell's vireo (LBV) and other riparian species.

Currently, this corridor exists in a degraded condition and consists of a mosaic of stands of under-developed willows, mule fat, and exotic weeds. As such, the carrying capacity of the habitat to be impacted is believed to be substantially suppressed for LBV. The proposed habitat maintenance and monitoring activities include the restoration of existing riparian vegetation including invasive species removal; the creation of riparian habitat, including the planting of appropriate riparian plant species; five years monitoring and management in perpetuity; the implementation of adaptive management activities to meet specified success criteria; and implementation of a five-year brown-headed cowbird trapping program. The specific details of the habitat maintenance and monitoring activities will be provided upon the completion of the project's habitat monitoring and mitigation plan (HMMP).

2.9.6 Parry's Spineflower/Plummer's Mariposa Lilly Preservation

As proposed, the LCRSP project would preserve the majority of the Parry's spineflower and Plummer's Mariposa lily, two sensitive plant species, located within the LCRSP project site. Although both species have been found in Neighborhoods II, III, and IV, the vast majority of the individuals occur within the large "island" within Lytle Creek in Neighborhood III. The sensitive plants on this island occur both within a portion already set aside for SBKR conservation as part for the LCNPD and farther east and downstream within a proposed open space area. The retention of these areas under the LCRSP will promote the preservation of the majority of Parry's spineflower and Plummer's mariposa lily found within the project site.

[47]/ Until such time as the appropriate conservation group and/or HOA is identified as the long-term manager of the corridor, the Applicant will be the entity responsible for the management of these activities.

2.10 Conceptual Phasing Plan

The LCRSP serves as a framework document guiding future development, redevelopment, and conservation activities within that designated planning area. Development is proposed to occur in an orderly fashion ensuring that adequate infrastructure and municipal services are in place prior to the issuance of occupancy permits for the individual land uses authorized thereunder. As illustrated in Figure 2-22 (Lytle Creek Ranch Specific Plan - Conceptual Phasing Plan), the project will generally be developed in four phases, corresponding to the four proposed neighborhoods. Subject to market conditions, build-out is projected to occur by 2030 or as may be otherwise required under the provisions of an approved development agreement.[48]

Under the LCRSP, the Applicant retains the right to alter the project phasing program at any time, provided that notice of the phasing change shall be provided to the City's Development Services Director within 20 calendar days of Applicant's election to institute such change.

2.11 Conceptual Annexation Plan

The proposed LCRSP does not specify whether those portions of the project site presently located in unincorporated County areas will be annexed into the City as a single action or whether annexation will occur in a phased manner, potentially timed to correspond with the phased development of the project site. The approximately 1,753.1-acre portion of the project site proposed for annexation is illustrated in Figure 2-23 (Lytle Creek Ranch Specific Plan – Conceptual Annexation Plan). As noted therein, the proposed annexation includes a short segment of the I-15 Freeway right-of-way (in the vicinity of PAs 10 and 11 in Neighborhood I) but excludes the remaining abutting segments of the I-15 Freeway right-of-way extending from Sierra Avenue on the west to the easterly property boundary. In addition, that portion of the project site which is not presently within the West Valley Water District's (WVWD) service area would be annexed therein.

2.12 Conceptual Grading Plans[49]

As illustrated in Figure 2-24 (Lytle Creek Ranch Specific Plan – Conceptual Grading Plans), conceptual grading plans have been developed which serves to create large development pads. Development of the proposed project would involve approximately 4.0 million cubic yards of earth movement to create the project's major building pads, the vehicular circulation system, and a network of utilities and infrastructure systems. As illustrated, a total of approximately 1,539.3 acres, inclusive of both on-site and off-site areas, will be directly impacted by proposed grading operations. As proposed, mass grading will generally occur in four distinct phases.

- **Phase 1**. During Phase I, mass grading will occur within all of Neighborhood I (PAs 1-15) and will involve an estimated 491,000 cubic yards of cut and fill.

- **Phase 2**. During Phase 2, grading activities will occur within all of Neighborhood II (PAs 89-103) and will involve a total of approximately 1,674,000 cubic yards. A levee will be

[48]/ As proposed, it is anticipated that construction will begin in Neighborhood I, followed by concurrent or sequential development in Neighborhoods II, III, and IV. Neither the LCRSP nor this EIR, however, stipulates nor specifies an order of development. The proposed phasing plan is, therefore, subject to potential change and refinement in response to market conditions, consumer demands, and other financing and financial considerations.

[49]/ As require under Section 82.12.040(f)(2) (Preliminary Grading Plan) of the County Development Code, each application shall include a preliminary grading plan.

extended eastward from the existing Cemex USA plant that will tie into the future levee planned for Neighborhood II.

- **Phase 3**. During Phase 3, mass grading will occur within all of Neighborhood III (PAs 29-79) and will involve an estimated 1,530,000 cubic yards of cut and fill. A levee will be extended eastward from the I-15 Freeway to the Cemex USA plant and a landscaped berm separating the project site from the Cemex USA mining operation will be constructed.

- **Phase 4**. During Phase 4, grading activities will occur within all of Neighborhood IV (PAs 20-27) and will involve a total of approximately 307,000 cubic yards. A levee will be extended westward from the I-15 Freeway to the end of Neighborhood IV.

Conceptual grading plans, as with many of the conceptual plans outlined herein, remain subject to modification pending final design and more detailed engineering. All grading activities, however, shall be in substantial conformance with the overall conceptual grading plans and shall incorporate the recommendations presented in the project's geotechnical investigation. All grading shall be accomplished in accordance with applicable City and County standards.

Grading activities will be phased in Neighborhoods I, II, III, and IV in accordance with the approval and development of each of those neighborhoods, as dictated by the City-imposed conditions of approval for the underlying tentative subdivision maps.

2.13 Conceptual Fuel Modification Plan

The project's conceptual "fuel modification plan" identifies specific zones that are subject to fuel modification. The "fuel modification zone" constitutes a strip of land where combustible native or ornamental vegetation has been modified and/or partially or totally replaced with drought tolerant, fire resistant plants. The conceptual fuel modification plan for the proposed LCRSP is presented in Figure 2-24 (Lytle Creek Ranch Specific Plan – Conceptual Fuel Modification Plan Neighborhood I Only).[50] The size and type of the final fuel modification zone(s) will be determined by the RFD and/or SBCFD upon review of preliminary development plans.[51]

The fuel modification plan will all take place within the boundaries of the proposed LCRSP and no encroachment shall take place within the boundaries of the National Forest. As stipulated in

[50]/ The Applicant asserts that fuel modification plans are only applicable to Neighborhood I because remaining areas of the project abut public streets, developed areas, or Lytle Creek.

[51]/ As required under Section 82.13.040(f)(3) (Fuel Modification Plan) of the County Development Code: "Each project application shall include a fuel modification plan describing the fuel modification area required in Subsection 82.15.060(b)6. . .Final plans shall be reviewed and approved by the responsible Fire Authority in conjunction with the County Fire Marshall." The applicable Development Code citation appears to be Section 82.13.060(b)(6). As specified, in pertinent part, therein: "(A) A permanent fuel modification area shall be required around a development project or portions thereof that are adjacent or exposed to hazardous fire areas for the purpose of fire protection. In no case shall this area be less than 100 feet in width as measured from the development perimeter. Where feasible, the area shall be designated as common open space rather than private open space. The recommended width of the fuel modification area shall be determined based on a fuel modification plan filed in compliance with Subsection 82.13.040(f)(3) above. (B) When a development project is phased, individual phases may be required to provide temporary fuel modification areas, where the development perimeter of a phase is contiguous to a subsequent phas of a project, which in it undeveloped state is a hazardous fire area. The need for a temporary fuel modification area shall be determined by the responsible Fire Authority in conjunction with the County Fire Marshall and shall be based upon the same considerations described in Subparagraph a, above, for permanent fuel modification areas and the factors addressed in the required fuel modification plan."

Section 82.13.040(f)(3) of the County Development Code, the fuel modification plan will be submitted to the jurisdictional fire authority at the time a grading permit application is filed with the permit agency by the Applicant.

2.14 Specific Plan Implementation

2.14.1 Specific Plan Administration

The City shall administer the provisions of the LCRSP in accordance with the provisions of the California Government Code (CGC), Subdivision Map Act, "City of Rialto General Plan" (City General Plan), the "City of Rialto Municipal Code" (City Municipal Code), and other applicable State and City regulations. The LCRSP's development procedures, regulations, standards, and specifications shall supersede the relevant provisions of the City Municipal Code, as they currently exist or may be amended in the future.

Any development regulation and building requirement not addressed in the LCRSP shall be subject to the City's adopted codes and regulations. Where there is a question of interpretation, the City's Development Services Director shall make a determination as to the intent of any disputed clause, paragraph, section, or development standard.

The City shall monitor compliance with the LCRSP and any adopted mitigation measures at the following stages: (1) during the review and approval of tentative tract maps, subsequent development permits, and use permits; (2) during the review of working drawings, and prior to the issuance of grading or building permits; (3) prior to the issuance of a certificate of occupancy for buildings within the LCRSP area; (4) prior to the recording of any parcel map or final map within the LCRSP boundaries; and/or (5) upon receipt of any written complaint alleging and providing evidence that the LCRSP requirements or subsequent project approval conditions have been violated. Such written complaints shall be kept anonymous unless disclosure of the complainant is required for court action against the violating party.

2.14.2 Alternative Equivalent Compliance and Transfer of Development Units between Planning Areas

As proposed, within the limitations established under the LCRSP, the specific plan would allow development flexibility by permitting the transfer of development units that have been allocated to various planning areas and neighborhoods between those neighborhoods and planning areas. Residential development within the "Single-Family Residential 1 (SFR-1)," "Single-Family Residential 2 (SFR-2)," "Single-Family Residential 3 (SFR-3), "Multi-Family Residential (MFR)," and "High Density Residential (HDR)" land-use categories within the proposed LCRSP, as depicted in Figure 2-6 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan) and Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary) are "target density ranges" only, meaning that, based upon preliminary development analysis or product type and development acreage, the allocated unit figure is a calculated "target" level of development.

The LCRSP limits total residential development to not more than 8,407 dwelling units and requires that the overall project-wide gross density not exceed 3.5 dwelling units per acre. Subject to those and other limitations (e.g., projected AM and PM daily vehicle trips are not exceeded), under the LCRSP, the precise number of dwelling units that could be constructed within each neighborhood and within each planning area can be transferred within and/or

between designated residential and non-residential planning areas, as described in the proposed LCRSP so long as projected traffic figures (i.e., AM and PM trips) are not exceeded. For example, the LCRSP would allow transfers of dwelling units and non-residential square footage within and between any planning areas in Neighborhoods I and IV, except for those designated "Open Space," provided that the total number of projected morning (AM) and evening (PM) vehicle trips per day for Neighborhoods I and IV do not exceed 3,853 (combined) projected trips. Similarly, transfers of dwelling units and non-residential square footage are permitted within and between any PAs in Neighborhoods II and III, except for those designated "Open Space," provided that the total number of projected AM and PM vehicle trips per day for Neighborhoods II and III do not exceed 12,483 projected AM and PM (combined) vehicle trips.[52]

As long as the maximum dwelling unit cap and the gross density per acre cap and AM and PM trips estimated to be generated by specific neighborhoods are not exceeded, no amendment to the LCRSP would be required to transfer dwelling units from one designated residential PA to another. As proposed, the Applicant retains the right to increase or decrease dwelling unit counts in any residential PA, provided that prior to the time such as a transfer is made, the Applicant submits to the City's Development Services Director a revised land-use plan (Figure 2-6) and detailed statistical summary (Table 2-2) for administrative approval. No tentative map or parcel map may be approved unless it is consistent with the adopted LCRSP, as revised.

Building square footages (intensities) may be transferred within and between areas designated "Village Center Commercial (VC)"; provided, however, a total 849,420 gross leaseable square feet of retail uses shall not be exceeded except as otherwise authorized under the LCRSP. Subject to specified vehicle trip limitations, an increase in the total square footage of non-residential uses may be exceeded for non-retail development, such as office, business park or light industrial uses but not for additional retail.

Prior to the application of any transfer of development, at such time as any overlay use is proposed by the Applicant, a subsequent traffic study would be required by the City as part of the Lead Agency's review process for each subdivision map. The traffic study would serve to document compliance with the trip budgets specified in the proposed LCRSP.

Any transfer of development units or non-residential square footage between neighborhoods and planning areas would need to conform to the following additional standards: (1) grading and landform alteration would substantially comply with that previously approved for the LCRSP; and (2) no new significant environmental impacts, not previously assessed in the FEIR would, result from the transfer. Transfer of residential dwelling units or non-residential square footage within or between neighborhoods and PAs, when conducted in accordance to the provisions of the LCRSP, would not constitute or require a specific plan amendment.

2.14.3 Substantial Conformance

Minor revisions to the plans, guidelines, regulations, and standards set forth in the LCRSP may be approved administratively by the Development Services Director, provided such deviations are deemed to be in substantial conformance with the LCRSP, do not raise environmental issues beyond those examined in this EIR or predicate the need for a subsequent or

[52]/ Information addressing the implementation and administration of this proposed project's trip allowance procedure is presented in "Lytle Creek Ranch Specific Plan – Maximum Trip Allowance Procedure" (Crain & Associates, December 14, 2009), included in Volume II (Traffic Impact Analysis) herein, and in the proposed "Lytle Creek Ranch Specific Plan."

supplemental EIR (14 CCR 15162015163), and are not deemed otherwise detrimental to the public health, safety, and welfare. Minor revisions that may be approved without amending the LCRSP shall be limited to the following:

- Slight modifications to the LCRSP area boundaries, provided that the adjusted land use plan does not impact any previously identified mitigation area(s).
- Dwelling units may be transferred within and between any of the land use categories (SFR-1, SFR-2, SFR-3, MFR, and HDR), as long as the total number of dwelling units within the entire LCRSP area does not exceed 8,407 dwelling units.
- Transfers of dwelling units and non-residential square footage are permitted within and between Neighborhoods I and IV, provided that the total number of projected AM and PM vehicle trips per day for Neighborhoods I and IV combined shall not exceed 3,853 projected AM and PM trips.
- Transfers of dwelling units and non-residential square footage are permitted within and between Neighborhoods II and III, provided that the total number of projected AM and PM vehicle trips per day for Neighborhoods II and III combined shall not exceed 12,483 projected AM and PM trips.
- Minor changes to the circulation plan to accommodate actual conditions on the site or modify ingress and egress locations or to respond to new information that was not available at the time the LCRSP was approved.
- Minor changes to the design of the roadway cross-sections, provided that the streets have adequate capacity to handle the anticipated volumes of traffic.
- Modifications to the proposed project that allow the Applicant to move and adjust land uses, provided that a site plan is submitted to and approved by the City's Development Services Director and the City Engineer. The site plan shall depict the location of all land uses and the relationships of the uses to one another. In evaluating the site plan, all of the following conditions must be met for the site plan to be approved: (1) the total number of dwelling units within the LCRSP boundaries may not exceed 8,407 dwelling units; (2) the total amount of undisturbed (natural) open space within the LCRSP boundaries shall not be less than 829.2 acres; (3) the total amount of land devoted to parks, trails, paseos, landscaped parkways, and private recreation areas shall not be less than three acres per 1,000 person; (4) the circulation plan network is essentially the same with only minor variations; (5) the public health, safety, and welfare shall not be jeopardized by the proposed modifications; and (6) no additional potentially significant environmental impacts are expected to occur as a result of the proposed modifications, except as evaluated in a certified EIR for the project.
- Minor modifications to the architectural or landscape design guidelines.
- Minor modifications to the grading plan.
- Minor modifications to the water, sewer, and/or drainage plan.
- Any modifications to the phasing plan.
- Addition of new information or data to the LCRSP maps, figures, and/or text which does not change the effect of any concepts or regulations.

2.14.4 Specific Plan Amendments

In accordance with the Section 65450 *et seq*. of the CGC, specific plans shall be prepared, adopted, and amended in the same manner as general plans, except that specific plans may be adopted by resolution or by ordinance. Specific plans may be amended, as necessary, in the same manner that they were adopted. If the proposed modifications to the adopted LCRSP do not meet the requirements for substantial conformance, then a specific plan amendment shall

be required. This amendment shall first be reviewed by the City's Planning Commission and approved by the City Council. Said amendment shall not require a concurrent amendment to the City General Plan unless it is determined by the City that the proposed amendment would substantively and adversely affect the City General Plan's goals, objectives, policies, or programs for the LCRSP area. Any amendments to the approved LCRSP shall be subject to the requirements of CEQA and its implementing guidelines.

2.15 Discretionary Permits and Approvals

The City is the "lead agency" for the proposed project and project approvals. Under the State CEQA Guidelines (14 CCR 15367), the "lead agency" is the public agency which has the principal responsibility for carrying out or approving a project and the agency responsible for preparing the analysis of the project's potential significant environmental effects. As part of their deliberations, this EIR will be used by the City, by the County, and by other governmental entities in assessing the potential environmental impacts that may arise in connection with the discretionary approvals related to the approval and implementation of the proposed project.

The Lead Agency's permits and approvals associated with the proposed project include the following discretionary approvals for which applications have been filed with the City:

(1) Amendments to the City General Plan, including its Land Use Element, Circulation Element, Open Space Element and its adopted Sphere of influence;
(2) Prezoning or unincorporated lands;
(3) Amendments to the City's Official Land Use Zoning Map;
(4) Text and map revisions to the City Municipal Code;
(5) Adoption by ordinance of the "Lytle Creek Ranch Specific Plan";
(6) Approval of vesting tentative subdivision maps, street and utility easements, and other subdivision activities, including both an "A" level map for financing purposes only[53] and "B" level subdivision maps for later development activities consistent with the LCRSP;
(7) Approval of a pre-annexation development agreement with the Applicant that will become a development agreement pursuant to Section 65864 *et seq*. of the CGC upon annexation of those portions of the project site presently located in unincorporated County areas into the City; and
(8) Changes of organization and reorganizations, including annexation or phased annexation of those portions of the LCRSP area currently in the County to the City and those lands that may need to be added to or removed from existing special districts.

In addition to the discretionary approvals identified above, this EIR may be used by the City for the following permits and approvals which include, but are not limited to:

(1) Approval of other implementing agreements, as may be determined necessary by the City and the Applicant;
(2) Approval, funding, construction, and acceptance of infrastructure improvements, public works projects, and other public facilities;
(3) Real property conveyances whether to or from the City, the County, other public or quasi-public entities, and private parties;
(4) Approval of site development and design reviews[54];

[53]/ For the purpose of this EIR, it is assumed that the "A" level map would be similar, in terms of general plotting and street configuration, to the conceptual land-use plan presented in Figure 2-6 (Lytle Creek Ranch Specific Plan - Conceptual Land-Use Plan) herein.

(5) Issuance of conditional use permits (CUP) as authorized under the proposed LCRSP;
(6) Issuance of encroachment, excavation, grading, building, and other associated permits and approvals, if considered by the City to be discretionary in nature;
(7) Establishment of one or more Mello-Roos districts, inclusive of the formulation of community facility districts and the construction and operation of each of the qualifying facilities included therein; and
(8) Such other actions as may be reasonably associated with the approval and implementation of the proposed LCRSP, inclusive of all uses, buildings, structures, facilities, public works, infrastructure improvements, and associated activities identified therein.

Under the State CEQA Guidelines (14 CCR 15381), a "responsible agency" is defined as a public agency which proposes to carry out or approve a project, including all public agencies other than the "lead agency" which have discretionary approval authority over the proposed project. With regards to project's approval and implementation, in addition to those actions identified above, a number of discretionary approvals will or may be required from the County. Those discretionary approvals include, but may not be limited to the following: (1) County General Plan amendments; (2) County Development Code amendments; (3) amendment of the LCNPD; (4) amendment to the GHSP; (5) special district formation and/or revision; and (6) annexation and/or detachment of project lands into or from existing County districts and service area and associated reorganization of existing governmental services, including, but not limited to, reorganization of existing County Service Area 70 and Improvement District GH (CSA 70-GH),[55,56] detachment from the San Bernardino County Fire Protection District[57] and its Valley Service Zone, and annexation into the WVWD.

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[54]/ In a potentially relevant case, Health First v. March Joint Powers Authority (2009) (Case No. E045541), the Court of Appeals for the Fourth Appellate District held that approval of a design plan application was ministerial and, therefore, not subject to CEQA. In that case, In that case, the March Joint Powers Authority (March JPA) adopted a general plan and specific plan for the reuse of the March Air Force Base. The general plan and specific plan were subject to environmental review. The March JPA zoned an area for a proposed warehouse distribution center for industrial use and adopted design guidelines which required each project applicant to submit a design review application to be reviewed and approved by the Implementation Committee. The committee had to approve the design plan application if it conformed to the design guidelines. In this case, the court found that the Implementation Committee merely decided "whether the application was consistent with the requirements, fixed standards, and proposed mitigation of the specific plan, focused EIR, and the design guidelines. Because the project subject to the case was a component of the specific plan and the committee had to approve the application if it conformed to the guidelines, the court found that approval of the application was a ministerial act. The court emphasized that the public had ample opportunity to comment on and challenge the reuse plan, the redevelopment plan, the general plan, and the specific plan prior to their adoption. Only under certain circumstances would subsequent environmental review need to take place. The ministerial approval of the design plan application was not one of those exceptional circumstances.

[55]/ A "County service area" is a political subdivision of the County that can have multiple powers (e.g., fire, street lighting, and sewer) that is organized under Sections 252101.1-25211.33 of the California Government Code. As specified by LAFCO, CSA 70 is a Countywide district (last amended July 1, 2008) providing the following functions and services: weed abatement, sewer distribution and treatment, water distribution and treatment, police protection, installation of electric power lines, street lighting, dam construction, road maintenance, parks and recreation (development, operation, and maintenance), animal control, pest control, television translation, flood control, street sweeping, open space and habitat conservation (acquisition and preservation of land for the purpose of protecting unique, sensitive, threatened, or endangered species, or historic or culturally significant lands that are deemed to be in need of protection by the County Board of Supervisors) (Source: LAFCO Policy & Procedure Manual, updated June 2009, p. 14).

[56]/ County Service Area 70 – Improvement Zone Glen Helen (GH) is a County special district. This County Service Area (CSA) was established by an act of the County Board of Supervisors on July 12, 2005 to provide sewer, water, recreation and parks, street lighting, and storm drain services to the Glen Helen area. Among other available services, CSA 70-GH also provides sanitation services to the County Sheriff's Department detention facility and to the LCNPD.

In addition, the following "responsible agencies," including a partial list of other discretionary approvals that will or may be required for the project's approval and implementation, have been identified: (1) California Department of Fish and Game (Section 1602 [California Fish & Game Code] streambed alteration agreement); (2) California Regional Water Quality Control Board, Santa Ana Region (Section 401 [Federal Clean Water Act] water quality certification, NPDES permits, and waste discharge requirements); (3) State Historic Preservation Office (Section 106 [National Historic Preservation Act] consultation; (4) California Public Utilities Commission (ROW authorization); (5) San Bernardino Local Agency Formation Commission (annexation, detachment, and/or reorganization); (6) Rialto Unified School District (school facilities funding and mitigation agreement); (7) Fontana Unified School District (school facilities funding and mitigation agreement); and (8) San Bernardino City Unified School District (school facilities funding mitigation agreement). Agencies, other than those cited herein, may be subsequently identified and are authorized to utilize the Lead Agency's CEQA documentation as the environmental basis for those later discretionary actions.

In addition to those permits and approvals that may be required from local and State agencies, a number of discretionary actions will be required from federal agencies with jurisdiction over the project site or the resources located thereupon. Those federal agencies and associated entitlements include, but may not be limited to, the following: (1) United States Army Corps of Engineers (Section 404 [Federal Clean Water Act] permit); (2) United States Fish and Wildlife Service (Section 7 [Federal Endangered Species Act] consultation and incidental take authorization); and (3) Federal Emergency Management Agency (conditional letter of map amendment).

[57]/ A "fire protection district" is a political subdivision of a County only having fire and related powers (e.g., fire suppression, prevention, hazardous materials, and ambulance) that is organized under Sections 13800-13806 of the California Health and Safety Code.

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3.0 RELATED PROJECTS

3.1 Regulatory Setting

A project may be deemed to produce a significant effect on the environment if any of a number of conditions is met. As defined under CEQA, a significant effect on the environment means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (Section 21068, CEQA; Section 15382, State CEQA Guidelines). CEQA requires that, in evaluating a project's potential effects, both direct (primary) effects which are caused by the project and which occur at the same time and place and indirect (secondary) effects which are caused by the project and which are later in time or farther removed in distance but are still reasonably foreseeable be analyzed (Section 15358, State CEQA Guidelines). An EIR shall also discuss cumulative impacts when the project's incremental effect is cumulatively considerable (Sections 15064[h][1] and 15065[c], State CEQA Guidelines). Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Section 15355 of the State CEQA Guidelines define cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects. In accordance therewith, in order to assess whether an impact is cumulatively considerable or produces a significant cumulative effect, the lead agency is required to examine the proposed project in the context of other past, present, and probable future projects.

When a later EIR is tiered from earlier programmatic analyses, and when the lead agency determines that a cumulative impact has been adequately addressed in the prior EIR, that effect is not treated as significant for purposes of the later EIR or negative declaration and need not be discussed in detail therein (Section 15152[f][1], State CEQA Guidelines).

Section 15130(b)(1) of the State CEQA Guidelines affords public agencies the opportunity to define probable future projects using one of two separate methodologies. As indicated therein, probable future projects can be defined based on either a: (1) list of past, present, and probable future projects producing related or cumulative impacts including, if necessary, those projects outside the control of the agency; or (2) summary of projections contained in an adopted general plan or related planning document or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.

3.2 Summary of Projections Approach

As specified in Section 65450 of the CGC, specific plans shall serve to facilitate the "systematic implementation of the general plan." As an implementation tool designed to promote the attainment of the applicable goals and policies presented in the City General Plan, it is evident that the LCRSP bears a strong relationship not only to the City General Plan but, incrementally, to the impacts associated with the long-term development envisioned in that Citywide planning

document.[1] As a result of that relationship and since the implementation of the specific plan will occur over a number of years rather than at a distinct point in time, for the purpose of cumulative impact assessment, the Lead Agency has elected to utilize a summary of projections approach, including the consideration of reasonably anticipated probable future projects, rather than relying exclusively upon a reasonably anticipated probable future project approach.

The County recently adopted a comprehensive update to the County General Plan and certified a programmatic County General Plan FPEIR. As indicated therein: "As background context for the environmental analysis, an analysis of County build-out capacity was prepared on March 29, 2006 by Stanley R. Hoffman Associates. This analysis compared the theoretical build-out capacity of the County's present General Plan with the present project and with the regional transportation planning forecast of the Southern California Association of Governments."[2]

Referencing the County's "2030 Growth Projections – Background Information," the future population of those unincorporated County lands located throughout the Valley Planning Area is projected to increase by 85,514 individuals between 2000 and 2030. As indicated in Table 3-1 (Valley Planning Area - Total Socioeconomic Projections), during that same time period, the number of housing units will increase by 6,242 units and 31,194 new jobs will be created. These development projections were utilized as the basis of the programmatic impact analysis presented in the County General Plan FPEIR. In addition, as the southern California area continues to intensify, development activities that occur throughout the region and subregion will impose additional impacts on traffic, public services and facilities, and other environmental factors. Since a complete and accurate inventory of all future year projects cannot be known with a level of certainty and since many of those future year activities would likely be located at greater distances farther from the project site but close enough to contribute additional traffic to those segments of the areawide roadway network potentially impacted by the proposed project, annual traffic growth projections are typically added to the ambient traffic and to both the traffic associated with the proposed project and other related projects as a means of depicting the additional traffic from currently unknown projects that may occur in the general project area.

For traffic planning purposes, ambient growth comes from a multitude of projects but is not directly assignable to any individual project. This growth is generally viewed as inevitable since much of the traffic in any area is passing through that area rather than being locally generated. In accordance with the County's "San Bernardino County Congestion Management Program, 2005 Update"[3] (CMP), an ambient growth factor of approximately one to two percent per annum is typically applied to the existing traffic volumes in order to obtain an estimate of those future traffic volumes that may exist along areawide roadway at the proposed project's projected horizon (build-out) year.[4]

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[1]/ The City of Rialto is currently in the process of updating the "City of Rialto General Plan" (1992) and, on July 16, 2008, released a "Notice of Preparation – City of Rialto General Plan Update and Related Zoning Ordinance Amendments" (City of Rialto Planning Department). As indicated therein, the "City has undertaken a comprehensive update of the General Plan to reflect a new vision for the community and to address issues relevant to Rialto today" (p. 3). Pending the adoption of the "General Plan Update," the existing City General Plan (1992) provide appropriate policy direction for land-use decisions within the City.

[2]/ County of San Bernardino (URS Corporation), Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038, certified March 13, 2007, p. IV-1.

[3]/ San Bernardino Associated Governments, Congestion Management Program for San Bernardino County, December 3, 2003.

[4]/ As indicated in "San Bernardino County Congestion Management Program, 2005 Update" (Appendix C - Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County): "One of the primary products of the TIA [traffic impact analysis] is the comparison of future traffic conditions with and without the project. The primary forecasts will be for the CMP forecast year. If a project is phased over a development period past the CMP forecast

Table 3-1
VALLEY PLANNING AREA - TOTAL SOCIOECONOMIC PROJECTIONS

	2000	Increment 2000-2030	2030 Projections[1]	Projections as Percent of Capacity
Population				
1989 County General Plan Capacity[2]	NA	NA	377,185	NA
SCAG RTP 2004	126,511	78,555	205,066	54.4%
2007 County General Plan	121,164	65,514	188,678	49.5%
Housing Units				
1989 County General Plan Capacity[2]	NA	NA	100,063	NA
SCAG RTP 2004	33,195	28,919	62,114	62.1%
2007 County General Plan	32,512	6,242	38,754	38.7%
Employment				
1989 County General Plan Capacity[2]	NA	NA	227,622	NA
SCAG RTP 2004	34,668	28,369	63,037	27.7%
2007 County General Plan[3]	23,428	31,194	54,622	24.0%

Notes:
1. The "1989 General Plan Capacity" estimates are not time-specific, whereas the Southern California Association of Governments' 2004 "Regional Transportation Plan" (SCAG RTP 2004) and the "Proposed General Plan" projections are for the year 2030. These projections have been controlled for future incorporations and annexations.
2. The estimated capacity is based on an amendment of the existing General Plan land-use policies.
3. Employment for the "Proposed General Plan" is based on 2002 data provided by the California Employment Development Department. The data does not account for self-employed or undocumented workers.

Source: Stanley R. Hoffman Associates, Inc.

In formulating the "Regional Transportation Development Mitigation Plan of the County of San Bernardino" (RTDMP), in order to calculate development impact fees, growth forecast data was developed for the each of the subareas identified therein, including the Rialto Sphere of Influence. Presented in Table 3-2 (Regional Transportation Development Mitigation Plan Growth Forecast – City of Rialto) and Table 3-3 (Regional Transportation Development Mitigation Plan Growth Forecast – City of Rialto Sphere of Influence) are the projected growth over the 27-year planning period (2004-2030) addressed in the San Bernardino Associated Governments' (SANBAG) "Development Mitigation Nexus Study"[5] (SANBAG Nexus Study) for both the City and the City's sphere of influence. In addition to the projected increase in the number of dwelling units and job opportunities, the SANBAG Nexus Study also sought to quantify the number of new vehicle trips associated with that growth. With regards to traffic, the growth for each of the residential and non-residential categories was converted into passenger car equivalents (PCE) subtotals.[6] A PCE is defined as a "trip end" divided by two.

year, a build-out forecast with forecast background traffic must be provided. There are two components of the forecast that need to be considered: background traffic and project traffic" (p. C-7). Background traffic refers to all traffic other than the traffic associated with the project itself. Several alternatives are available for forecasting background traffic volumes. For the project opening day analysis, the CMP guidelines require the use of "acceptable growth rates provided by the jurisdiction in which the analysis is to take place" (p. C-8).

[5]/ San Bernardino Associated Governments, Development Mitigation Nexus Study, Appendix K of the SANBAG Congestion Management Program, September 28, 2005; County of San Bernardino, Regional Transportation Development Mitigation Plan Report, Department of Public Works – Transportation.

[6]/ The following trip generation factors were used: (1) Single-family dwelling units – 9.57 vehicle trip ends/day; (2) Multi-family dwelling units – 6.63 vehicle trip ends/day; (3) Retail – 19.5 vehicle trip ends per employee/day; and (4) Non-retail – 1.85 vehicle trip ends/day.

Table 3-2
REGIONAL TRANSPORTATION DEVELOPMENT MITIGATION PLAN GROWTH FORECAST - CITY OF RIALTO

Land Use	**Dwelling Units** (2004)	**Dwelling Units** (2030)	**Growth in Dwelling Units** (2004-2030)	**PCE Trips Growth for Residential** (2004-2030)
Single-Family Residential	19,474	34,335	14,861	71,110
Multi-Family Residential	7,083	10,563	3,480	11,536
	Retail Employees (2004)	**Retail Employees** (2030)	**Growth in Retail Employees** (2004-2030)	**PCE Trips Growth for Retail and Non-Retail Employees** (2004-2030)
Retail Employment[1]	4,390	7,181	2,791	27,212
Non-Retail Employment[2]	17,403	27,758	10,355	9,578

Source: San Bernardino Associated Governments

Table 3-3
REGIONAL TRANSPORTATION DEVELOPMENT MITIGATION PLAN GROWTH FORECAST - CITY OF RIALTO SPHERE OF INFLUENCE

Land Use	**Dwelling Units** (2004)	**Dwelling Units** (2030)	**Growth in Dwelling Units** (2004-2030)	**PCE Trips Growth for Residential** (2004-2030)
Single-Family Residential	5,805	9,489	3,684	17,628
Multi-Family Residential	876	1,344	468	1,551
	Retail Employees (2004)	**Retail Employees** (2030)	**Growth in Retail Employees** (2004-2030)	**PCE Trips Growth for Retail and Non-Retail Employees** (2004-2030)
Retail Employment[1]	237	411	174	1,697
Non-Retail Employment[2]	4,579	7,284	2,705	2,502

Notes:
1. Assuming 87,000 square feet of new retail square footage.
2. Assuming 811,500 square feet of new industrial and 2,705,000 square feet of new high-cube industrial square footage. "High-cube" includes warehouse/distribution centers that are used primarily for the storage and/or consolidation of manufactured goods prior to their distribution to retail locations or other warehouses.

Source: San Bernardino Associated Governments

With regards to the proposed LCRSP project, the City of San Bernardino's "East Valley Travel Forecast Model" (EVTM) was used to evaluate the distribution of project-generated trips through the study area network. A select zone analysis was performed using the EVTM. The future year (2030) cumulative base volumes include the EVTM growth from the existing year, plus the volumes produced by other related projects. The EVTM utilizes a regional land-use database that was developed in close consultation with other relevant jurisdictions. The EVTM is based on the Southern California Association of Government's (SCAG) "San Bernardino/Riverside

Comprehensive Transportation Planning" (CTP) model. The EVTM explicitly takes into consideration all growth within the five-county SCAG region, including the project study area. A generalized ambient growth factor was, therefore, not utilized and is not considered appropriate.

The SCAG region encompasses several federally designated non-attainment and maintenance areas for air quality standards. The United States Department of Transportation's (USDOT) Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), under Section 176(c) of the Federal Clean Air Act (42 U.S.C. 7506[c]) requires that non-attainment areas periodically submit regional transportation plans (RTPs). All RTPs must conform to air quality requirements and meet a number of other specified requirements, including specific requirements on what constitutes the "horizon" year (e.g., at least 20 years in the future) of RTPs for planning purposes.

On May 8 2008, SCAG adopted the "2008 Regional Transportation Plan: Making the Connection" (2008 RTP). The horizon year for the 2008 RTP is 2035. SCAG's projected population, household, and employment growth forecasts for the County and for the City,[7] as reflected in the 2008 RTP, are presented in Table 3-4 (Population, Household, and Employment Forecasts for the County of San Bernardino – 2008 Regional Transportation Plan) and in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), respectively. Assuming project build-out in 2030, also included in the above table is the revised 2030 City (assuming annexation) population and household forecasts based on SCAG's projections plus direct project-related contributions.

In response to SCAG's "Notice of Preparation" for the 2008 RTP, the City informed SCAG of the presence of a number of "major projects that could be of regional significance." Those projects included: (1) "General Plan Update and Comprehensive Zoning Code Update"; (2) "Renaissance Specific Plan" (approximately 1,500 acres of industrial, commercial, and residential use near the SR-210 Freeway); (3) "Foothill Boulevard Specific Plan" (the entire length of the Route 66 frontage through the City of Rialto); (4) "Pepper Avenue Specific Plan" (single-family and multi-family residential and freeway-oriented mixed-use commercial near the SR-210 Freeway); and (5) "Lytle Creek Specific Plan" (approximately 1,500 acres of residential with some neighborhood commercial and commercial near the I-15 Freeway).[8]

3.3 List of Reasonably Anticipated Probable Future Projects Approach

In order to ensure the consideration of all projects that, in combination with the proposed project, have the potential to produce cumulatively significant environmental effects, the list of reasonably anticipated probable future projects was also considered. Under this methodology, the Lead Agency considered not only approved projects that are currently under construction,

[7]/ SCAG projects city level demographic trend projections using the housing unit method, which is one of the most widely used methods for estimating and projecting local area households and population for planning purposes. The housing unit method consists of the following four procedures. First, occupied housing units (households) are estimated by extrapolating the past trend of occupied housing units. Second, household (residential) population is estimated by multiplying occupied housing units (households) by the projected average household size. Third, projected group quarters population is added to projected household population. Fourth, projected total population of local jurisdictions are adjusted or smoothed out in order to maintain its consistency with the projected County population (Source: http://www.scag.ca.gov/forecast/methods.htm).

[8]/ Correspondence from Michael E. Story, Development Services Director to Jessica Kirchner, Southern California Association of Governments (Re: PEIR 2008 RTP and 2008 RCP), July 24, 2007, included in the "Draft 2008 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2007061126" (SCAG 2008).

but also approved projects that have yet to commence construction and unapproved projects currently under environmental review that, based on their location or on other considerations, were determined to have the potential to produce significant cumulative impacts. The inventory of such projects includes not only those projects within the Lead Agency's own jurisdiction but also other projects located within the jurisdiction of other agencies.

Table 3-4
POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECASTS FOR THE COUNTY OF SAN BERNARDINO - 2008 REGIONAL TRANSPORTATION PLAN

Forecast Year	Population (persons)	Households[1]	Individuals per Household	Employment (jobs)	Jobs/Housing Ratio
2005	1,971,318	576,277	3.42	704,239	1.18
2010	2,182,049	637,250	3.42	810,233	1.27
2015	2,385,765	718,602	3.32	897,489	1.25
2020	2,582,765	787,142	3.28	965,778	1.23
2025	2,773,945	852,986	3.25	1,045,480	1.23
2030	2,957,753	914,577	3.23	1,134,960	1.24
2035	3,133,801	972,561	3.22	1,254,749	1.29
2005-2035 Change	1,162,483	396,284	(0.20)	550,510	0.09
2010-2030[2] Change	775,704	277,327	(0.19)	324,727	(0.03)
Project	≤32,720	8,407	3.89	≤3,398	0.40

Notes:
1. For the purpose of this comparison the terms "household" and "housing units" are assumed to be synonymous.
2. Representing the time period which equates to the project's build-out.

Source: Southern California Association of Governments

Information concerning other planned, proposed, and reasonably foreseeable future projects within the general project area was formulated by the project's traffic engineer[9] (Crain & Associates) based on review of City record of filed projects and information obtained through consultation with the Cities of Fontana and San Bernardino and the County. Figure 3-1 (Related Projects Location Map) illustrates the location of each of these related projects in relation to the project site.[10,11] A listing of related projects in the project vicinity that were individually analyzed are summarized in Table 3-6 (Related Projects Summary).

[9]/ Crain & Associates, Traffic Impact Analysis Report for the Lytle Creek Ranch Planned Development Project, February 2008.

[10]/ Although not specifically cited, the West Valley Water District (WVWD) proposes to replace and extend water pipeline service on 1.7 acres of land located within the Lytle Creek Wash in the City and unincorporated County. The purposes of the project are to: (1) increase water delivery capacity of untreated surface water (State Water Project Water) from the San Gabriel Valley Water District's transmission pipeline system to the WVWD and Fontana Water Company by replacing two 12-inch diameter pipelines with one 30-inch diameter pipeline and one 36-inch diameter pipeline; (2) install a pipeline to delivery water to the Cemex USA aggregate mining operation; and (3) install an emergency outflow pipeline that will discharge into existing spreading basins for groundwater recharge. The WVWD seeks an incidental take permit for San Bernardino kangaroo rats from the USFWS (72 FR 31603).

[11]/ On February 27, 2009, The Press Enterprise reported: "A new route proposed for a controversial power line would sidestep Mojave Desert land by running towers parallel to existing lines along Interstate 10 and through San Timoteo Canyon to Lytle Creek. The seventh and latest potential route for the Green Path North project to carry renewable energy to Los Angeles was confirmed Thursday by city Department of Water and Power officials. . .The new path would end at the utility's transmission lines at Lytle Creek north of Fontana. From there, electricity could be routed to Los Angles." Since no additional information concerning this potential transmission line is presently available, no further discussion of that line is presented herein.

Figure 3-1
RELATED PROJECTS LOCATION MAP
Source: Crain & Associates

A total of 104 related projects were identified and are reasonably expected to be in place by the project's projected build-out (2030). The higher socioeconomic data value for each traffic zone, based on a comparison of the EVTM growth projection data and the sum of each zone's known related projects, was used as the incremental growth for that zone. In addition, growth from an additional ten related projects was considered in the EVTM for the future 2030 base. To be conservative, it was assumed that the growth from the EVTM did not include the growth from these related projects.

Table 3-5
POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECASTS FOR THE CITY OF RIALTO - 2008 REGIONAL TRANSPORTATION PLAN

Forecast Year	Population (persons)	Households[1]	Individuals per Household	Employment (jobs)	Jobs/Housing Ratio
2005	99,334	25,202	3.94	21,815	0.87
2010	107,849	27,519	3.92	26,492	0.96
2015	115,846	30,550	3.79	30,295	0.99
2020	123,079	33,029	3.73	33,237	1.01
2025	130,098	35,411	3.67	36,676	1.04
2030	136,846	37,638	3.64	40,555	1.08
2035	143,310	39,735	3.61	46,580	1.17
2005-2035 Change	43,974	14,534	(0.33)	24,766	0.30
2010-2030[2] Change	28,997	10,119	(0.28)	14,063	0.12
Project	≤32,720	8,407	3.89	≤3,398	0.40
Change + Project	≤61,717	18,526	3.33	≤17,461	0.94
2030 Forecast	136,846	37,638	3.64	40,555	1.08
Project	≤32,720	8,407	3.89	≤3,398	0.40
2030 + Project	≤169,566	46,045	3.68	≤43,953	0.96

Notes:
1. For the purpose of this comparison the terms "household" and "housing units" are assumed to be synonymous.
2. Representing the time period which equates to the project's projected build-out.

Source: Southern California Association of Governments

Included on the list of related projects are a number of separate specific plan projects now undergoing review by the City. Those projects, including their corresponding reference number in Table 3-6 (Related Projects Summary) and Table 3-7 (Related Projects Summary – Other Projects of Areawide Significance) include: (1) 1,500-acre "Rialto Renaissance Specific Plan" (Reference No. 104); (2) 23-acre "Elm Park Specific Plan" (Reference No. 16); (3) 31-acre "Olive Grove Specific Plan" (Reference No. 74); (4) 147-acre "Pepper Avenue Specific Plan" (Reference No. 96); and (5) 174-acre "Cactus Avenue Specific Plan" (Reference No. 96).

Although not specifically identified among the list of "related projects," excluding consideration of street improvement projects that have occurred or are scheduled to occur in the general project area, there exist a number of agency-initiated or agency-mandated capital improvement projects that can be anticipated to occur which, either directly or indirectly, have some relevancy to the proposed project. Those projects include, but may not be limited to, the following: (1) the construction and operation of the San Bernardino County Fire Department's Central Valley Station 81 (Glen Helen Parkway); (2) the construction and operation of new and/or relocated groundwater infiltration ponds by the Fontana Water District in the general vicinity of the Cemex USA Lytle Creek Plant; (3) upgrades to the City's existing Ayala Avenue, Cactus Avenue, Lilac Avenue, and Sycamore Avenue Lift Stations; (4) removal of existing and construction of approximately 9,135 linear feet of 12-30 inch transmission sewer mains located downstream of those four lift stations along the southern end of the I-210 Freeway; (5) expansion and operation of the City of Rialto Wastewater Treatment Plant from 11.7 to 16 million gallons per day (mgd); (6) construction and operation by the West Valley Water District (WVWD or District) of new

Zone 7 and Zone 8 (Neighborhoods I), Zone 5 (Neighborhood II), and Zone 6 (Neighborhood III) reservoirs; (7) improvements to the Calnev (Kinder Morgan) liquid fuel (gasoline, jet fuel, and diesel) interstate pipeline (Calnev Pipeline Expansion Project); and (8) future improvements and modifications to the Southern California Gas Company (SoCalGas) gas-line easement adjacent to Neighborhood I.[12]

In addition, operating under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), in January 2010, the USEPA published a "Final Remedial Investigation/Feasibility Study Report – B.F. Goodrich Superfund Site, Rialto, California"[13] (RI/FS) addressing groundwater contamination at the B.F. Goodrich Superfund Site. The RI/FS identifies and evaluates remedial alternatives that mitigate the threats to human health and the environment from the continued spread of contaminated groundwater from the 160-acre area where volatile organic compounds (VOCs) and perchlorate have contaminated soil and groundwater and downgradient areas of groundwater contamination. In all of the remedial alternatives, untreated (raw) groundwater is conveyed to the treatment plant. Treated groundwater is then conveyed and used for one or a combination of the following water use options: (1) distribution to local water purveyors for use as municipal supply (drinking water), industrial supply, or irrigation (reclaimed use); and/or (2) aquifer recharge. Implementation of one or more of those remedial alternatives constitutes a potentially related project.

3.4 Geographic Scope

The geographic area potentially impacted by a proposed action likely varies with the nature of the proposed action, the severity of the environmental effect, the resource considered, and the environment affected. Similarly, in the context of cumulative environmental effects, when the effects of the proposed action are considered in combination with those of other past, present, and reasonably foreseeable future projects, the geographic extent of the potentially affected environment may also vary. The general geographic area potentially impacted by the environmental effects of the proposed project can be used to define the boundaries of the area considered in the assessment of potential cumulative impacts.

Presented in Table 3-8 (Generalized Geographic Scope of Cumulative Impacts) is the general geographic area associated with the different resources addressed herein. Although each of the related projects will continue to produce impacts attributable to those projects, the geographic area of those impacts may be so removed from the proposed project as not to produce a potentially significant cumulative environmental effect. With regards to each of the resources examined herein, the inventory of related projects is based on the corresponding geographic area used to define the possibility of proximal or distal projects materially contributing to a significant cumulative impact.

[12]/ The SCAG EVTM, which is used for the San Bernardino/Riverside County comprehensive transportation plans (CTPs), takes into account all growth in the five County southern California region (including the County of San Bernardino and County of Riverside). Thus, expected growth including growth from other related projects which are not cited in the traffic study are considered in the EVTM traffic volume projection. Note that the related projects located within the City of Rialto were separately called out. The higher of the growth from these related projects versus the EVTM model growth projection for each traffic analysis zone (TAZ) was used as the incremental growth for that zone. Furthermore, the growth from 10 related projects (which were identified to be of areawide significance) were considered in the traffic study, assuming the growth from the EVTM did not include the growth from these related projects. Although the EVTM accounts for all regional growth in the area, these related projects were considered in the traffic analysis in order to be conservative. Thus, all foreseeable growth was considered at least once.

[13]/ United States Environmental Protection Agency (CH2MHill), Final Remedial Investigation/Feasibility Study Report – B.F. Goodrich Superfund Site, Rialto, California, January 25, 2010.

Table 3-6
RELATED PROJECTS SUMMARY

NO.	SIZE	UNIT	DESCRIPTION	LOCATION
1	43,365	sf	New Sanctuary	1123 S. Cactus Ave.
2	15	acre	Container Storage Facility	S/S Lowell, W/O Locust
3	16	du	Single Family Residential	Btwn Locust & Maple, S/O Persimmon
4	24	du	Single Family Residential	W/O Linden, ext of McWethy
5	27,280	sf	Office, Shop & Storage	Westerly terminus of Lowell
6	23	du	Single Family Residential	NWC Baseline & Cactus
7	20,400	sf	Warehouse & Maintenance Bldg.	E/S Locust, S/O Vineyard
8	2,112	sf	Two-Story Office Bldg.	233 North Riverside
9	126,000	sf	Storage Facility	E/S Locust S/O Riverside
10	22,094	sf	Used Car Sales Lot	S/S Foothill, btwn Lilac & Cactus
11	26	du	Single Family Residential	NWC Etiwanda & Pepper
12	5,394	sf	Auto Repair Facility	E/S Lilac, 150' S/O Foothill
13	9	du	Single Family Residential	W/S Linden, N/O Summit
14	24	du	Single Family Residential	W/S Cactus, 213' N/O Baseline
15	28	du	Apartment	E & W sides of Palm, 250 ft. S/O Walnut
16	132	du	Single Family Residential	SEC Cactus & BaseLine Rd.
17	13,678	sf	Office	NEC Laurel & Lowell
	19,097	sf	Maint. Shop	
18	13,745	sf	Multi-tenant Retail Bldg. Within Shopping Ctr.	NEC Highland and Riverside Ave.
19	21	du	Single Family Residential	NEC Maple Ave. & Summit Ave
20	29	du	Single Family Residential	S/S Bonnie View, E/O Willow
21	7,200	sf	Retail Center	466 E. Foothill (NWC Foothill & Acacia)
22	143,900	sf	Freight Terminal	SWC Lowell & Locust
23	19,500	sf	RV Maint. & Repair Fac.	S/S Slover, 190' W/O River
24	27,598	sf	2 Industial Buildings	NWC Lowell & Laurel
25	15	du	Single Family Residential	Btwn Locust & Maple Ave., S/O Persimmon
26	14	du	Single Family Residential	592 N. Linden Ave.
27	40	du	Rehab. Apartments	Willow/winchester
28	9.52	acre	Contractors Storage Yard	2330 S. Willow Ave.
29	250,000	sf	Retail (Walmart SuperCenter)	SWC San Bernardino & Riverside
	34,000	sf	Misc. Retail Pads	
	0.79	acre	Gas Station	
	(125,000)	sf	Walmart (To be Removed)	1610 S. Riverside
30	132	du	Apartment	N/S Rialto, 350' e/o Maple Ave,
31	15,090	sf	Savon Pharmacy w/ Drive-thru	S/S Base Line Rd., 600 ft. W/O Riverside Ave.
32	9,300	sf	Restaurants	NWC Riverside Ave. & Highland
33	4,200	sf	Retail Center	1621 South Riverside
34	20	du	Single Family Residential	W/S Eucalyptus, S/O Frisbie Park
35	15	du	Single Family Residential	W/S Cedar, Btwn. Bohnert & Summit Ave.
36	20,000	sf	2 Industrial Buildings	E/S Fitzgerald, 227 S/O Leiske Dr.
37	5,000	sf	Preschool in Existing Building	515 West Rialto
38	21,183	sf	Alteration of Smog Shop to Entertainment Ctr.	363 W. Valley
39	6,280	sf	Retail	NEC Ayala & Base Line Rd.
40	18,000	sf	Industial Building	Leiske Dr., W/O Ayala
41	10	du	Single Family Residential	E/S Cedar, btwn. Woodcrest & Miramont
42	14,635	sf	Office	2352 North Locust
43	1,396,495	sf	Two Distribution Bldgs.	W/O Riverside Ave., E/O Holly
44	43,000	sf	Retail	Foothill and Cedar
45	15,000	sf	Warehouse & Office	429 West Rialto Avenue
46	12,000	sf	Addition to Existing Church	311 S. Sycamore
47	4,392	sf	Retail Center	SC Foothill Blvd. & Willow
48	20	empl	Bio-solids processing facility	501 E. Santa Ana Ave.
49	10,785	sf	Lumber Yard Office, Retail, Storage	S/O Rialto, E/S Spruce
50	22,606	sf	Shopping Center	1364 W. Foothill (NEC Foothill & Linden)
51	83,300	sf	Expansion to Distribution Facility	330 West Resource Dr.
52	12,000	sf	Storage Bldg.	3141 S. Riverside Ave.
53	15,500	sf	Drive-thru pharmacy	S/S Base Line Rd., 600' W/O Riverside

Table 3-6 (Continued)
RELATED PROJECTS SUMMARY

NO.	SIZE	UNIT	DESCRIPTION	LOCATION
53	15,500	sf	Drive-thru pharmacy	S/S Base Line Rd., 600' W/O Riverside
54	1,400,000	sf	Warehouse Distribution	N/O Santa Ana River, W/O Riverside
55	402,500	sf	Industrial Building	562 W Santa Ana
56	24	du	Single Family Residential	NWC Linden & Merrill Ave.
57	295,000	sf	Distrib. Warehouse	100 S Cedar
58	3,764	sf	Two-Story Retail Center	420 S. Riverside
59	17	du	Single Family Residential	670 S. Lilac Ave.
60	192,844	sf	Warehouse	1409 S. Lilac Ave.
61	19	du	Single Family Residential	S/S San Bernardino btwn Spruce & Idylwild
62	20,800	sf	Industrial Bldg.	2280 S. Lilac Ave.
63	725,937	sf	Warehouse/Distribution Bldgs.	NWC & NEC Cedar & Rialto
64	40	du	Condominium	S/S Rialto, 175' E/O Maple Ave.
65	38	du	Apartment	1062 S. Riverside Ave.
66	11	du	Apartment	1012 S. Riverside Ave.
67	888	sf	Office Addition to Existing Warehouse	2805 Industrial Dr.
68	683	sf	Telecommunication Facility	1794 West Easton
69	4,642	sf	Auto Sales & Servicing	515 West Valley Blvd.
70	6,340	sf	Retail Center	NEC Cactus & Bloomington
71	705	sf	Addition to SBC building	495 S. Riverside Ave.
72	2,900	sf	Gas Station w/ Conv. Store & Car Wash	NWC Riverside Ave. & Agua Mansa Rd.
	1,850	sf	Restaurant w/ Drive-Thru	
73	800	sf	Concrete Batch Plant	S/S Santa Ana, 320' W/O Willow
74	204	du	Single Family Residential	N/S Base Line, 300' E/O Fitzgerald (31 acres)
75	3,041	sf	Church	234 West Merrill
76	16,250	sf	Addition to Existing Manufacturing Bldg.	168 S. Spruce
77	7,750	sf	Industrial Bldg.	2741 S. Lilac Ave.
78	17	du	Single Family Residential	E/S Acacia, approx. 600' S/O Carter
79	29,630	sf	Warehouse	E/S Lilac Ave. btwn Slover & Mindanao
80	1,040	sf	Office	211 West Valley
	(1)	du	Single Family Residential (To be converted)	
81	127.5	sf	Wireless Telecomm. Fac. Co-location	150 S. Larch
82	1,155	sf	Wireless Telecomm. Co-location	Ball field, Jerry Eaves Park
83	1,022	sf	Wireless Telecomm. Fac. Ww/60' monopine	1464 West Merrill Ave.
84	192	sf	Co-location Tele. Comm. Fac. On Monopalm	140 West Easton
85	150	sf	Co-location Tele. Comm. Fac. On Monopole	E/S of Willow, 900' N/O Valley
86	150	sf	Co-location Tele. Comm. Fac. On Monopalm	855 West Bast Line Rd.
87	10,833	sf	Industrial Building	W/S Riverside, approx. 170' S/o Slover
88	330,000	sf	Industrial Building	SWC Agua Mansa & Riverside Ave.
89	2,208	sf	Warehouse Addition to Existing Trailer Facility	225 West Slover
90	900	sf	Trailer Storage Facility (2.81 Acres)	SWC Linden & Rialto
91	6,014	sf	Auto Retail Wholesale in Existing Auto Repair Fac	1731 South Cactus
92	70	du	Condominium	E/S Willow, S/O Merrill Ave.
93	1,636	sf	Dog Kennel	435 West Randall
94	51	du	Condominium	W/S Riverside, 400' S/oO Merrill Ave.
95	17,750	sf	Industrial Building	S/S Slover, 256' W/O Riverside Ave.
96			Pepper Ave. Specific Plan	Pepper Avenue, S/O 210 Ext.
	291	du	Single Family Residential	
	594	du	Multi Family Residential	
	13	acre	Commercial	
97	119,440	sf	Warehouse	375 South Cactus
98	9,000	sf	Warehouse w/ office	1230 Durst Dr.
99	23,000	sf	Warehouse	1253 W. Rialto
100	4,976	sf	Addition to existing retail bldg.	SEC Riverside Ave. & South St.
101	800	sf	Convert Banquet Patio into Outdoor Seating Area	728 E. Foothill Blvd.
102	60,000	sf	Building Materials Retail Center	165 S. Spruce Avenue
103	25	du	Condominium	166 W. Walnut

Table 3-6 (Continued)
RELATED PROJECTS SUMMARY

NO.	SIZE	UNIT	DESCRIPTION	LOCATION
104			Renaissance Rialto	Generally bounded by Casmalia St. to the north, Baseline Rd. to the south, Alder Ave. to the west and Ayala Dr. to the east
	3,853	du	Residential	
	1,174,323	sf	Retail/Commercial	
	711,553	sf	Office	
	436,961	sf	"Town Center" Retail Shopping Center	
	4,554,199	sf	Business and Industrial Park	

Table 3-7
RELATED PROJECTS SUMMARY
OTHER RELATED PROJECTS OF AREAWIDE SIGNIFICANCE

					Employees	
		EVTM	Single-Family	Multi-Family		Non-
No.	Project	Zone	Dwelling Units	Dwelling Units	Retail	Retail
1	Empire North	85	241	312	0	0
2	Lytle Creek North	86	2234	172	218	899
3	CALMAT	87	0	0	0	3448
4	Rolling Hills- Gordon	88	406	0	0	0
5	Rolling Hills- Bice	89	292	0	0	0
6	Martin Ranch	208	329	0	0	0
7	Kendall	747	0	0	420	0
8	Lowes	748	0	0	403	0
9	Culligan	749	0	0	228	0
10	Paradise Hills	750	235	269	0	0
Note: Employment includes School, Golf Course & Park						

Source: Crain & Associates

Table 3-8
GENERALIZED GEOGRAPHIC SCOPE OF CUMULATIVE IMPACTS

Resource	Geographic Area	Resource	Geographic Area
Aesthetics	Local	Land Use and Planning	Regional and Local
Air Quality	Regional and Local	Mineral Resources	Regional
Biological Resources	Regional and Local	Noise	Local
Cultural Resources	Local	Population and Housing	Regional and Local
Geology and Soils	Local	Public Services	Local
Hazards and Hazardous Materials	Local	Transportation and Traffic	Regional and Local
Hydrology and Water Quality	Regional and Local	Utilities and Service Systems	Local

Source: City of Rialto

Where the nature of the resources affected and the assessment of cumulative impacts warrants a different geographic area of assessment, an explanation as to the delineation of the geographic area and the basis for that delineation is provided in the impact analysis section.

4.0 IMPACT ANALYSIS

Except where otherwise noted, the description of the existing environmental setting and the analysis of effects of the proposed project and other related projects on the environmental, including impacts at the State, national, and global level, are not examined herein. The analysis has been undertaken in response to the City's receipt of a development application. As such, since the focus of this assessment is on the project-related and cumulative effects that might occur should that Lead Agency elect to approval or conditionally approve the proposed project, the Lead Agency's initiation of this action and the analysis itself is reactive in nature. For example, in conducting this analysis, the Lead Agency has not first sought to answer the question on how best the regional conservation of protected species should occur. Rather, with regards to conservation, the project is examined in the context of adopted plans and policies, the environmental and regulatory setting in which the project now exists, and the conditions that might exist following the project's implementation. Speculation concerning unknowable future events is beyond the scope of this EIR (Section 21082.2, CEQA; Section 15145, State CEQA Guidelines).

Focusing on both project-related and cumulative environmental impacts, presented in the following sections of this EIR is a topic-specific analysis of the potential direct and indirect environmental effects resulting from the adoption of the proposed specific plan and from the development,[1] public works, and public facility activities associated with and that will follow the plan's adoption and from the subsequent construction, implementation, operation, use, habitation, and maintenance activities that may be associated therewith. The topical issues addressed herein were identified by the Lead Agency and presented in the NOP, included in Appendix I-A (Notice of Preparation and Comments Received in Response to the Notice of Preparation). This section briefly describes the format of the following topical analyses.

Pursuant to Section 15063 of the State CEQA Guidelines, the Department prepared and disseminated an Initial Study which included the Department's preliminarily determination that the project, as then proposed and prior to consideration of mitigation, had the potential to produce a number of significant or potentially significant environmental effects, either directly or indirectly, relative to certain aspects of the following topical issues, including: (1) aesthetics; (2) air quality; (3) biological resources; (4) geology and soils; (5) hydrology and water quality; (6) land use and planning; (7) mineral resources; (8) noise; (9) population and housing; (10) public services; (11) recreation; (12) transportation/traffic; and (13) utilities and service systems.

With regard to the analysis of each of those issues, except where otherwise noted, a consistent format has been presented under each of those topical headings presented in this EIR. Under each heading, separate sections are provided identifying any site-specific or project-specific technical studies germane to that specific issue, describing the existing environmental and regulatory setting, presenting the recommended threshold of significance standards utilized by the Lead Agency to assess the potential significance of each identified project-related and cumulative environmental effect, delineating those impacts that could potentially result from the project's approval and subsequent construction, implementation, operation, use, habitation, and maintenance, listing the mitigation measures recommended by the City, and presenting the

[1]/ As used herein, the term "development" is intended to be inclusive of public and private development, redevelopment, and, where applicable, the conservation of real property relating, either directly or indirectly, to the implementation of the proposed project.

Lead Agency's preliminary findings concerning the post-mitigated level of significance of the project's significant environmental effect.

Except where noted, the analyses of each of the impact categories examined herein has been divided into seven sections, many of which may themselves include separate subsections focusing upon distinct aspects of the specific issue being presented or evaluated. Each of those sections is identified below, including a brief discussion of that section's intent and the general nature of the information presented therein.

- **Technical Reports**. Because of potential relevancy to the proposed project, the EIR identifies and incorporates by reference certain technical reports containing site-specific, project-specific, or area-specific information. Each of the cited reports were examined by the Lead Agency in the preparation of this EIR and the information presented therein considered in the derivation of the Department's preliminary findings. Each of those referenced reports is available for inspection at the Department during the City's regular business hours.

- **Regulatory and Policy Setting**. The presentation of the regulatory and policy setting throughout this EIR is not intended to be inclusive of all federal, State, and local statutes, regulations, rules, policies, plans, and standards governing the project site and/or the general project area. Certain statutes, regulations, policies, plans, and standards, including those excerpted from the County General Plan and the City General Plan, may have application to other topical heading. To avoid redundancy, those policies are generally cited under a single heading. Each of the statutes, regulations, policies, plans, and standards cited herein should be assumed to apply to such other sections of this EIR where those policies may also be deemed to be applicable.

  The discussion of the regulatory and policy setting is neither intended to serve as a tutorial nor provide detailed information concerning existing regulatory requirements, including the interpretation and application of the regulatory and policy setting as established under case law. Certain permits referenced herein may have specified expiration dates and/or may impose requirements for specific implementing action. In recognition of the length of the project's build-out period (2030), the project's regulatory discussion should not be interpreted as exclusionary but rather inclusive of additional, subsequent, and/or replacement permits and implementing actions. Similarly, all reference to applicable or potentially applicable statutes is intended to be inclusive of any amendments that may have been or that may be adopted following the enactment of the original statute.

  Since statutes, regulations, rules, policies, plans, and standards may change over time, the information presented is neither intended to limit the discussion of the project's statutory and regulatory setting nor foreclose the consideration of other applicable statutes, regulations, rules, policies, plans, and standards that could have potential application, either directly or indirectly, to the proposed project and its potential environmental effects. The material presented is provided for informational purposes only and does not constitute a legal opinion as to the interpretation and/or application of the statutes, regulations, rules, policies, plans, standards, and court cases so cited. Questions regarding the interpretation and application of the information cited should be directed to the City Attorney or to independent legal counsel.

Because of the format selected, there may exist or appear to exist certain overlap between the discussion of the regulatory setting and the discussion of the environmental setting. Each subsection is, however, intended to present a specific focus but may incorporate or include information also found in another section or subsection of this document.

- **Environmental Setting**. Referencing Section 15125(a) of the State CEQA Guidelines, "[a]n EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives."

  The purpose of providing a description of the existing environmental setting is to provide a meaningful context against which the Lead Agency and other stakeholders can examine the physical changes resulting from the project and assess the significance of the project's effects, as measured from those physical baseline conditions that exist on and near the project site, generally at the time of publication of the NOP and prior to the project's approval or conditional approval.

- **Threshold of Significance Criteria**. Based, in part, on the factors presented in Appendix G of the State CEQA Guidelines, for each topical issue addressed in this EIR, the Lead Agency has identified one or more quantitative, qualitative, or performance-based standard that serve as the basis for a threshold of significance determination. This document identifies the recommended threshold standards that have been identified for each topical issue based on a review of existing policy documents, the State CEQA Guidelines, and other relevant or potentially relevant documents.

  In addition to the topic-specific threshold criteria identified in each corresponding section, there exists other "mandatory findings of significance" which universally apply to the environmental analysis but are not specifically cited in each section. As excerpted from Appendix G of the State CEQA Guidelines, those mandatory threshold criteria are identified below:

  - ◊ Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal species or eliminate important examples of the major periods of California history or prehistory?
  - ◊ Does the project have impacts that are individually limited, but cumulative considerable?
  - ◊ Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

- **Impact Analysis**. As required under Section 15126.2 of the State CEQA Guidelines, "[a]n EIR shall identify and focus on the significant environmental effects of the project.

In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published. . .Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects." The environmental impacts addressed in this EIR include those identified in the Initial Study and such other significant environmental effects as were identified by the Lead Agency during the preparation of this document, including those raised in comments submitted in response to the City's dissemination of the NOP.

To assist in understanding the project's potential impacts, except where otherwise noted, the impact analysis is divided into the following three separate subsections: (1) construction impacts, addressing the potential environmental consequences associated with the project's approval and subsequent development; (2) operational impacts, focusing on those conditions that will likely exist following the completion of construction and the operation, occupancy, habitation, and use of the proposed land uses authorized under the LCRSP; and (3) cumulative impacts, examining the potential effects of the proposed project when combination with other reasonably anticipated future projects within the general project area.[2] Based on the size of the proposed project and the fact that development activities will occur over a number of years, construction-term and operational impacts may occur simultaneously, rather than in separate and distinct phases.

The City General Plan MEIR identified the following four "classes" of impacts relative to certain topical issues: (1) Class I (significant environmental impacts which cannot be mitigated or avoided); (2) Class II (significant environmental impacts that can be mitigated or avoided; (3) Class III (impacts that are [a] adverse but not significant and do not require action to approve the projects or [b] not adverse); and (4) Class IV (beneficial changes that will occur as a result of project implementation).[3]

For each identified impact, based on the stated threshold of significance criteria, the Lead Agency presents its preliminary determination concerning whether the impact, prior to the consideration of any mitigation measures, has the potential to manifest at a significant level. For the purpose of this EIR, those categories and that nomenclature has not been expressly retained. In lieu of those four classes presented in the City General Plan MEIR, each of the environmental impacts identified herein, have been categorized as being: (1) significant and unavoidable; (2) potentially significant unless mitigation incorporated; or (3) less than significant.

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[2]/ As indicated in Section 15355 of the State CEQA Guidelines, "cumulative impacts" refers to "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. . .The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." Section 21083 of CEQA provides the following general standard for the analysis of cumulative impacts: "The project may have a 'significant effect on the environment' if. . .The possible effects of a project are individually limited but cumulatively considerable. As used in this paragraph, 'cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." Section 15130 of the State CEQA Guidelines provides that "[a]n EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant."

[3]/ *Op. Cit*., Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, p. 1.1-1 and 1.1-2.

"Significant" environmental effects constitute those impacts that exceed the identified threshold of significance criteria and which cannot be feasibly mitigated to a less-than-significant level. "Potentially significant" environmental effects constitute those impacts that exceed the identified threshold of significance criteria but which can be avoided or substantially reduced through the implementation of those mitigation measures identified in the EIR. "Less than significant" environmental effects constitute those impacts that do not exceed the identified threshold of significance criteria and, therefore, do not require the identification of mitigation measures in order to reduce those effects to below the identified threshold standard.

- **Recommended Mitigation Measures**. As required under Section 21002 of CEQA, "[t]he Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significance environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which would avoid or substantially lessen such significant effects."

  As a result, the Lead Agency has a statutory obligation to seek to mitigate the significant environmental effects of its actions. Under this section, for each significant environmental effect identified in the EIR, the Lead Agency has sought to identify one or more mitigation measures whose implementation would serve to reduce, avoid, rectify, or compensate for the identified effect. If no feasible mitigation measures exist for the identified significant effect, the City explicitly notes the absence of any such measures.

  As indicated under Section 15126.4(a)(3) of the State CEQA Guidelines, "[m]itigation measures are not required for effects which are not found to be significant."

  The project's environmental analysis, as well as a number of recommended mitigation measures presented herein, reference a specific land use and refer to that land use by its current or assumed ownership or by its common or generally accepted name. It can be assumed that over the 20-year horizon period examined in this analysis, ownership and business names of specific uses could and will likely change. The names assigned herein are intended for convenience only, presented to assist stakeholders understand the land use which is being referenced in the context of what now exists. As such, future ownership and/or name changes with regards to those uses and any project-specific obligations resulting from those uses would not materially alter the intent and enforceability of any mitigation measures where those ownerships or names are presented. Similarly, any imprecision with regards to document references to real or assumed current ownership and/or name would not serve as a basis for negating the enforceability of any such measures. Conversely, any substantial change in the operational characteristics of proximal off-site uses, such as the cessation of operations, could provide a factual basis for the Lead Agency's reconsideration of any such mitigation measures.

- **Level of Significance after Mitigation**. Each topical section concludes with a declaration of the Lead Agency's preliminary determination whether the identified environmental effects associated with that topical issue and following the implementation of any recommended mitigation measures can be mitigated to below a level of

significance, as measured against the stated threshold of significance criteria. As identified in this EIR, despite the concerted efforts of the Lead Agency to minimize the significant environmental effects of the proposed project, this document concludes that there will remain one or more environmental impacts that cannot be feasibly mitigated to a less-than-significant level.

For convenience, the DEIR is divided into numerous chapters, sections, and subsections. Background information and analyses may be presented in a particular chapter of the document although that information might be viewed as more appropriately located in another topical area. The DEIR should, therefore, be viewed holistically, such that information and analyses presented in one portion of that document should be considered application to the information and analysis presented in other portions of the EIR. Needless repetition of information would only serve to add length but not substance to the Lead Agency's analyses.

As required under Section 15002(h) of the State CEQA Guidelines, "CEQA requires more than merely preparing environmental documents. The EIR by itself does not control the way in which a project can be built or carried out. Rather when an EIR shows that a project could cause substantial adverse changes in the environment, the governmental agency must respond to the information by one or more of the following methods: (1) changing a proposed project; (2) imposing conditions on the approval of the project; (3) adopting plans or ordinances to control a broader class of projects to avoid the adverse changes; (4) choosing an alternative way of meeting the same need; (5) disapproving the project; (6) finding that changes in or alterations to the project are not feasible; or (7) finding that the unavoidable, significant environmental damage is acceptable when weighted against the merits of the project, as provided in Section 15093 of the State CEQA Guidelines.

In order to facilitate informed decision making, presented in Section 6.0 (Alternatives Analysis) is the analysis of a number of possible alternatives to the proposed project. Those alternatives have been formulated in recognition of and in response to the project's significant environmental effects and, in addition to the "no project" alternative, present other development options available or potentially available to the Lead Agency and to the Applicant that, if implemented, could reduce or avoid one or more of the project's adverse environmental consequences.

4.1 LAND USE AND PLANNING

Emanating from the Tenth Amendment of the United States Constitution which reserves to the states their inherent powers, the authority for local governments to adopt land-use policies and regulations is the "police power" (i.e., the inherent power and obligation of a state government or sovereign, usually delegated, in part, to municipalities, to make whatever laws are appropriate and necessary to maintain public safety and security, morality, health, and propriety). The police power entitles municipalities to take actions and adopt laws and policies that protect the public's health, safety, and welfare. Article XI, Section 7 of the California Constitution states that cities and counties "may make and enforce within its limits all local, police, sanitary, and other ordinances or regulations not in conflict with the general laws." Under the police power, local governments are provided broad discretion to determine use and development of lands within their boundaries. Police powers have evolved into two distinct areas of land-use law, namely environmental protection and land-use regulations, both of which are derived from the police power of states to protect public health, safety, and welfare.[1]

In the context of this EIR, "land use and planning" relates to: (1) the existing and potential future physical use of the project site; and (2) the policies, plans, and regulations of both the Lead Agency and other governmental entities governing and defining those uses.[2] The focus of this analysis is on the physical changes to the existing land uses resulting, either directly or indirectly, from the project's implementation and on the public policies that control, regulate, and define those changes. Except as otherwise noted, "land use and planning" is not inclusive of either natural features, those regulations that limit public exposure to environmental constraints, or the actual constraints (affecting the use of real property) themselves. Other sections in this EIR more specifically address those regulations, those constraints, and their possible land-use and planning implications.

4.1.1 Technical Reports

No previous site-specific or project-specific technical reports focusing specifically on the issues of land use and planning were prepared or examined by the Lead Agency. The County's "Land Use Background Report" (County of San Bernardino, October 31, 2005) provides general information germane to regional and subregional land-use conditions and changes. In addition, other technical reports referenced throughout this EIR have potential relevancy to the assessment of the project's land-use and planning impact and were considered by the Lead Agency in the preparation of this analysis.

4.1.2 Regulatory and Policy Setting

4.1.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

[1]/ Salsich, Peter W., Jr. and Tryniecki, T.J., Land-Use Regulations – A Legal Analysis and Practical Application of Land Use Law, Second Edition, 2003.

[2]/ As used herein, the term "uses" is intended to be inclusive of all uses, buildings, structures, facilities, public works projects, infrastructure improvements, and associated activities relating to both the existing physical environment and to the development and conservation of the project site.

- **Standard Enabling Acts**. The United States Department of Commerce institutionalized comprehensive planning in the Standard Zoning Enabling Act of 1926 (SZEA) and the Standard City Planning Enabling Act of 1928 (SCPEA). The SZEA allowed municipalities to adopt zoning regulations and specified that zoning must be in accordance with the comprehensive plan. The SZEA included a grant of power, a provision that the legislative body could divide the local government's territory into districts, a statement of purpose for the zoning regulations, and procedures for establishing and amending the zoning regulations. A legislative body was required to establish a zoning commission to advise it on the initial development of zoning regulations. In 1926, the United States Supreme Court (Euclid vs. Ambler Realty Company) upheld the constitutionality of zoning authority to provide for public welfare through the separation of land uses.

  The SCPEA included: (1) the organization and power of the planning commission, which was directed to prepare and adopt a "master plan"; (2) the content of the master plan for the physical development of the territory; (3) provision for adoption of a master street plan by the governing body; (4) provision for approval of all public improvements by the planning commission; (5) control of private subdivision of land; and (6) provision for the establishment of a regional planning commission and a regional plan.

- **National Forest Management Act**. North of the I-15 (Ontario) Freeway,[3] a portion of the project site abuts the San Bernardino National Forest (SBNF or National Forest).[4] The SBNF is administered by the United States Forest Service (USFS) under the provisions of the National Forest Management Act of 1976 (16 U.S.C. 1601-1614) and the current land and resources management plan.

  The land and resources management plan for the SBNF[5] is contained in a number of inter-related documents, including the "Land Management Plan – Part 1 Southern California National Forests Visions: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest," "Land Management Plan – Part 2 San Bernardino National Forest Strategy," "Land Management Plan – Part 3 Design Criteria for Southern California National Forests: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest," "Final Environmental Impact Statement - Land Management Plans: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest," and "Record of Decision – San Bernardino National Forest Land Management Plan"[6] (Forest Plan).

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[3]/ That segment of the I-15 Freeway from Limonite Avenue exit to the northerly I-15/I-215 Freeway junction was named the "Ontario Freeway" by Assembly Concurrent Resolution 10, Chapter 136, in 1989. That segment of the I-15 Freeway between Kenwood Avenue and Sierra Avenue was named the "CHP Officer Reuben F. Rios, Sr., Memorial Freeway" by Assembly Concurrent Resolution 110, Chapter 93, in 2000.

[4]/ No portion of the project site is located within the Congressional boundaries of the San Bernardino National Forest and none of the properties comprising the Applicant's development application constitute National Forest in-holdings. As such, because federal National Forest policies do not control the project's land use decisions, the following information is presented for informational purposes only and is intended, in part, to facilitate an understanding of land use compatibility issues with other abutting and proximal properties.

[5]/ Privately owned in-holdings located within the SBNF boundaries are not governed by the provisions of the Forest Plan. Additionally, the Forest Plan does not govern or otherwise regulation activities conducted outside National Forest lands.

[6]/ United States Department of Agriculture, Forest Service, Land Management Plan - Part 1 Southern California National Forests Visions: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-075, September 2005; United States Department of Agriculture, Forest Service, Land Management Plan – Part 2 San Bernardino National Forest Strategy, R5-MB-079, September 2005; United States Department of Agriculture, Forest Service, Land Management Plan – Part 3 Design Criteria for

The portion of the adopted land-use plan for the SBNF located in proximity to the project site is presented in Figure 4.1-1 (San Bernardino National Forest Land Management Plan). As depicted, the federal land-use designation for properties within and abutting the National Forest boundaries is "Developed Area Interface (DAI)." The Forest Plan notes that this zone includes areas adjacent to communities and concentrated use areas and developed sites with more scattered or isolated community infrastructure. Although this zone allows a broad range of higher intensity uses, "the intent is to limit development to a slow increase of carefully designed facilities before developing new ones."[7]

The USFS further notes: "Much of the urban interface and concentrated use areas within the National Forest boundary are included in the Developed Area Interface zone. Accordingly, most of our [USFS] community defense work and fuels management activities in response to the National Fire Plan will be focused within this zone. The Developed Area Interface zone includes the Wildland/Urban Interface (WUI) zone described in the National Fire Plan. Within the WUI zone there are two sub-zones called the WUI Defense zone and the WUI Threat zone. Areas beyond these zones can, under the right conditions, be included in the WUI zone and therefore are described as the WUI influence zone. The DAI zone is especially compatible with community defense work and already includes a large number of the National Forest System roads that enable access for community defense work or fire suppression. The zone is also compatible with the location of sites needed for a variety of special-uses."[8]

As indicated in the Forest Plan, to the extent indicated, the following land uses are suitable in the DAI: (1) recreation residential tracts (designated areas); (2) organization camps (designated areas); (3) lodges, resorts, and clubs (designated areas); (4) hunting and fishing (regulated by the State); (5) target shooting areas (by exception); (6) public motorized use on NFS roads (suitable); (7) authorized motor use (suitable); (8) off-highway vehicle use on NFS roads and trails (designated roads and trails); (9) public motorized use off NFS roads and trails (suitable in designated open areas; (10) mountain bikes on NFS roads and trails (unless otherwise restricted); and (11) dispersed area camping (suitable unless otherwise restricted.[9] As such, as indicated, these uses may exist within those DAI areas abutting the project site.

The Forest Plan has a "place-based program emphasis" through which, for planning purposes, the SBNF is subdivided into distinct geographic units called "places." As illustrated in Figure 4.1-1 (San Bernardino National Forest Land Management Plan), the "Lytle Creek Place" extends to the south boundary of the National Forest. The Forest Plan outlines, in part, the following "desired condition" for this place: "Lyle Creek Place is maintained as a natural appearing landscape that functions as a location for family-oriented, day-use and dispersed and developed recreation."[10]

Southern California National Forests: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-080, September 2005; United States Department of Agriculture, Forest Service, Final Environmental Impact Statement - Land Management Plans: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-074A and B, September 2005; United States Department of Agriculture, Forest Service, Record of Decision – San Bernardino National Forest Land Management Plan, R5-MB-114, April 2006.

[7]/ *Op. Cit*., Land Management Plan – Part 2 San Bernardino National Forest Strategy, p. 6.

[8]/ United States Department of Agriculture, Forest Service, Record of Decision – San Bernardino Forest Land Management Plan, R5-MB-084, September 2005, p. 7.

[9]/ *Op. Cit*., Land Management Plan – Part 2 San Bernardino National Forest Strategy, Table 2.4.2, p. 3.

[10]/ *Op. Cit*., Land Management Plan – Part 2 San Bernardino National Forest Strategy, R5-MB-079, p. 74.

A portion of the proposed project, including Sycamore Canyon (within Neighborhood I), is located within the Congressional boundaries of the SBNF (but not on National Forest System lands). Privately owned lands within the NFS, commonly identified as in-holdings, are not subject to the jurisdictional authority of the USFS.

- **Farmland Policy Protection Act of 1981**. The Farmland Policy Protection Act (17 U.S.C. 4201-4209) (FPPA) requires that, before taking or approving any federal action that would result in conversion of farmlands[11] to nonagricultural uses, the federal agency must examine the effects of the action using the criteria set forth in the act. If there are adverse effects on farmland, the agency must consider alternatives that would lessen those effects. Under the FPPA, farmlands include prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance. A detailed explanation of those classifications is presented in the California Department of Conservation's (CDC) "A Guide to the Farmland Mapping and Mapping Program."[12,13]

  The CDC is charged with developing programs for the protection the State's agricultural resources. Based on data from the Natural Resources Conservation Service (NRCS), the CDC developed a Farmland Mapping and Monitoring Program (FMMP) classifying different agricultural soil types according to their ability to sustain agricultural crops. The FMMP's "Important Farmland Series maps" and the advisory guidelines for the FMMP identify five agricultural-related categories: prime farmlands, farmland of Statewide importance, unique farmland, farmland of local importance, and grazing land.[14]

  As indicated in the CDC's "San Bernardino County Important Farmland 2004 (Sheet 2)"[15] map, the entire project site is identified as "grazing land," defined as land on which the existing vegetation is suited to the grazing of livestock." No portion of the project site is identified as prime farmland, unique farmland, or farmland of Statewide importance.

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[11]/ As defined, "'farmland' includes all land defined as follows: (A) prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary [or Agriculture]. Prime farmland includes land that possesses the above characteristics but is being used currently to produce livestock and timber. It does not include land already in or committed to urban development or water storage; (B) unique farmland is land other than prime farmland that is used for production of specific high-value food and fiber crops, as determined by the Secretary. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables; and (C) farmland, other than prime or unique farmland, that is of statewide or local importance for the production of food, feed, fiber, forage, or oilseed crops, as determined by the appropriate State or unit of local government agency or agencies, and that the Secretary determines should be considered as farmland for the purposes of this chapter" (17 U.S.C. 4201[c]).

[12]/ California Department of Conservation, A Guide to the Farmland Mapping and Mapping Program, 2004 Edition, 2004.

[13]/ Projects that are not subject to the FPPA include projects on land already developed for urban use, land used for water storage, and land used for the construction of on-farm structures needed for farm operations.

[14]/ "Prime farmlands" are those lands with the best combination of physical and chemical features for the long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yield. The land must have been used for the production of irrigated crops at some time during the four years prior to the mapping date. "Farmland of Statewide importance" are those lands with a good combination of physical and chemical features but with minor shortcomings, such as greater slopes or with less ability to hold and store moisture. The land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date (Source: California Department of Conservation, California Farmland Conversion Report 2000-2002, 2004, p. 5).

[15]/ California Department of Conservation, Division of Land Resource Protection, San Bernardino County Important Farmland 2004, Farmland Mapping and Monitoring Program, September 2005.

- **Religious Land Use and Institutionalized Persons Act**.[16] In response to possible religious discrimination concerning the siting of religious facilities, Congress passed the Religious Land Use and Institutionalized Persons Act of 2000 (42 U.S.C. 2000[cc]) (RLUIPA), protecting religious land uses from religious discrimination. As established under RLUIPA, no government shall impose or implement land-use regulations[17] in a manner that imposes a substantial burden on the religious exercise[18] of a person, including a religious assembly or institution, unless the government demonstrates that imposition of the burden on that person, assembly, or institution: (a) is in furtherance of a compelling governmental interest and (b) is the least restrictive means of furthering that compelling governmental interest (Section 2[a][1], RLUIPA). Even if a municipality can show that its zoning laws serve a compelling interest, it still must demonstrate that its actions are the least restrictive means of protecting that interest. RLUIPA applies, but is not limited to, those circumstances where "the substantial burden is imposed in the implementation of land-use regulations, under which a government makes, or has in place formal or informal procedures or practices that permit the government to make, individualized assessments of the proposed use for the property involved" (Section 2[a][2][C], RLUIPA). Additionally, no government shall impose or implement a land-use regulation in a manner that treats a religious assembly or institution on less than equal terms with a non-religious assembly or institution (Section 2[b][1], RLUIPA).

4.1.2.2 State of California

The following information presents a general discussion of certain California statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **California Planning and Zoning Law**. California's land use and zoning law is codified, in part, in Sections 65000-66037 in Division 1 of Title 7 of the California Government Code (CGC). As required under Section 65300 therein: "Each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgment bears relation to its planning." As further specified under Section 65300.5, it is the Legislature's intent that "the general plan and elements and parts thereof comprise an integrated, internally consistent and compatible statement of policies for the adopting agency." As authorized under Section 65358(a) of the CGC: "If it deems it to be in the public interest, the legislative body may amend all or part of an adopted general plan. An amendment to the general plan shall be initiated in the manner specified by the legislative body."

  Although all general plan elements are given equal credence, the following four mandatory elements directly bear on land use: land use, housing, conservation, and

[16]/ In addition, the California Freedom of Access to Clinic and Church Entrances Act of 2001 (Section 423-423.6, California Penal Code) provides, in part, civil remedies for the commission of prescribed activities that interfere with a person's participation in religious services or that damage or destroy property of a place of worship.

[17]/ As defined in RLUIPA, "land use regulation" means "a zoning or landmarking law, or the application of such a law, that limits or restricts a claimant's use or development of land (including a structure affixed to land), if the claimant has an ownership, leasehold, easement, servitude, or other property interest in the regulated land or a contract or option to acquire such an interest" (Section 8[5]).

[18]/ As defined in RLUIPA, "In general – The term 'religious exercise' includes any exercise of religion, whether or not compelled by, or central to, a system of religious belief" and "Rule - The use, building, or conversion of real property for the purpose of religious exercise shall be considered to be religious exercise of the person or entity that uses or intends t use the property for that purpose" (Section 8[7]).

open space. As specified in Section 65302 of the CGC, the land-use element serves to designate the proposed general distribution, location, and extent of the uses of land for housing, business, industry, open space and agriculture, natural resources, recreation and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land.

On July 20, 2004, Governor Schwarzenegger signed into law Assembly Bill (AB) 1268. AB 1268 amended Section 65302.4 of the CGC relative to individual land-use elements. As amended, the "text and diagrams in the land-use element that address the location and extent of land uses, and the zoning ordinances that implement these provisions, may also express community intentions regarding urban form and design. These expressions may differentiate neighborhoods, districts, and corridors, provide for a mixture of land uses and housing types within each, and provide specific measures for regulating relationships between buildings, and between buildings and outdoor public areas, including streets."

With regards to the housing element, Section 65580 of the CGC specifies that the "Legislature finds and declares as follows: (a) The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order. (b) The early attainment of this goal requires the cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians of all economic levels. (c) The provision of housing affordable to low- and moderate-income households requires the cooperation of all levels of government. (d) Local and state governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community. (e) The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental, and fiscal factors and community goals set forth in the general plan and to cooperate with other local governments and the state in addressing regional housing needs."

With regards to the open space and conservation elements, Section 65302 requires that the general plan include policies for the preservation and protection of open space and agricultural lands and for the conservation of essential natural resources.[19] As indicated in Section 65561 of the CGC, the "Legislature finds and declares as follows: (a) That the preservation of open-space land, as defined in this article, is necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources. (b) That discouraging premature and unnecessary conversion of open-space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage non-contiguous development patterns which unnecessarily increase the costs of community services to community residents. (c) That the anticipated increase in population of the state demands that cities, counties, and the state at the earliest possible date make definite plans for the preservation of valuable open-space land and take positive action to carry out such plans by the adoption and strict administration of laws, ordinances, rules and regulations as authorized by this chapter or by other applicable methods."

[19]/ The open space and conservation elements are afforded equal status with the other five mandatory elements (Sierra Club v. Kern County [1981]).

As described by the Governor's Office of Planning and Research (OPR): "The way in which a city plans its surrounding area can be an important statement of its future intent. It is one means by which city officials can indicate to state and local governments their concerns for the future of surrounding unincorporated lands. Since the general plan is a policy document with a long-term perspective, a city's general plan may logically include adjacent territory which the city ultimately expects to annex or to serve, as well as that which is of particular interest to the city. A local municipality's "sphere of influence"[20] describes its probable physical boundaries and service area and can therefore be used as a benchmark for the minimum extent of the planning area. The city may choose to plan for land uses beyond its sphere when coordinating plans with those of other jurisdictions."[21]

As a tool for local governments, OPR developed "General Plan Guidelines." Among a wide range of other issues, the guidelines acknowledge the importance of job-housing balance as an issue that crosses several general plan elements and most directly affects land use, circulation, and housing. As indicated by OPR: "Jobs/housing balance is based on the premise that commuting, the overall number of vehicle trips, and the resulting vehicle miles traveled can be reduced when sufficient jobs are available locally to balance the employment demands of the community and when commercial services are convenient to residential areas. . .Strategies include locating higher-density housing near employment centers, promoting infill development, promoting transit-oriented development, actively recruiting businesses that will utilize the local workforce, developing a robust telecommunications infrastructure, developing workforce skills consistent with evolving local economies, and providing affordable housing opportunities within the community."[22]

As authorized in Sections 65800-65863.12 of the CGC, cities and counties are authorized to adopt and administer zoning laws, ordinances, rules, and regulations and to implement such general plans as may be in effect in such cities or counties. As provided in Section 65800: "The legislative body of any county or city may, pursuant to this chapter, adopt ordinances that do any of the following: (a) Regulate the use of buildings, structures, and land as between industry, business, residences, open space, including agriculture, recreation, enjoyment of scenic beauty, use of natural resources, and other purposes. (b) Regulate signs and billboards. (c) Regulate all of the following: (1) The location, height, bulk, number of stories, and size of buildings and structures. (2) The size and use of lots, yards, courts, and other open spaces. (3) The percentage of a lot which may be occupied by a building or structure. (4) The intensity of land use. (d) Establish requirements for off-street parking and loading. (e) Establish and maintain building setback lines. (f) Create civic districts around civic centers, public parks, public buildings, or public grounds, and establish regulations for those civil districts."

[20]/ As described by Section 56076 of the CGC: "'Sphere of influence' means a plan for the probable physical boundaries and service area of a local agency, as determined by the commission [LAFCO]." It is an area within which a city or district may expand, over an undefined period of time, through the annexation process. Section 56425 of the CGC requires that LAFCO establish spheres of influence for each city and special district in the county and may establish spheres of unincorporated communities, open space use, or agricultural preserves. The purpose of the sphere of influence is to encourage the "logical and orderly development and coordination of local government agencies so as to advantageously provide for the present and future needs of the county and its communities."

[21]/ Governor's Office of Planning and Research, LAFCOs, General Plans, and City Annexation, The City's Role in Planning and Regulating Land Use, August 1997.

[22]/ Governor's Office of Planning and Research, State of California General Plan Guidelines, 2003, p. 21.

As authorized under Section 65851 of the CGC: "For such purposes the legislative body may divide a county, a city, or portions thereof, into zones of the number, shape and area it deems best suited to carry out the purpose of this chapter." In accordance with that authority, the City has adopted and periodically amends and modifies a comprehensive zoning ordinance, codified in Title 18 (Zoning) of the Municipal Code. As specified in Section 18.02.010 (Purpose) in Chapter 18.02 (General Provisions): "The zoning regulations and districts as herein set forth are made in accordance with a comprehensive plan and are designed to lessen congestion in the streets; to secure safety from fire, panic and other dangers; to promote health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements." Section 65859 of the CGC allows a city to prezone adjacent unincorporated territory. Prezoning, although it has no regulatory effect until the property is annexed, is subject to the requirements applicable to zoning in the city, including the requirement for consistency with the general plan.[23]

The Cortese-Knox Local Government Reorganization Act of 1985, codified in Title 5, Division 3, Part 2 (Section 56000, *et seq.*) of the CGC establishes the framework for annexations, incorporations, consolidations, and special district formations. This law establishes a Local Agency Formation Commission[24] (LAFCO) in each county, empowering it to review, approve, or deny proposals for boundary changes and incorporations for cities, counties, and special districts. The act mandates specific factors which LAFCO must address when considering annexation proposals. Section 56841(g) of the CGC does not mandate that annexations conform to local general plans beyond requiring that the LAFCO consider "consistency with the city or county general and specific plans."

As specified in Section 56741 of the CGC: "Unless otherwise provided in this division, territory may not be annexed to a city unless it is contiguous to the city at the time the proposal is initiated pursuant to this part." As defined in Section 56031 of the CGC: "(a) 'Contiguous' means both of the following: (1) In the case of annexation, territory adjacent to, or territory adjoining territory within, the local agency to which annexation is proposed. (2) In the case of consolidation, territory of a local agency or agencies which is adjacent to, or adjoining the territory of, the consolidating local agency or to the territory of another local agency which is contiguous to the consolidating local agency and to be consolidated with the consolidating local agency. (b) Territory is not contiguous if the only contiguity is based upon a strip of land more than 300 feet long and less that 200 feet wide, that width to be exclusive of highways." As further indicated under Section 56744 of the CGC: "Unless otherwise determined by the commission

[23]/ Governor's Office of Planning and Research, State of California General Plan Guidelines, October 2003, p. 151.

[24]/ The statutes governing the activities of LAFCO are found under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. As indicated therein: "Among the purposes of a Local Agency Formation Commission are the discouragement of urban sprawl and the encouragement of the orderly formation and development of local agencies based upon local conditions and circumstances. One of the objectives of the Local Agency Formation Commission is to make studies and to obtain and furnish information which will contribute to the logical and reasonable development of local governments in each county and to shape the development of local government agencies so as to advantageously provide the present and future needs of each county and its communities" (Section 56301, CGC). LAFCO's more prominent roles including, but are not limited to, creation of spheres of influence, formation of new districts, incorporation of new cities, and annexations to cities or special districts (Source: San Bernardino Local Agency Formation Commission, Environmental Review Guidelines: Administrative Policies and Procedures, undated, p. 1).

pursuant to subdivision (m) of Section 56375, territory shall not be incorporated into, or annexed to, a city pursuant to this division if, as a result of that incorporation or annexation, unincorporated territory is completely surrounded by the city or the territory of that city on one or more sides and the Pacific Ocean on the remaining sides."[25]

Sections 65450-65457 of the CGC authorize cities and counties to prepare and adopt specific plans as a tool for the systematic implementation of the general plan. A specific plan is a regulatory tool designed to guide development in a localized area and may be as general as setting forth broad policy concepts or as detailed as providing direction to every facet of development, from the type, location, and intensity of uses to the design and capacity of infrastructure systems. A specific plan establishes a link between the implementing policies contained in the agency's general plan and the individual development proposal within a defined area. Under State law, no specific plan may be adopted or amended unless the proposed plan or amendment is consistent with the agency's general plan. No public works project, no tentative map, and no zoning ordinance may be approved, adopted, or amended within the area covered by a specific plan unless consistent with the adopted specific plan.[26]

As specified under Section 65913.1 of the CGC, referred to as the "least cost zoning" law, "[i]n exercising its authority to zone for land uses, a city, county, or city and county shall designate and zone sufficient vacant land for residential use with appropriate standards, in relation to zoning for nonresidential use, and in relation to growth projections of the general plan to meet housing needs as identified in the general plan. For the purpose of this section, 'appropriate standards' shall mean densities and requirements with respect to minimum floor areas, building setbacks, rear and side yards, parking, the percentage of a lot which may be occupied by a structure, amenities, and other requirements imposed on residential lots pursuant to the zoning authority which contribute significantly to the economic feasibility of producing housing at the lowest possible cost given economic and environmental factors, the public health and safety, and the need to facilitate the development of housing for persons and families of low or moderate income, as defined in Section 50093 of the Health and Safety Code." This obligation is in addition to the requirements that local housing elements "[i]dentify adequate sites which will be made available through appropriate zoning and development standards and with public services and facilities needed to facilitate and encourage the development of a variety of housing for all income levels."[27]

Although the State conveys to local government the primary responsible for land-use planning, with the passage of AB 857 in 2002, the State established three planning priorities for State agencies and further specified that the Governor's "Environmental

[25]/ Under Section 56375(m), LAFCO is authorized to waive those restrictions if it finds that the application of the restrictions would be detrimental to the orderly development of the community and that the area that would be enclosed by the annexation or incorporation is so located that it cannot reasonably be annexed to another city or incorporated as a new city.

[26]/ Pursuant to Section 65457 of the CGC, any residential development project, including any subdivision, or any zone change that is undertaken to implement and is consistent with a specific plan for which an EIR has been certified after January 1, 1980, is exempt from further CEQA requirements. If after adoption of the specific plan, an event as specified in Section 21166 of CEQA occurs, the exemption provided does not apply unless and until a supplemental EIR for the specific plan is certified.

[27]/ Section 65583(c)(1)(A), CGC.

Goals and Policy Report"[28] (EGPR) be consistent with those priorities. Revisions to the EGPR initiated after January 1, 2004 must provide that the goals are consistent with the State's planning priorities and require State agency requested infrastructure to specify how the proposed infrastructure is consistent with those priorities.

Under Section 65041.1 of the CGC, the "State planning priorities, which are intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety in the State, including in urban, suburban, and rural communities, shall be as follows: (a) To promote infill development and equity by rehabilitating, maintaining, and improving existing infrastructure that supports infill development and appropriate reuse and redevelopment of previously developed, underutilized land that is presently served by transit, streets, water, sewer, and other essential services, particularly in underserved areas, and to preserving cultural and historic resources. (b) To protect environmental and agricultural resources by protecting, preserving, and enhancing the State's most valuable natural resources, including working landscapes such as farm, range, and forest lands, natural lands such as wetlands, watersheds, wildlife habitats, and other wildlands, recreation lands such as parks, trails, greenbelts, and other open space, and landscapes with locally unique features and areas identified by the state as deserving special protection. (c) To encourage efficient development patterns by ensuring that any infrastructure associated with development that is not infill supports new development that uses land efficiently, is built adjacent to existing developed areas to the extent consistent with the priorities specified pursuant to subdivision (b), is in an area appropriately planned for growth, is served by adequate transportation and other essential utilities and services, and minimizes ongoing costs to taxpayers."

- **Surface Mining and Reclamation Act**. The Surface Mining and Reclamation Act of 1995[29] (SMARA), codified in Section 2710 *et seq*. in Chapter 9 of Division 2 of the PRC, was enacted by the State Legislature to address the need for a continuing supply of mineral resources and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As stipulated, in part, under Section 2711 of the PRC, the "Legislature hereby finds and declares that the extraction of minerals is essential to the continued economic well-being of the state and to the needs of the society, and that the reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety." Section 2712 states that it is the Legislature's intent to create and maintain a comprehensive surface mining and reclamation policy, with regulation of surface mining operations, to assure that: (a) adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses; (b) the production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment; and (c) residual public health and safety hazards are eliminated.

[28]/ The EGPR is intended to provide a 20-30 year overview of State growth and development as well as articulate the Governor's environmental goals and policies, including land use, population, growth and distribution, development, conservation of natural resources, air quality, and water quality. The EGPR forms the basis for judgments about major State investments and capital projects, including the allocation of State resources through the budget and appropriations process. The EGPR was transmitted to the State Legislature on November 10, 2003 but was never finalized nor formally approved, as required under Section 65046 of the CGC.

[29]/ SMARA's requirements apply to anyone, including government agencies, engaged in surface mining operations in California, including those on federally managed lands, which disturb more than one acre or remove more than 1,000 cubic yards of material. This includes, but is not limited to prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials.

Under SMARA, city and county lead agencies adopt ordinances for land-use permitting and reclamation procedures.[30] Ordinances provide the regulatory framework under which local mining and reclamation activities within each jurisdiction are conducted.

As specified in Section 2763(a) and (b) of SMARA, if an area is designated by the State Mining and Geology Board (SMGB) as either an area of "regional significance"[31] or an area of "statewide significance"[32] and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to Section 2762(a) or otherwise has not yet acted pursuant to Section 2762(a) then, prior to permitting a use which would threaten the potential to extract minerals in that area, the lead agency shall prepare a statement specifying its reasons for permitting the proposed use, in accordance with the requirements set forth in Section 2762(d).

Lead agency land-use decisions involving areas designated as being of either "regional significance" or "statewide significant" shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of these minerals to their market region as whole and not just their importance to the lead agency's area of jurisdiction.

Section 3675 of SMARA defines a "compatible land use" as a land use that is "inherently compatible with mining and/or that require a minimum public or private investment in structures, land improvements and which may allow mining because of the relative economic value of the land and its improvements" (e.g., very low density residential, geographically extensive but low impact industrial, recreational, agricultural, silvicultural, grazing, and open space). "Incompatible land uses" are defined as those use that are "inherently incompatible with mining and/or that require public and private investment in structures, land improvements, and landscaping and that prevent mining because of the greater economic value of the land and its improvements" (e.g., high density residential, low density residential with high unit value, public facilities, geographically limited but impact intensive industrial, and commercial).[33]

The general project area is underlain by a considerable thickness of Quaternary alluvium deposit. Unconsolidated Quaternary gravels, sands, silts, and clays associated with alluvial fan deposits are exposed throughout the area and relatively recent channel deposits are present in the area of unimproved drainages.

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[30]/ Section 2774.1(f) of SMARA provides that: "The lead agency has primary responsibility for enforcing this chapter (SMARA] and Section 2207." Section 2774.4 provides that if the State Mining and Geology Board (SMGB) finds that a lead agency has failed to perform its specific responsibilities to enforce the act or performs those responsibilities deceptively then the responsibility for enforcement shall be assumed by the SMGB.

[31]/ As defined in Section 2726 of SMARA: "'Area of regional significance' means an area designated by the Board pursuant to Section 2790 which is known to contain a deposit of minerals, the extraction of which is judged to be of prime importance in meeting future needs for minerals in a particular region of the state within which the minerals are located and which, if prematurely developed for alternative incompatible land uses, could result in the permanent loss of minerals that are of more than local significance."

[32]/ As defined in Section 2727 of SMARA: "'Area of stateside significance' means an area designated by the board pursuant to Section 2790 which is known to contain a deposit of minerals, the extraction of which is judged to be of prime importance in meeting future needs for minerals in a state and which, if prematurely developed for alternative incompatible land uses, could result in the permanent loss of minerals that are of more than local or regional significance."

[33]/ Similar definitions of "compatible land uses" and "incompatible lands uses" are presented in Section 810.01 in the County Development Code (pp. 10-99 and 100).

The project site is located in the "San Bernardino Production-Consumption Region." As indicated in Section 3550.8 (Construction Aggregate Resources, San Bernardino Region) in Article 2 (Areas Designated to be of Regional Significant) in Title 14 of the CCR (State Mining and Geology Board Reclamation Regulations), SMGB-designated areas designated as regionally significant include, but are not limited to, "Section B – Thirteen parcels covering the unurbanized portions of Lytle Creek Wash from north of Freeway 15, west to the downtown area of the City of San Bernardino."

- **Subdivision Map Act**. The Subdivision Map Act (SMA), codified in Sections 66410-66499.37 in Title 7, Division 2 and Sections 66499-50-66499.58 in Title 7, Division 3 of the CGC, provides the statutory framework under which local entities regulate land use and development within their jurisdictions by controlling the design and improvement of the subdivision of real property.[34] The SMA was enacted to ensure uniformity of mapping procedures, provide regulation and control of development, and accommodate the dedication of land within a subdivision.[35]

  The necessity for tentative, final, and parcel maps is covered by the provisions of Article 1 (commencing with Section 66425) of Chapter 2 of Division 2. As stipulated therein, "[n]o local agency shall approve a tentative map, or a parcel map for which a tentative map was not required, unless the legislative body finds that the proposed subdivision, together with the provisions for its design and improvement, is consistent with the general plan required by Article 5 (commencing with Section 65300) of Chapter 3 of Division 1, or any specific plan adopted pursuant to Article 8 (commencing with Section 65450) of Chapter 3 of Division 1. A proposed subdivision shall be consistent with a general plan or a specific plan only if the local agency has officially adopted such a plan and the proposed subdivision or land use is compatible with the objectives, policies, general land uses, and programs specified in such a plan" (Section 66473.5, CGC). As authorized under Section 66454 of the CGC, any subdivider may file with a city the tentative map of a proposed subdivision of unincorporated territory, adjacent to such city. The map, in the discretion of the city, may be acted upon in the manner provided in Article 2 (commencing with Section 66452), except that if it is approved, such approval shall be conditioned upon annexation of the property to such city within such period of time as shall be specified by the city and such approval shall not be effective until the annexation has been completed. Section 66498.1(b) of the CGC provides that when a vesting tentative subdivision map is approved, a vested right shall be conveyed to proceed with development in substantial compliance with the ordinances, policies, and standards in effect at the time the application for the vesting map was completed.[36]

[34]/ As indicated in Section 66451 therein: "The procedures set forth in this chapter shall govern the processing, approval, conditional approval or disapproval and filing of tentative, final and parcel maps and the modification thereof. Local ordinances may modify such procedures to the extent authorized by this chapter."

[35]/ As defined in Section 66424 of the CGC, "subdivision" means "any division, by any subdivider, of any unit or units of improved or unimproved land, or any portion thereof, shown on the latest equalized county assessment roll as a unit or as contiguous units, for the purpose of sale, lease or financing, whether immediate or future. Property shall be considered as contiguous units, even if it is separated by roads, streets, utility easements or railroad rights-of-way."

[36]/ Subsequent land use permits, building permits, extensions of time, or other entitlements filed on parcels created by the subdivision may be conditioned or denied only if the review authority determines that: (1) a failure to do so would place the residents of the subdivision or the immediate community, or both, in a condition dangerous to their health or safety, or both; or (2) the condition or denial is required in order to comply with State or federal law.

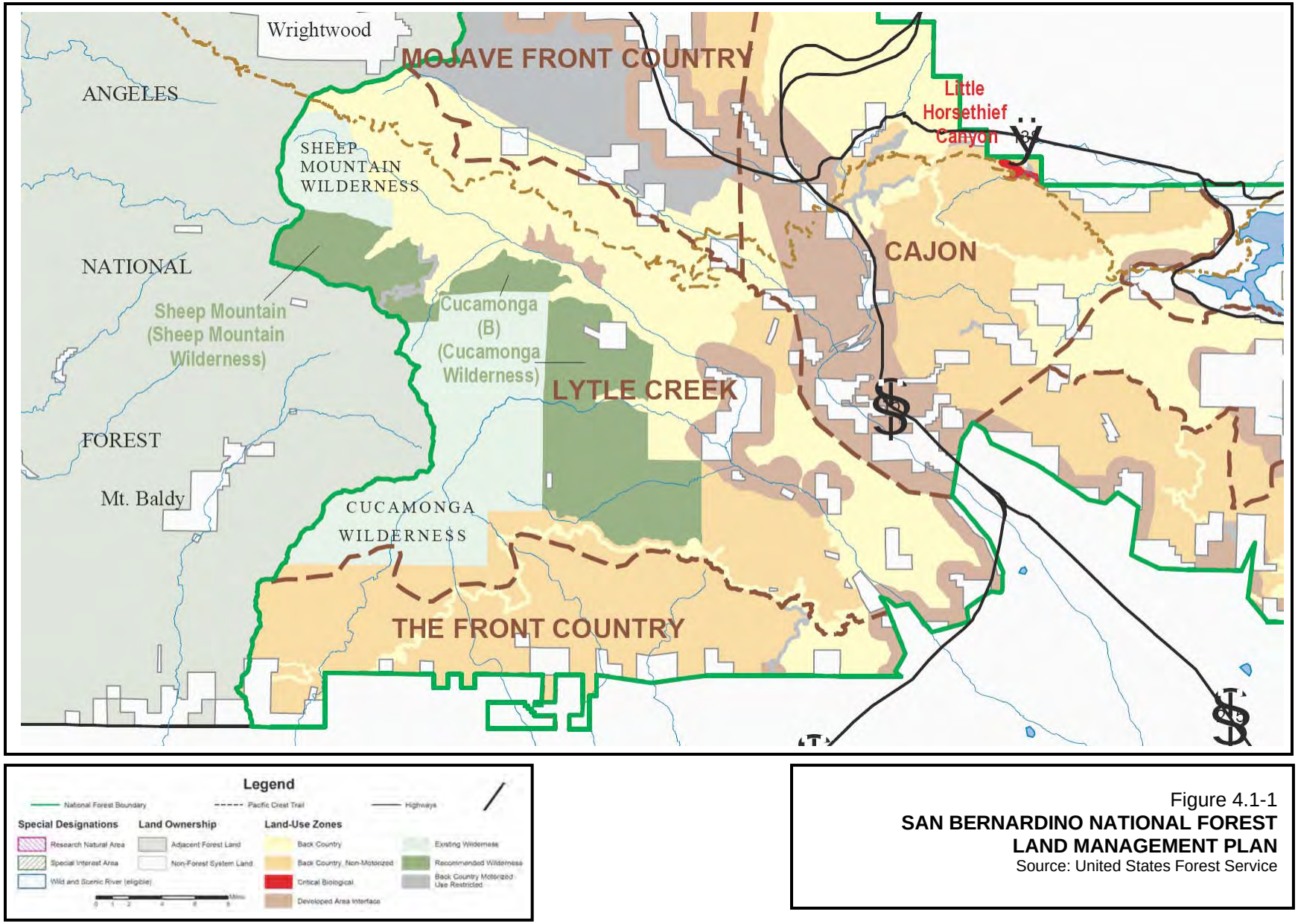

Figure 4.1-1
SAN BERNARDINO NATIONAL FOREST LAND MANAGEMENT PLAN
Source: United States Forest Service

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Once approved, a landowner/developer may proceed with a project unimpeded by subsequent changes to the applicable development regulations. A specific plan adopted prior to the approval of a vesting tentative map may provide local agencies and the landowner/developer a single reference in determining the rights to be vested.[37] Pursuant to Section 66411 of the CGC: "Regulation and control of the design and improvement of subdivisions are vested in the legislative bodies of local agencies. Each local agency shall by ordinance regulate and control the initial design and improvement of common interest developments as defined in Section 1351 of the Civil Code and subdivisions for which this division requires a tentative and final or parcel map."

The SMA allows a subdivider to process a master plan to plot backbone roadway alignments, create builder lots, identify park and school sites, and define the general layout of a large-scale development proposal. This master plan map (which may be used by the subdivider for finance and conveyance purposes) is known as an "A" map or "A-level" map. Subsequent maps, know as "B" or "B-level" maps, would then cover a portion of the "A" map and define the bounds and the design for streets and individual lots. Conditions imposed on the "A" map are often broad and affect a larger geographic area that should be satisfied by the master subdivider and may not be appropriate to the later "B" map. These broader level conditions on the "A" map must typically be satisfied prior to the approval of subsequent "B-level" maps.

- **California Natural Community Conservation Planning Act**. Under the California Natural Community Conservation Planning Act (NCCP), the California Resources Agency began implementing a pilot program in 1991 for the protection of coastal sage scrub habitat. The program organized five counties in southern California, including San Bernardino and Riverside Counties, into eleven planning subregions, which were further subdivided into subareas. Each subregion and subarea must design its own habitat conservation plan (HCP) for endangered species, which is then submitted to the United States Fish and Wildlife Service (USFWS) under the NCCP. If approved, these plans allow local communities to manage endangered species on specified reserve areas without having to seek additional take permits from the USFWS.

  The County, acting in concert with eleven cities, initiated a planning process intended to result in the adoption of the "San Bernardino Valley Multi-Species Habitat Conservation Plan" (MSHCP). As initially conceived, the MSHCP would encompass an area of about 309,000 acres, including portions of the project site, and include San Bernardino kangaroo rat (SBKR) habitat areas.[38] At the present time, the MSHCP has not been adopted and will not be further addressed herein.

- **Public Utilities Code**. Section 851 of the Public Utilities Code (PUC) states, in part, that no utility shall lease any part its plant, system, or other property necessary or useful in the performance of its duties to the public without first having secured from the California Public Utilities Commission (CPUC) an order authorizing it to do so. Every such lease made other than in accordance with the order authorizing it is void. Any lease of property by a public utility shall be conclusively presumed to be of property that is not useful or necessary in the performance of its duties to the public, as to any lessee

[37]/ Governor's Office of Planning and Research, The Planner's Guide to Specific Plans, Part 6, Specific Plan Implementation Measures, April 1998.

[38]/ United States Fish and Wildlife Service (Industrial Economics, Incorporated), Draft Economic Analysis of Critical Habitat Designation for the San Bernardino Kangaroo Rat, August 2001, pp. 25-26.

dealing with such property in good faith and for value. The CPUC has broad discretion to determine if it is in the public interest to authorize a transaction pursuant to Section 851. The primary standard used by the CPUC is whether the transaction will serve the public interest. Where necessary and appropriate, the CPUC may attach conditions to a transaction in order to protect and promote the public interest.[39] The CPUC has repeatedly held that the public interest is served when utility property is used for other productive purposes without interfering with the utility's operation or affecting service to utility customers. "Productive purposes" is defined as encompassing activities that provide monetary benefits to ratepayers.

- **Public Resources Code**. Pursuant to Section 21151.4 of the PRC, no EIR or negative declaration shall be approved for any project involving the construction or alteration of a facility within ¼ mile of a school which might reasonably be anticipated to emit hazardous or acutely hazardous air emissions or which would handle acutely hazardous material or a mixture containing acutely hazardous materials in a quantity equal to or greater than the quantity specified in Section 25536(a) of the Health and Safety Code which may pose a health and safety hazard to persons who would attend or would be employed at the school, unless the agency consulted with the school district having jurisdiction regarding the potential impacts of the project on the school and the school district has given written notification of the project not less than 30 days prior to the proposed approval of the EIR.

  Section 21151.8 of the PRC states, in part, that no EIR or negative declaration shall be approved for any project involving the purchase of a school site or the construction of a new elementary or secondary school by a school district unless the EIR or negative declaration includes information which is needed to determine if the property proposed to be purchased or to be constructed upon is any of the following: (1) the site of a current or former hazardous waste disposal site or solid waste disposal site, (2) a hazardous substance Release site, or (3) a site containing one or more pipelines which carries hazardous substances, acutely hazardous materials, or hazardous materials.

  Senate Bill 352 (Chapter 668, Statutes of 2003) expanded the requirements school districts must follow in identifying and reviewing the impacts of hazardous air emitters and hazardous material handlers within ¼ mile of a new school site and created new requirements if the site is within 500 feet of a busy freeway or traffic corridor (defined in Senate Bill 352 as averaging more than 50,000 vehicles per day in rural areas and 100,000 vehicles per day in urban areas). If a proposed site boundary is within 500 feet of such roadway, the school district must determine if air quality at the site poses a significant health risk to pupils.

- **California Education Code**. The California Education Code (CEC) requires public school districts to notify the local planning agency about siting a new public school or expanding an existing school. The planning agency then reports back to the school district regarding the project's conformity with the adopted general plan. A school district

[39]/ Such conditions might reasonably include the following stipulations that the alternative use of the utility right-of-way: (1) not interfere with the utility's use of the property for utility-related purposes, provided that any utility-initiated change be subject to CPUC approval; (2) the utility retains the ability to install new transmission facilities on the property when deemed necessary by the utility and the CPUC; (3) should environmental claims, in whole or in part, related to the tenancy or activities be made on the utility subsequent to the execution of the leasehold interest, the utility shall not seek recovery of any such claims or defense of such claims from utility ratepayers; and/or (4) such other or alternative conditions as may be imposed by the CPUC.

can, however, overrule local zoning and land-use designations for schools if they follow specific procedures. In addition, all school districts must evaluate new school sites using site selection standards established in Section 14010 of Title 5 of the CCR. Districts seeking State funding for school site acquisition must also obtain site approval from the California Department of Education.

On September 30, 2008, the Governor signed into law Senate Bill 375 (Chapter 728, Statutes of 2008), among other things, amended Section 65080 of the CGC and stipulated that the regional transportation plan (RTP) for regions of the State with a metropolitan planning organization (MPO) adopt a "sustainable communities strategy"[40] (CSC), subject to the requirements of Part 450 of Title 23 of CCR, as part of its RTP, designed to achieve certain goals for the reduction of greenhouse gas (GHG) emissions from automobiles and light trucks in a region. The bill requires the California Air Resources Board (CARB), working in consultation with the MPO, to provide each affected region with GHG emission reduction targets for the automobile and light truck sector for 2020 and 2035 by September 30, 2010, to appoint a regional targets advisory committee to recommend factors and methodologies for setting those targets, and to update those targets every eight years. To the extent the SCS is unable to achieve the GHG emission reduction targets, the bill would require affected MPOs to prepare an "alternative planning strategy"[41] (APS) to the SCS showing how the targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.[42]

As indicted therein: "Current federal law requires regional transportation planning agencies to include a land use allocation in the regional transportation plan. Some regions have engaged in a regional 'blueprint' process to prepare the land use allocation. This process has been open and transparent. The Legislature intends, by this act, to build upon that successful process by requiring metropolitan planning organizations to develop and incorporate a sustainable

[40]/ The sustainable communities strategy shall (i) identify the general location of uses, residential densities, and building intensities within the region; (ii) identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth; (iii) identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to Section 65584; (iv) identify a transportation network to service the transportation needs of the region; (v) gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of Section 65080.01; (vi) consider the State housing goals specified in Sections 65580 and 65581; (vii) set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the GHG emission reduction targets approved by the State board; and (viii) allow the regional transportation plan to comply with Section 176 of the Federal Clean Air Act (42 U.S.C. 7506).

[41]/ The alternative planning strategy shall be a separate document from the regional transportation plan, but it may be adopted concurrently with the regional transportation plan. In preparing the alternative planning strategy, the metropolitan planning organization: (i) Shall identify the principal impediments to achieving the targets within the sustainable communities strategy. (ii) May include an alternative development pattern for the region pursuant to subparagraphs (B) to (F), inclusive. (iii) Shall describe how the greenhouse gas emission reduction targets would be achieved by the alternative planning strategy, and why the development pattern, measures, and policies in the alternative planning strategy are the most practicable choices for achievement of the greenhouse gas emission reduction targets. (iv) An alternative development pattern set forth in the alternative planning strategy shall comply with Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, except to the extent that compliance will prevent achievement of the greenhouse gas emission reduction targets approved by the State board.

[42]/ SB 375 provides a special set of exceptions for the development of the SCS/APS within the SCAG region (Section 65080[b][2][C], CGC). Here, a subregional council of governments and the county transportation commission may work together to proposed a SCS/APS for the subregional area. Although SCAG may still address interregional issues in the SCS/APS, SCAG must include the subregional SCS/APS to the extent consistent with the requirements of a RTP and federal law. SCAG remains responsible for creating a public participation plan, ensuring coordination, resolving conflicts, and making sure that the SCS/APS complies with applicable legal requirements.

communities strategy which will be the land use allocation in the regional transportation plan."[43] "At least two years prior to a scheduled revision required by Section 65588 [CGC], each council of governments, or delegate subregion as applicable, shall develop a proposed methodology for distributing the existing and projected regional housing need to cities, counties, and cities and counties within the region or within the subregion, where applicable pursuant to this section. The methodology shall be consistent with the objectives listed in subdivision (d) of Section 65584 [CGC]. . .It is the intent of the Legislature that housing planning be coordinated and integrated with the regional transportation plan. To achieve this goal, the allocation plan shall allocate housing units within the region consistent with the development pattern included in the sustainable communities strategy."

4.1.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the "County of San Bernardino 2007 General Plan" (County General Plan) and "San Bernardino County Development Code" (County Development Code) policies and ordinances will continue to apply.

- **San Bernardino County General Plan**. Within the framework of the County General Plan, the County has established a number of Countywide goals and policies which are meant to be general and represent an ideal future condition to which planning implementation measures within unincorporated areas are directed. As indicated therein: "In the context of community planning, a goal is a general direction-setter. It is an ideal future condition or end related to the public, health, safety, or general welfare. A goal is a general expression of community values and, therefore, may be abstract in nature. Consequently, a goal is generally not quantifiable or time dependent. A policy, by contrast, is a specific statement that guides decision making for the County. It indicates a commitment of the Board of Supervisors, the County's local legislative body, to a particular course of action. Policies must be clear and unambiguous. A policy is based on and helps to implement the [County] General Plan's goals."[44] Those land-use goals, policies, and programs presented in the County General Plan most closely related to the unincorporated County portion of the project site, if processed through the County, are presented below.[45]

  - Goal LU1. The County[46] will have a compatible and harmonious arrangement of land uses by providing a type and mix of functionally well-integrated land uses

[43]/ The Southern California Association of Governments' "Southern California Compass – Growth Vision Report" (SCAG, June 2004) may, in the future, constitute the type of "blueprint process" referenced in SB 375 and serve, in whole or in part, as the sustainable communities strategy or alternative planning strategy described therein.

[44]/ *Ibid*., San Bernardino County 2007 General Plan, Section I, p. I-15.

[45]/ The County General Plan contains a large array of goals, objectives, programs, policies, and action under a diverse range of headings. Although the Lead Agency has attempted to identify those goals, objectives, programs, policies, and actions that relate, either directly or indirectly, to the project site, the general project area, and/or the existing environmental setting, both herein and throughout this EIR, there may exist other portions of the County General Plan that could be applicable or potentially applicable to the site, the area, and/or the project's existing environmental setting.

[46]/ "County" refers to only the unincorporated portions of San Bernardino County that are presently or that will remain under the jurisdiction of the County and the County Board of Supervisors. Unless otherwise indicated, the

that are fiscally viable and meet general social and economic needs of the residents.

◊ Policy LU1.1. Develop a well-integrated mix of residential, commercial, industrial, and public uses that meet the social and economic needs of the residents in the three geographic regions of the County: Valley, Mountain, and Desert.

◊ Policy LU1.2. The design and siting of new development will meet locational and development standards to ensure compatibility of the new development with adjacent land uses and community character.

Programs: (1) Discourage linear commercial development of shallow depth along streets or highways when it can be shown that such development impairs traffic flow or detracts from the aesthetic enjoyment of the surroundings, or if it can be demonstrated that equally effective services can be provided in an alternative configuration. (2) Establish special performance standards for industrial uses to control industrial odors, air pollution, noise pollution, vibrations, dust, hours of operation, exterior storage, and other nuisances.

- Goal LU2. Residential land uses will be provided in a range of styles, densities, and affordability and in a variety of areas to live, ranging from traditional urban neighborhoods to more “rural” neighborhoods.

◊ Policy LU2.1. Promote varied approaches to residential development to foster a variety of housing types and densities and more efficient use of the land.

Programs: (1) Allow innovative residential development, such as clustering as a means of achieving more efficient housing construction and providing larger areas of usable common open space and avoiding natural hazards. (2) Establish a system to award density bonuses in return for special design, infrastructure improvements, extra amenities, usable open space, or other developer efforts.

- Goal LU6. Promote, where applicable, compact land-use development by mixing land uses, creating walkable communities, and strengthening and directing development towards existing communities.

◊ Policy LU6.1. Mixed-use developments will be encouraged in unincorporated areas of the County for projects that have adequate acreage to accommodate different land uses while providing buffers and other mechanisms to minimize or avoid land use conflicts.

- Goal LU7. The distribution of land uses will be consistent with the maintenance of environmental quality, conservation of natural resources, and the preservation of open spaces.

goals, policies, and programs extracted from the County General Plan are applicable only to the unincorporated portions of the County.

- ◊ Policy LU7.1. Ensure that land use developments within the state-delineated Mineral Resource Zones (MRZs) are in accordance with the adopted mineral resources management policies of the County.

- ◊ Policy LU7.2. Enact and enforce regulations that will limit development in environmentally sensitive areas, such as those adjacent to river or streamside areas, and hazardous areas, such as flood plains, steep slopes, high fire risk areas, and geologically hazardous areas.[47]

- ◊ Goal ED17. Encourage joint city/county/LAFCO planning within city sphere of influence areas to achieve rational and efficient economic development.

- ◊ Goal ED25. As local, unincorporated areas within the County develop, establish financing approaches to fund adequate ongoing public services on a fair-share basis.

- ◊ Goal V/ED1. Promote economic development that is compatible with the land use patters and environment of the Valley Region.[48]

For planning purposes, the County General Plan divides the County into three planning regions (Valley, Mountain, Desert), which are further subdivided into eight sub-regions (East Valley, West Valley, Mountain, Victor Valley, Barstow, Baker, Morongo Basin, Lower Colorado River). The boundaries of the sub-regions are coterminous with the boundaries of the County's seven Regional Statistical Areas (RSAs), as depicted in Figure 4.1-2 (County of San Bernardino Regional Statistical Areas). As described in the 1989 "County of San Bernardino General Plan,"[49] as superseded by the 2007 County General Plan: "The Valley is divided into two major sub-regions: the West Valley (RSA 28) which is largely urbanized, and the East Valley (RSA 29) which is fast becoming urbanized. While the Valley (West and East) contains only two percent of the County's land area, the region contains approximately eighty percent of the County's population. [US]EPA's mandate that the Valley should meet established air quality standards and the inadequacy of existing infrastructure facilities to support the region's burgeoning population are two of the major constraints to future development in the region."[50] As depicted in Figure 4.1-3 (County of San Bernardino - Regional Statistical Area 29), with the exception of Sycamore Canyon which is located in the "Mountain Sub-Region (RSA 30), the project is located within the "East Valley Sub-Region (RSA 29)."

Section 65300 of the CGC places a dual mandate on both cities and counties relating to land-use planning within Spheres of influence (SOIs). Within the County, SOIs are considered to constitute individual planning areas. The land-use policies adopted for sphere areas are designed to encourage annexations or incorporations.[51] The

[47]/ *Op. Cit*., County of San Bernardino 2007 General Plan, Land Use Element, pp. II-32 through II-35.
[48]/ *Ibid*., Economic Development Element, pp. IX-15, IX-18, and IX-19.
[49]/ Since it has been superseded by the "County of San Bernardino 2007 General Plan," any references to or excerpts from the 1989 "San Bernardino County General Plan" herein are not intended to suggest any continuing relevancy of that document with regards to County unincorporated areas. Certain graphics and other material may, however, provide background information relevant to an understanding of the project's environmental setting.
[50]/ County of San Bernardino (Public Services Group, Land Use Services Department), San Bernardino County General Plan, July 1989 (revised April 1998), p. III-B1-1.
[51]/ *Op. Cit*. County of San Bernardino 2007 General Plan. p. II-25.

geographic area comprising the City-adopted and San Bernardino Local Agency Formation Commission (LAFCO) approved Sphere of Influence is illustrated in Figure 4.1-4 (San Bernardino Local Agency Formation Commission - City of Rialto Adopted Sphere of Influence). With regards to the City's northern Sphere of Influence, that area has been prezoned by the City as "Special Study Area." An approximately 1,753.1-acre on-site portion of the proposed LCRSP and the additional approximately 19.9 acres of off-site acreage outside the proposed LCRSP boundaries but included in the project area are located within the City-adopted and LAFCO-approved SOI. No portion of the project site which is not located within the City's existing corporate boundaries is located outside the City's adopted Sphere of Influence.

The County General Plan presents a comparison of the build-out potential in the County's SOIs. With regards to City of Rialto's SOI, the County's comparative analysis of development authorized under the County General Plan and development authorized under the City General Plan is shown in Table 4.1-1 (County and City Comparisons of Build-Out Potential in the City of Rialto Sphere of Influence).[52]

Table 4.1-1
COUNTY AND CITY COMPARISONS OF BUILD-OUT POTENTIAL IN THE CITY OF RIATLO SPHERE OF INFLUENCE

Jurisdiction	**Residential** (dwelling units)	**Commercial** (square footage)	**Industrial** (square footage)
City of Rialto	16,361	29,347,8979	70,837,708
San Bernardino County	10,553	17,146,679	20,146,635

Source: County of San Bernardino 2007 General Plan, Table LU-2.

The County's "Land Use Background Report"[53] presents a comparison between the County and City land-use policies with regards to the City-adopted SOI areas. Inclusive of the entire SOI illustrated in Figure 4.1-5 (City of Rialto Sphere of Influence Land-Use Districts Comparison), County policies indicate a "holding capacity" of 10,553 units and 17.2 and 20.1 million square feet of commercial and industrial space, respectively. In comparison, under City policies, the "holding capacity" would be 16,361 units and 29.4 million and 70.8 million square feet of commercial and industrial space, respectively.[54] In contrast, the "County of San Bernardino Housing Element" presents an estimate of the "total capacity (at current zoning designations)" for the City's northern Sphere of Influence. As indicated in Table 4.1-2 (Potential Dwelling Unit Construction in the City of Rialto Sphere of Influence – County of San Bernardino Housing Element), the County estimates that 2,685 new dwelling units can be constructed within the 1,522.1-acre SOI area (not the 1,753.1-acre area examined herein) based on existing County zoning.[55,56]

[52] / *Ibid*., Table LU-2, p. II-61,

[53]/ As a precursor to the adoption of the County General Plan, the County prepared a number of "background reports" which serve as reference documents and technical appendices for that planning document. Those reports contain information applicable to an understanding of the project's existing environmental setting and conditions likely to exist in the foreseeable future.

[54]/ County of San Bernardino, Land Use Background Report, October 31, 2005, p. 1-219.

[55]/ County of San Bernardino, County of San Bernardino Housing Element, adopted on March 13, 2007, Table 4-14, p. 4-53.

[56]/ The acreages presented in this table are not coterminous with the project site in that, among other differences, they do not include those portions of the project site designated "Floodway (FW)" and, unlike the proposed project, include lands designated "Multiple Residential (RM).

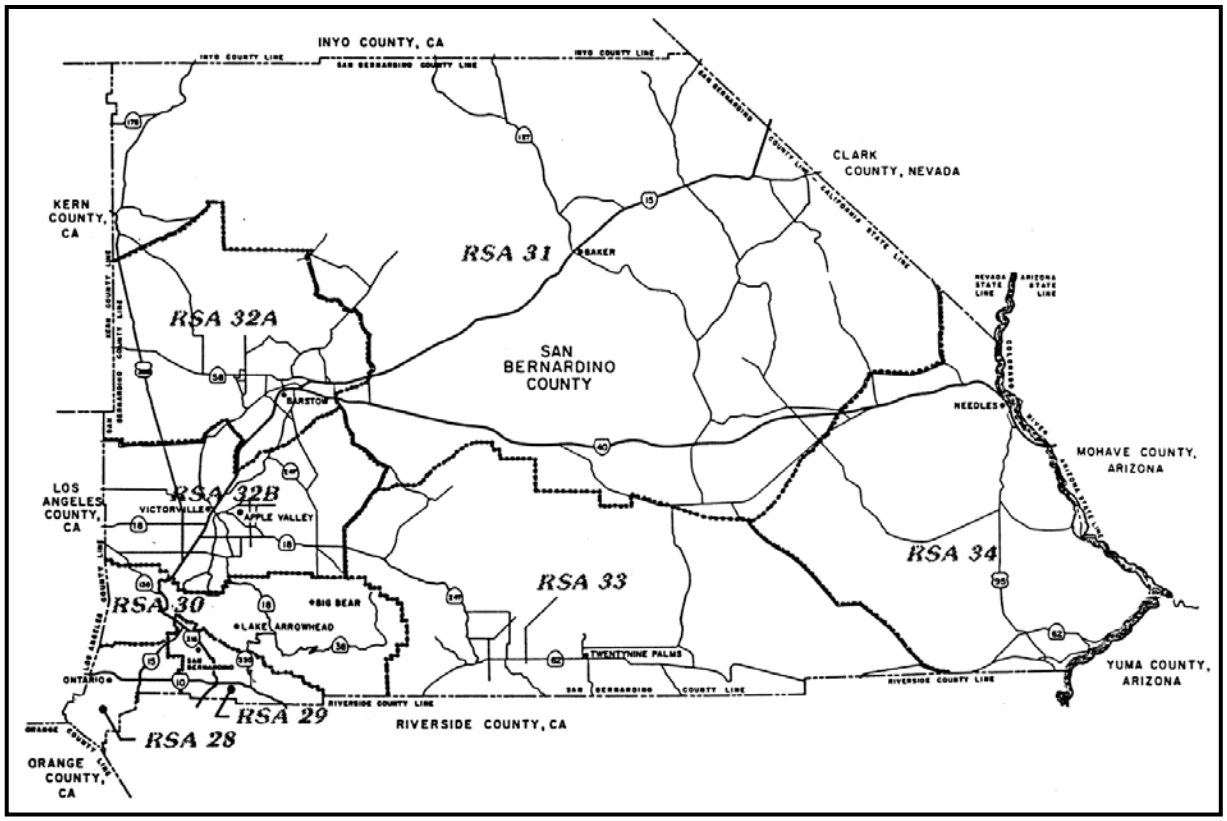


Figure 4.1-2
COUNTY OF SAN BERNARDINO REGIONAL STATISTICAL AREAS
Source: San Bernardino County 1989 General Plan

Figure 4.1-3
COUNTY OF SAN BERNARDINO GENERAL PLAN REGIONAL STATISICAL AREA 29
Source: San Bernardino County 1989 General Plan

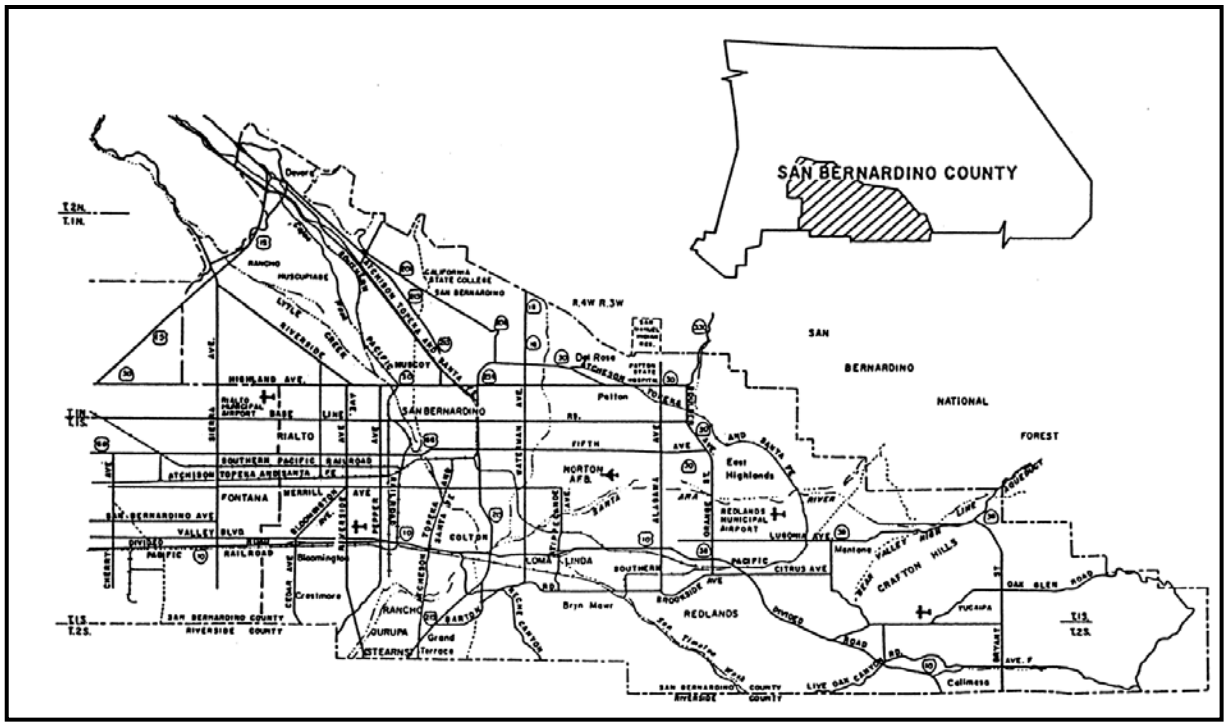


Table 4.1-2
POTENTIAL DWELLING UNIT CONSTRUCTION IN THE CITY OF RIALTO SPHERE OF INFLUENCE COUNTY OF SAN BERNARDINO HOUSING ELEMENT

Zone	Density Range (DU/Acre)	Units	Acres
Rural Living (RL)	0.1-0.5	20	238
Single Residential (RS)	1.0-4.0	1,351	719
Multiple Residential (RM)	12-20	203	10
Special Development (SD)	0.1-2.0	868	434
Specific Plan (SP)	0.1-2.0	243	121
Total	-	2,685	1,522

Source: San Bernardino County

Project-specific information obtained from the County (Information Services Department - Geographical Information Management Services), as presented in Table 4.1-3 (Potential Dwelling Unit Construction in the Area of the Lytle Creek Ranch Specific Plan – County of San Bernardino Geographic Information Systems) and as assembled during the preparation of this EIR, differs from that presented in Table 4.1-2 (Potential Dwelling Unit Construction in the City of Rialto Sphere of Influence – County of San Bernardino Housing Element) and likely more precisely reflects the acreage, land-use designations, and development potential for that portion of the project site located in the County's SOI.

Table 4.1-3
POTENTIAL DWELLING UNIT CONSTRUCTION IN THE AREA OF THE LYTLE CREEK RANCH SPECIFIC PLAN COUNTY OF SAN BERNARDINO GEOGRAPHIC INFORMATION SYSTEMS[1]

Zone	Density Range (DU/Acre)	Units	Acres
Floodway (FW)	-	-	1,175.5
Rural Living (RL)	0.1-0.5	12-62	12.5
Single Residential (RS)	1.0-4.0	117-470	117.6
Special Development (SD)	0.1-2.0	16-32	160.8
Specific Plan (SP)	0.1-2.0	28-57	286.7
Total	-	173-621	1,753.1

Notes:
1. Project-specific information obtained from the County (Information Services Department - Geographical Information Management Services), as presented herein and as assembled during the preparation of this EIR, differs from that presented in Table 4.1-2 (Potential Dwelling Unit Construction in the City of Rialto Sphere of Influence – County of San Bernardino Housing Element) and likely more precisely reflects the acreage, land-use designations, and development potential for that portion of the project site located in the County's Sphere of Influence.

Source: KTGY Group

The County's official land-use districts maps depict parcel-specific, land-use districts and, in combination with the accompanying text, include provisions addressing allowable uses and development standards. In addition, the County General Plan is comprised of a comprehensive series of overlay maps covering nine resource areas. The pertinent County General Plan components are separately discussed below.

◊ **Official Land-Use Districts**. The County General Plan categorizes all privately owned lands within unincorporated areas into one of eighteen official land-use districts. Excluding the 276.7-acre area and the 3.6-acre off-site acreage that includes the Southern California Gas Company (SoCalGas) easement within the area comprising the "Glen Helen Specific Plan" (i.e., Sycamore Flat[57] and Sycamore Canyon), which is separately discussed below, an approximately 1,476.4-acre portion of the project site is presently located within unincorporated County jurisdiction. An additional approximately 16.3 acres, comprising lands outside the proposed LCRSP boundaries but included within the project's analytical area, are also located in County unincorporated area. The remainder of the project site is located within the corporate boundaries of the City.

As depicted in Figure 4.1-6 (San Bernardino County General Plan – Land-Use District Designations), from a land-use perspective, unincorporated portions of the project site are designated "Floodway (FW)," "Single Residential (RS)," "Rural Living (RL)," "Special Development - Residential (SD-RES),"[58] and "Specific Plan (SP)." These land-use designations, applicable to unincorporated areas where development is being processed through the County, are discussed below.[59]

♦ **Floodway** (FW). The purposes of this County land-use designation are to: (1) identify and preserve areas for flood flow, such as the channel of a river or drainage way, and those portions of the floodway adjoining the channels required to effectively carry the discharge of floodwater or flood flow of any river or stream; (2) protect floodways from encroachment by land uses which would be endangered when floodway channels are full or are overflowing into that portion of an adjacent floodplain that becomes part of the channel; (3) prohibit occupancy or the encroachment of any structure, improvement, or development that would unduly affect the capacity of the floodway or unduly increase flood heights; (4) prevent the loss of life or property caused by flood water runoff; and (5) designate natural and man-made floodway and their adjacent areas on a map in order to coordinate flood drainage and land development.[60]

The County General Plan delineates specific "locational criteria" upon which this designation is established and includes those areas: (1) identified as major flood channels by the County; (2) where extensive flooding conditions require the curtailment of development; and (3) identified, mapped, and designated as floodway by the Federal Flood

[57]/ Various documents refer to this area as "Sycamore Flat" or "Sycamore Flats." Depending on their source, both terms are cited herein and are intended to reference the same portion of the project site.

[58]/ *Op. Cit*., Land Use Background Report, Land Use Zoning District Map – Rialto, 2007.

[59]/ The courts have repeatedly held that cities, when they undertake projects on unincorporated county lands, are not subject to that county's zoning or planning requirements (Akins v. County of Sonoma; Lawler v. City of Redding). The leading treatises on California land-use law have uniformly stated that this exemption is the law, without any reservation or qualification (Longtin's California Land Use, § 3.66 [2nd ed. 1987 & 2000 Supp.]; Daniel J. Curtin, Curtin's California Land Use and Planning Law, at 54-55 [20th ed. 2000]). Since the Applicant is not presently proposing the retention of any portion of the LCRSP within the County, the County's existing policies and land-use designations are presented for informational purposes only and are not represented as the applicable policies and land-use designations governing the proposed development and proposed governance of the LCRSP.

[60]/ *Op. Cit*., Land Use Background Report, Land Use Zoning District Map – Rialto, 2007, p. II-22.

Insurance Administration. This district provides sites for animal raising, grazing, crop production, and similar and compatible uses.[61]

The "Floodway (FW)" land-use designation currently applies to an approximately 1,175.5-acre portion of the proposed LCRSP. Approximately 16.3 acres of additional off-site acreage is also located within the County's "Floodway (FW)" designation.

- **Single Residential** (RS). The purposes of this County land-use designation are to: (1) provide areas for single-family homes on individual lots; (2) provide areas for accessory and non-residential uses that complement single residential neighborhoods; and (3) discourage incompatible non-residential uses in single-family residential neighborhoods. Specific "locational criteria" include those areas: (1) not adjacent to "Regional Industrial" or "Agricultural Districts," except where the ultimate minimum residential parcel sizes will be 1 acre or larger; and (2) within 1 mile of major arterial and/or existing major public transit routes. Minimum lot sizes are identified.

  The "Single Residential (RS)" land-use designation currently applies to an approximately 117.6-acre portion of the proposed LCRSP. None of the additional off-site acreage is located within this land-use designation.

- **Rural Living** (RL). The purposes of this County land-use designation are to: (1) encourage appropriate rural development where single-family residential use is primary; (2) identify areas where rural residences may be established and where associated related animal uses may be permitted; (3) prevent inappropriate demand for urban services; and (4) establish areas where non-agricultural activities are the primary use of the land but where agriculture and compatible uses may exist. Specific "locational criteria" includes areas: (1) generally adjacent to urbanizing centers, with existing land uses that include limited agriculture, mining and quarrying, energy production operations, public and private recreation areas, rural residences and vacation cabins, and watershed, wildlife, and open space areas; (2) with limited, low-density development or mountainous areas with moderate slopes or soils of poorer quality than in agricultural areas; (3) areas where rural residences are the primary use of the land but where agriculture and other compatible uses, such as hunting clubs, dude ranches, RV parks, may be found or located; and (4) with partial public services and limited public improvements.[62]

  The "Rural Living (RL)" land-use designation currently applies to an approximately 12.5-acre portion of the proposed LCRSP. None of the additional off-site acreage included herein is located within this land-use designation.

- **Special Development** (SD). The purposes of this County land-use designation are to: (1) allow a combination of residential, commercial,

[61]/ *Ibid*., pp. II-23.
[62]/ *Ibid*., pp. II-8 and II-9.

and/or manufacturing activities that maximize the utilization of natural as well as man-made resources; (2) identify areas suitable for large-scale planned developments and allow cluster-type development in order to provide more open space; and (3) allow joint planning efforts, such as specific plans and area plans, among adjacent land owners and jurisdictions. Specific "locational criteria" includes areas that need or require special planning studies. This district provides sites for a combination of residential, commercial, industrial, agricultural, open space and recreational uses, and similar and compatible uses.

Whenever a "Planned Development (PD)" application is processed and adopted by the Board of Supervisors, a County General Plan amendment will be processed and adopted concurrently. The County General Plan amendment will indicate that there has been some type of change to the development standards or allowed uses within the area included within the boundaries of the Planned Development application. This County General Plan amendment will be annotated on the Land Use Zoning District Maps as a suffix to the Special Development District. The suffix will include the letters "PD" and the year of adoption and the sequence number of the specific Planned Development application that had been approved for that specific year (e.g. PD-2006-01).[63]

The "Special Development (SD)" land-use designation currently applies to an approximately 160.8-acre portion of the proposed LCRSP, as located within the area of the approximately 647-acre "Lytle Creek North Planned Development"[64] (LCNPD or Lytle Creek North). None of the additional off-site acreage included herein is located within this land-use designation.

- **Specific Plan** (SP). The purposes of this County land-use designation are to: (1) designate an area that encompasses the boundaries of an adopted specific plan; and (2) allow joint planning efforts among adjacent land owners and jurisdictions. The County General Plan designates "locational criteria" upon which this land-use designation is established. Specific criteria include areas that need or require special planning studies.[65] This district provides sites for a combination of residential, commercial, industrial, agricultural, open space, recreational, and similar compatible uses, as determined by the specific plan.[66]

  The area so designated is comprised of an approximately 286.7-acre portion of the proposed LCRP and is presently a part of the County-adopted "Glen Helen Specific Plan" (GHSP). An additional approximately 3.6 acres of off-site acreage, consisting of the SoCalGas easement, is presently included within the boundaries of the adopted GHSP.

[63]/ *Ibid*., pp. II-21.
[64]/ County of San Bernardino, Lytle Creek North Planned Development, December 2001.
[65]/ *Ibid*., p. II-23.
[66]/ *Ibid*., p. II-23.

◊ **Hazards and Resources Overlay Maps**. The County General Plan includes a number of hazards and resource overlay maps that identify the potential presence of environmental hazards, constraints, environmental resource amenities, or community concerns. Those maps serve to augment and illustrate corresponding provisions of the County General Plan (Safety Element) and the "San Bernardino County Development Code" (County Development Code). As indicated in the County General Plan, the natural resource overlay maps are intended to include a variety of resources, including mineral resource zones, biological resources, cultural resources, paleontological resources, open space/recreational/scenic resources, important farmlands, and agricultural preserves. For mineral resources, pending the completion of a composite overlay map, the County utilizes the State's mineral resource zone map.

Those overlay maps that contain information that may be relevant or useful to an understand of project's existing setting are presented, in part, in Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlays Map), in Figure 4.1-8 (San Bernardino County General Plan – Geologic Hazard Overlay Map), in Figure 4.1-9 (San Bernardino County General Plan – Portion of the Biotic Resources Overlay Map), and in Figure 4.1-10 (San Bernardino County General Plan – Open Space Element/Resources Overlay).

As illustrated in the County General Plan, to the north of the I-15 (Ontario) Freeway, the County's "Open Space – A Plan for Open Space and Trails for the County of San Bernardino" identifies both a wildlife corridor (Wildlife Corridor 3) and a regional trail (Lytle Creek Trail). South of and generally paralleling the I-15 Freeway, the plan identifies another regional trail (Greenbelt Trail). Lands located to the east of Sierra Avenue, generally encompassing the entire project site, the County General Plan identifies a policy area (Policy Area 52). Another regional trail (Devil Canyon Connection) is located to the north of Highland Avenue, linking to a joint trail and greenbelt area (Rialto Trail). Wildlife Corridor 3 follows the alignment of Lytle Creek from the boundary of the SBNF northward to approximately Miller Narrows and contains riparian habitat for several sensitive species, including wild rainbow trout.[67]

The project site is located to the south of the planning areas established under the County's "Lytle Creek Community Plan."[68] That community plan includes an approximately six square mile area located within unincorporated County lands about ten miles northwest of the Cities of Fontana and Rialto. In addition, the project site is located to the west of the "Muscoy Community Plan."[69] This community plan includes an approximately three square mile area located within unincorporated County lands abutting the City of San Bernardino and its SOI. The plan area is separated from the City of Rialto on the west by a railroad line and the Lytle Creek and Cajon Creek washes. Development actions on the project site are not regulated by the planning and land-use policies contained in either of those community plans.

[67]/ With regards to that portion of Lytle Creek north of the project site, the County's Open Space Element notes: "This wildlife corridor follows the alignment of Lytle Creek from the boundary of the national forest to approximately Miller Narrows, and contains riparian habitat for several sensitive species, including wild rainbow trout. This section should be maintained both for its habitat value and as a dispersion corridor for wildlife to and from the national forest and other open space areas outside."

[68]/ County of San Bernardino, Lytle Creek Community Plan, adopted March 13, 2007.

[69]/ County of San Bernardino, Muscoy Community Plan, adopted March 13, 2007.

- **Glen Helen Specific Plan**.[70] On November 15, 2005, the County certified the "Final Environmental Report for the Glen Helen Specific Plan, SCH No. 2000011093" and adopted the GHSP, encompassing an area of about 3,400 acres of unincorporated lands in the Devore area. The GHSP, in combination with the County General Plan, presently serves as the policy document governing local land-use decisions within the GHSP boundaries processed through the County. As described therein: "This is actually two undeveloped areas of somewhat different characteristics: Sycamore Flat, along the east side of the I-15 Freeway, and Sycamore Canyon, a topographically varied area of private property on the west side of the freeway in the SBNF. Sycamore Flat is characterized by gently sloping terrain, a stream with a ponded freshwater marsh and surrounding riparian vegetation near the I-15 Freeway. These two areas have a strong visual, biological and historical identify within the Glen Helen area."[71]

  As depicted in Figure 4.1-11 (Sycamore Flat and Sycamore Canyon), the approximately 276.7-acre Sycamore Flat and Sycamore Canyon areas are being extracted from the GHSP and are included as part of the proposed project. As depicted in Figure 4.1-12 (County of San Bernardino - Glen Helen Specific Plan Land-Use Plan), the Sycamore Flat and Sycamore Canyon areas contain the following land-use designations: "Commercial/Travel Services (CTS)" and "Golf Course Community (GCC)." Both of those designations are briefly described below.

  - ◊ **Commercial/Traveler Services** (CTS). This designation provides for uses that serve the traveling public, typically during transit from one designation to another outside of the immediate area. Though some of the uses would be similar to those found in the Destination/Entertainment designation, the focus would be more on serving people as they pass through, rather than people who stay for local events. Restaurants, convenience services, service stations, lodging, retail goods, and commercial recreational uses are typically found in this designation.[72]

  - ◊ **Golf Course Community** (GCC). This designation provides for single-family detached residential development, at a density of one dwelling unit per 20 acres. Because of the extensive parcel sizes involved, the remainder of some parcels may be suitable for agricultural uses, but not extensive material or vehicle storage. Development of this area as a golf course, with a driving range, clubhouse and other ancillary uses, will be allowed as conditional use, as well as other similar outdoor recreation uses. Residential development at a density higher than the permitted density may be proposed as a Planned Development, requiring additional approvals and environmental analysis. Any such proposal will be required to satisfy stringent conditions related to regional park, sheriff's facilities, open space, and natural resources impacts. [73]

[70]/ Since the Applicant is processing an annexation request for those portions of the project site located within County unincorporated areas, upon annexation, the proposed project would no longer be subject to the "Glen Helen Specific Plan" land use designations and policy declarations. Since the information describes the existing regulatory and policy setting and may remain applicable to other abutting and proximal properties following the project's implementation, those land-use designations are briefly described herein.

[71]/ County of San Bernardino (The Planning Center), Glen Helen Specific Plan, July 2005, p. 2-4.

[72]/ *Ibid*., p. 2-10.

[73]/ *Ibid*., p. 2-51.

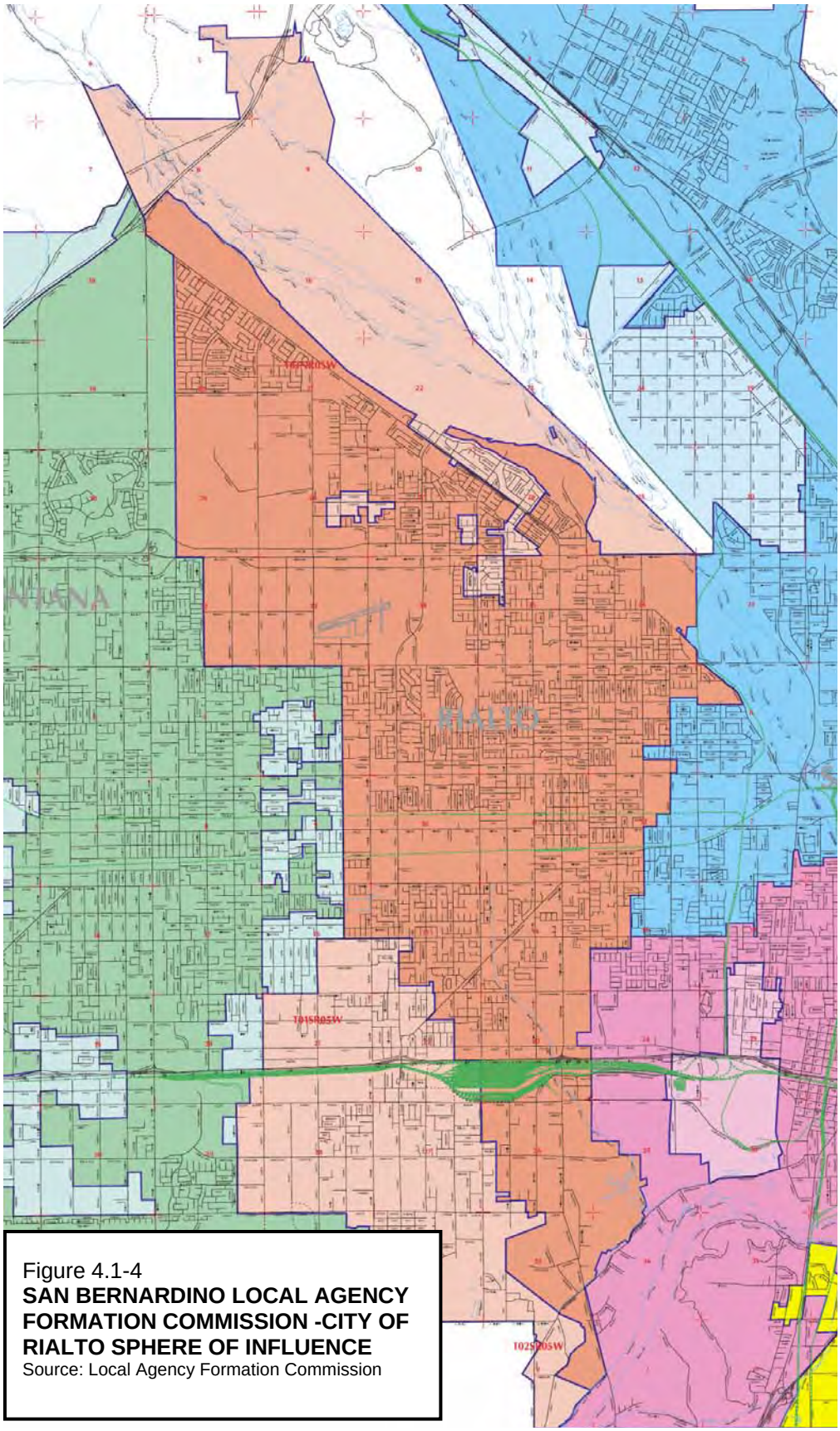


Figure 4.1-4
SAN BERNARDINO LOCAL AGENCY FORMATION COMMISSION -CITY OF RIALTO SPHERE OF INFLUENCE
Source: Local Agency Formation Commission

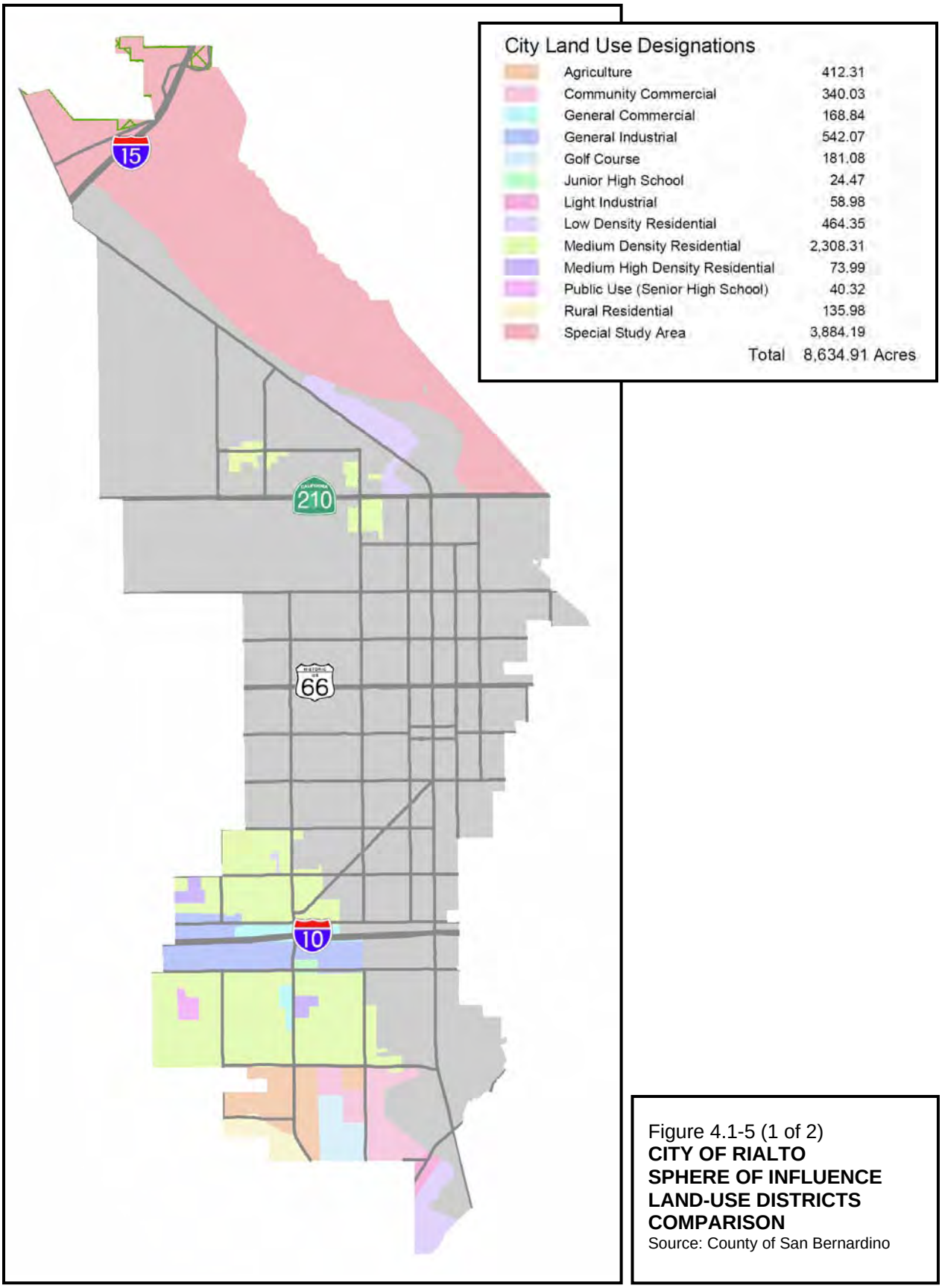
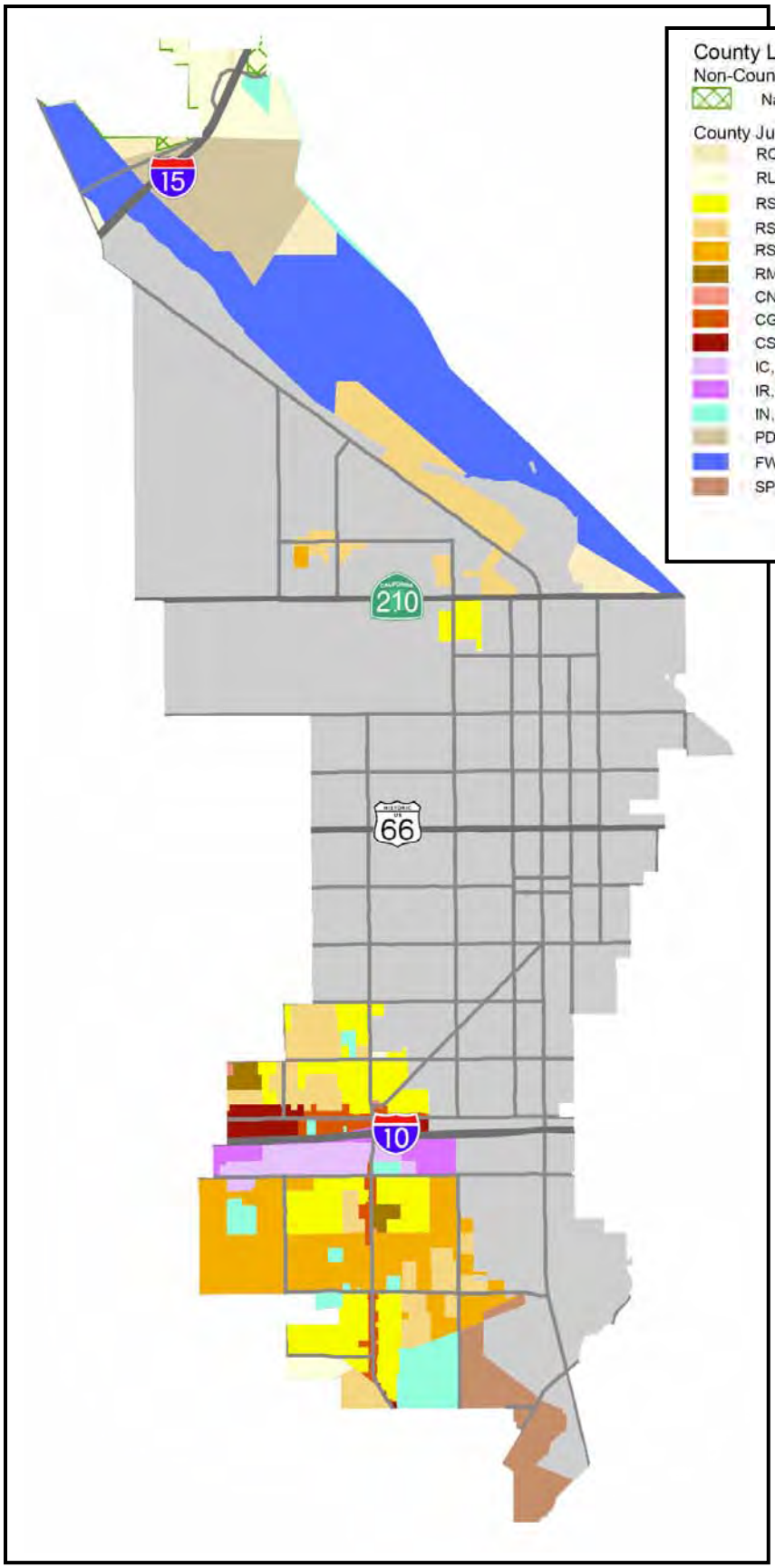


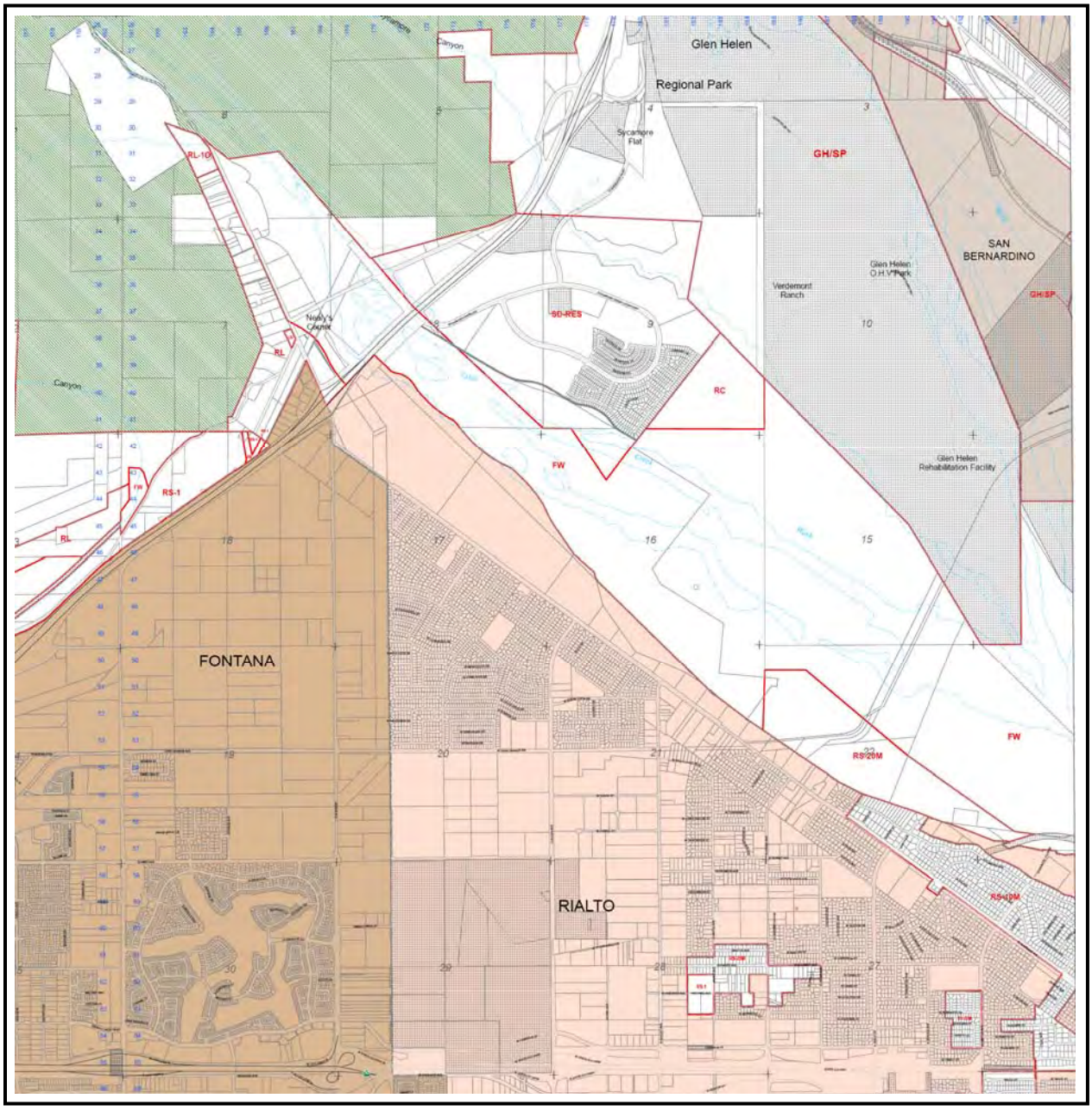
Figure 4.1-5 (1 of 2)
CITY OF RIALTO SPHERE OF INFLUENCE LAND-USE DISTRICTS COMPARISON
Source: County of San Bernardino



County Land Use Designations

Non-County Jurisdiction		
	National Forest Service	46.78
County Jurisdiction		
	RC, Resource Conservation	269.21
	RL, Rural Living	446.30
	RS <= 10,000 Sq. Ft.	992.71
	RS >10,000 and <40,000 Sq. Ft.	1,142.34
	RS >= 40,000 Sq. Ft.	1,069.48
	RM, Multiple Residential	69.54
	CN, Neighborhood Commercial	7.37
	CG, General Commercial	198.86
	CS, Service Commercial	128.19
	IC, Community Industrial	249.59
	IR, Regional Industrial	234.47
	IN, Institutional	383.69
	PD, Planned Development	749.01
	FW, Floodway	2,203.58
	SP, Specific Plan	443.78
	Total	8,588.13 Acres
	Grand Total	8,634.91 Acres

Figure 4.1-5 (2 of 2)
CITY OF RIALTO SPHERE OF INFLUENCE LAND-USE DISTRICTS COMPARISON
Source: County of San Bernardino



Land Use Zoning Districts

AG – Agriculture
CG – General Commercial
CH – Highway Commercial
CN – Neighborhood Commercial
CO – Office Commercial
CR – Rural Commercial
CS – Service Commercial
FW – Floodway
IC – Community Industrial
IN – Institutional
IR – Regional Industrial
OS – Open Space
RC – Resource Conservation
RL – Rural Living
RM – Multiple Residential
RS – Single Residential
SD – Special Development
SP – Specific Plan

County designated Land Use Zoning Districts do not apply to Federal or State owned property.

Figure 4.1-6 (1 of 2)
SAN BERNARDINO COUNTY GENERAL PLAN LAND-USE DISTRICT DESIGNATIONS
Source: San Bernardino 2007 County General Plan

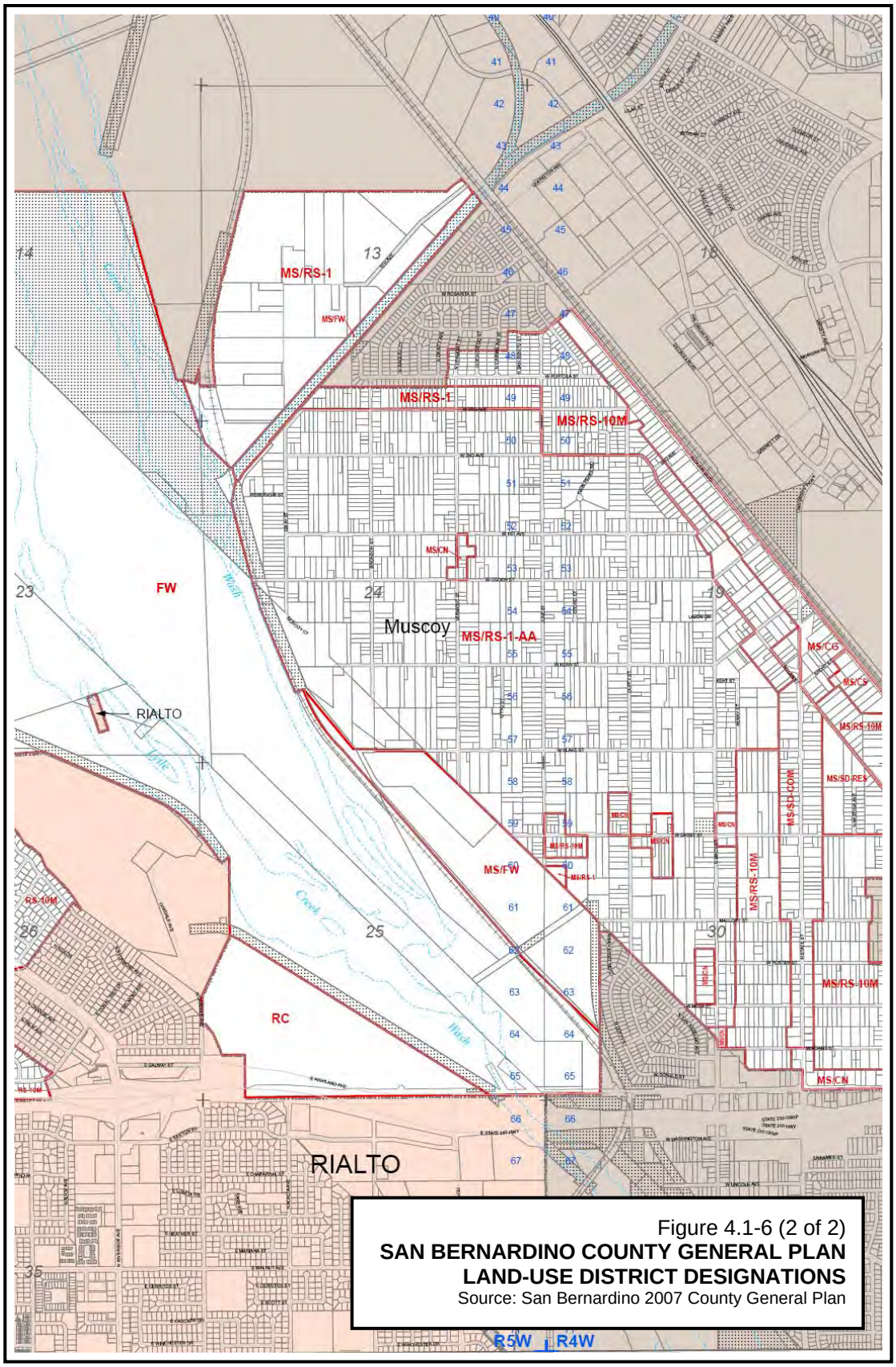
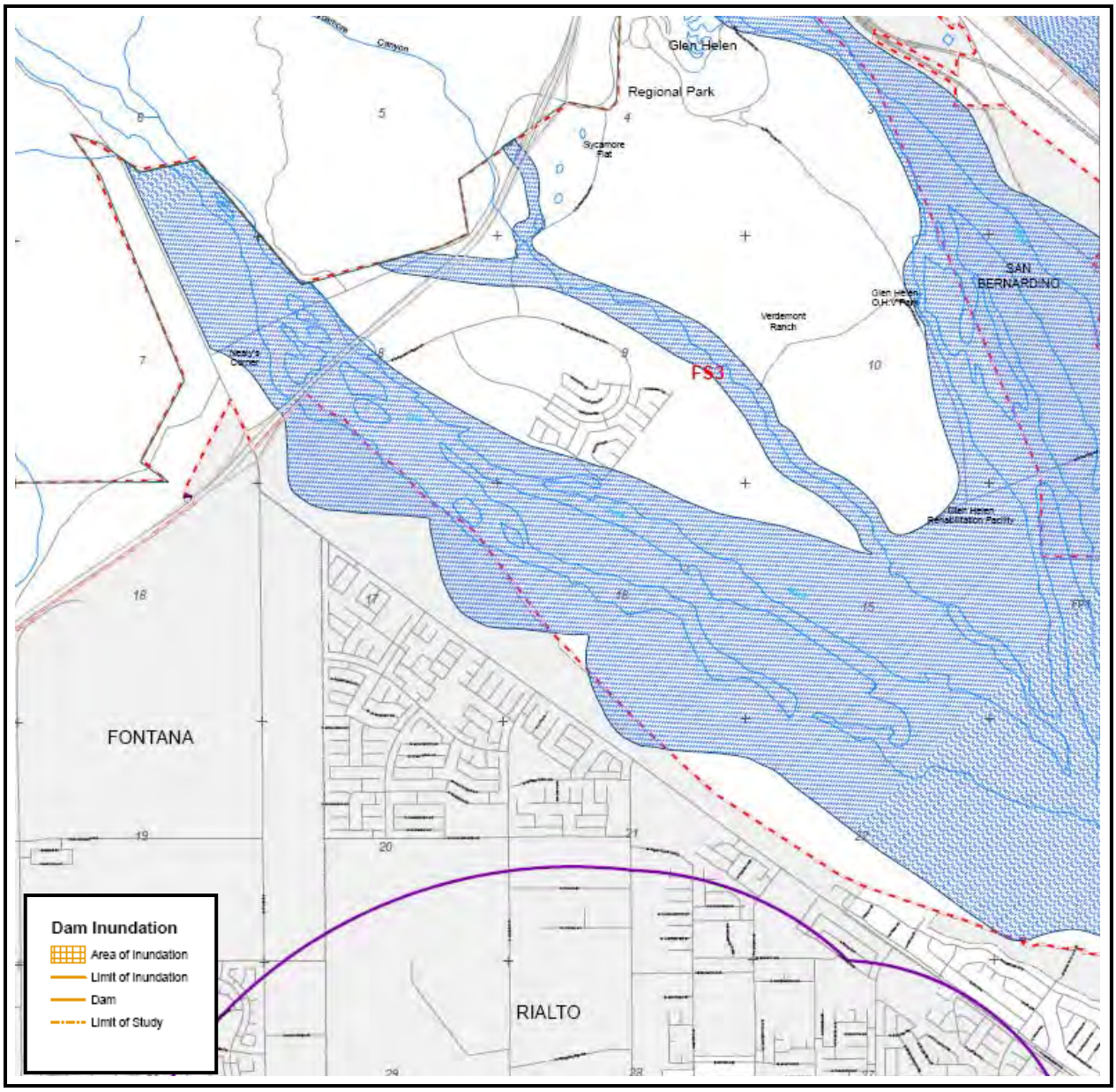


Figure 4.1-6 (2 of 2)
SAN BERNARDINO COUNTY GENERAL PLAN LAND-USE DISTRICT DESIGNATIONS
Source: San Bernardino 2007 County General Plan



Flood Plain Safety (FP) Overlay District

FEMA

- FP1 (Zone A - Inside 100 Year Flood Plain)
- FP2 (Zone X - Inside 500 Year Flood Plain)

Local Flood Hazard

- FP3 (Local Flood Data)

Noise Hazard (NH) Overlay District

- Noise Contour in LDN
- Runway Location

Fire Safety (FS) Overlay District

- Fire Safety Boundary
- FS1 Fire Safety Area 1
- FS2 Fire Safety Area 2

Airport Safety Review

- AR3 (Airport Safety Review Area 3)
- AR4 (Airport Safety Review Area 4)

- Cities

Figure 4.1-7
SAN BERNARDINO COUNTY GENERAL PLAN HAZARD OVERLAY MAP
Source: San Bernardino County

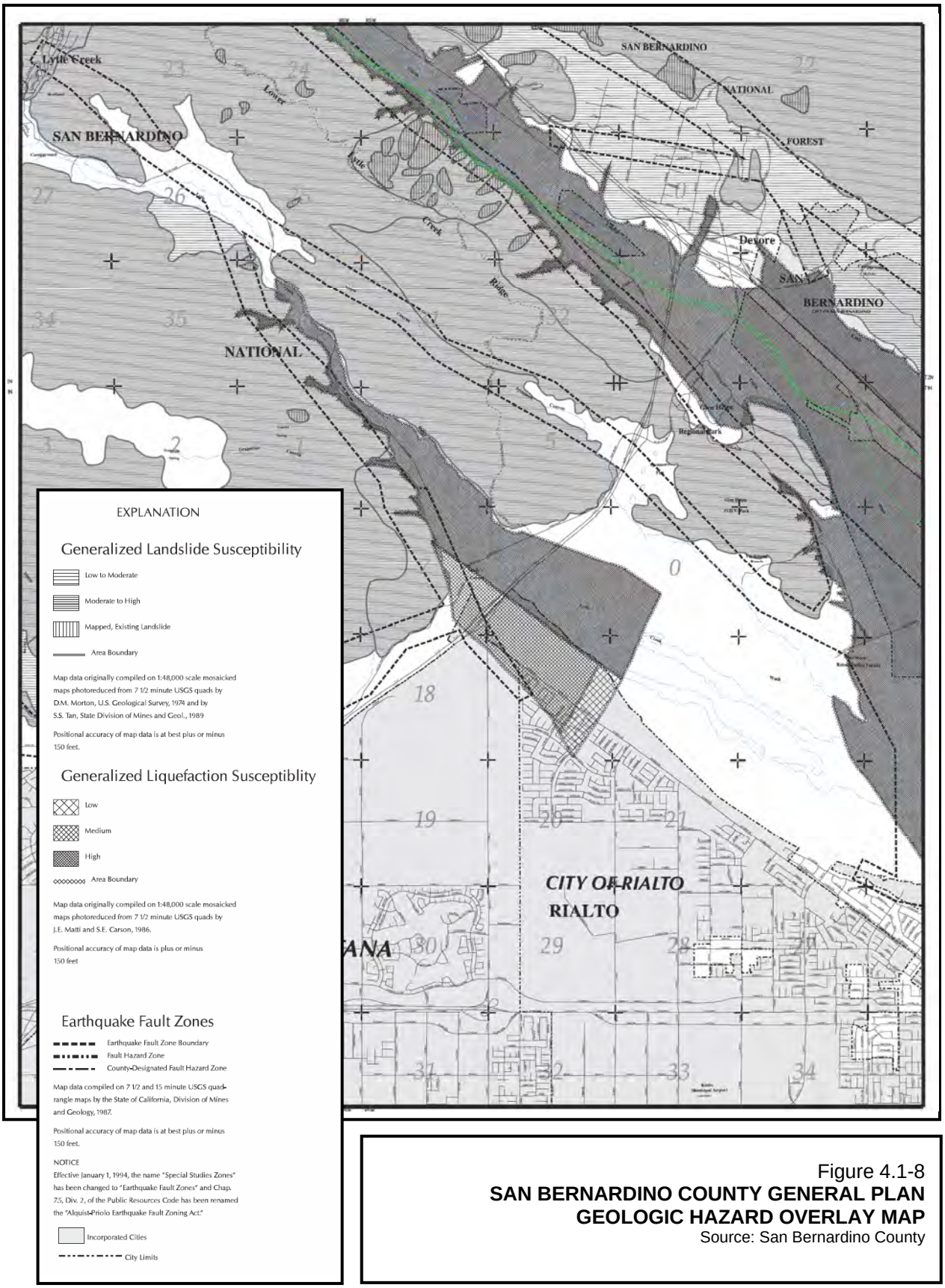
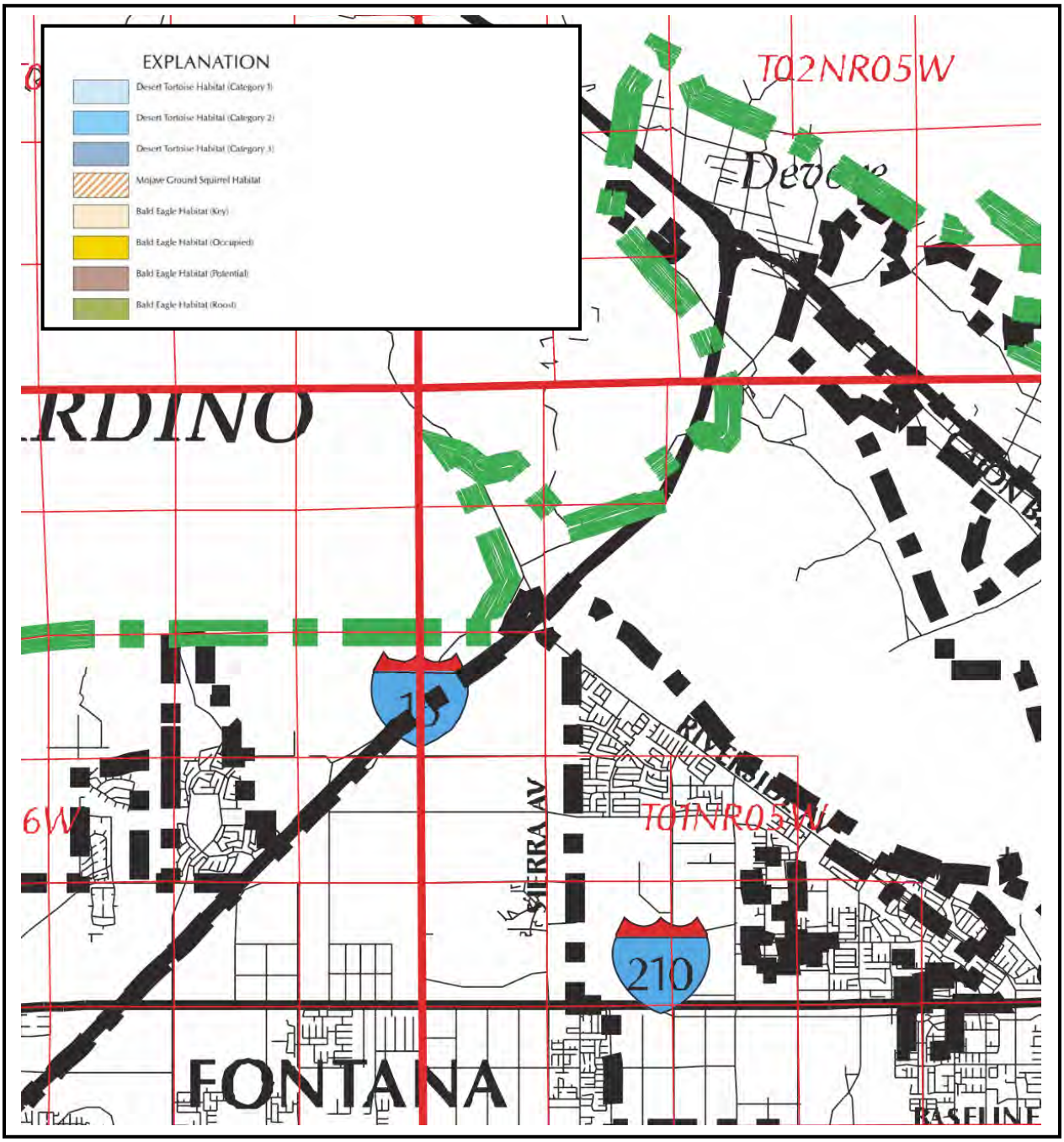
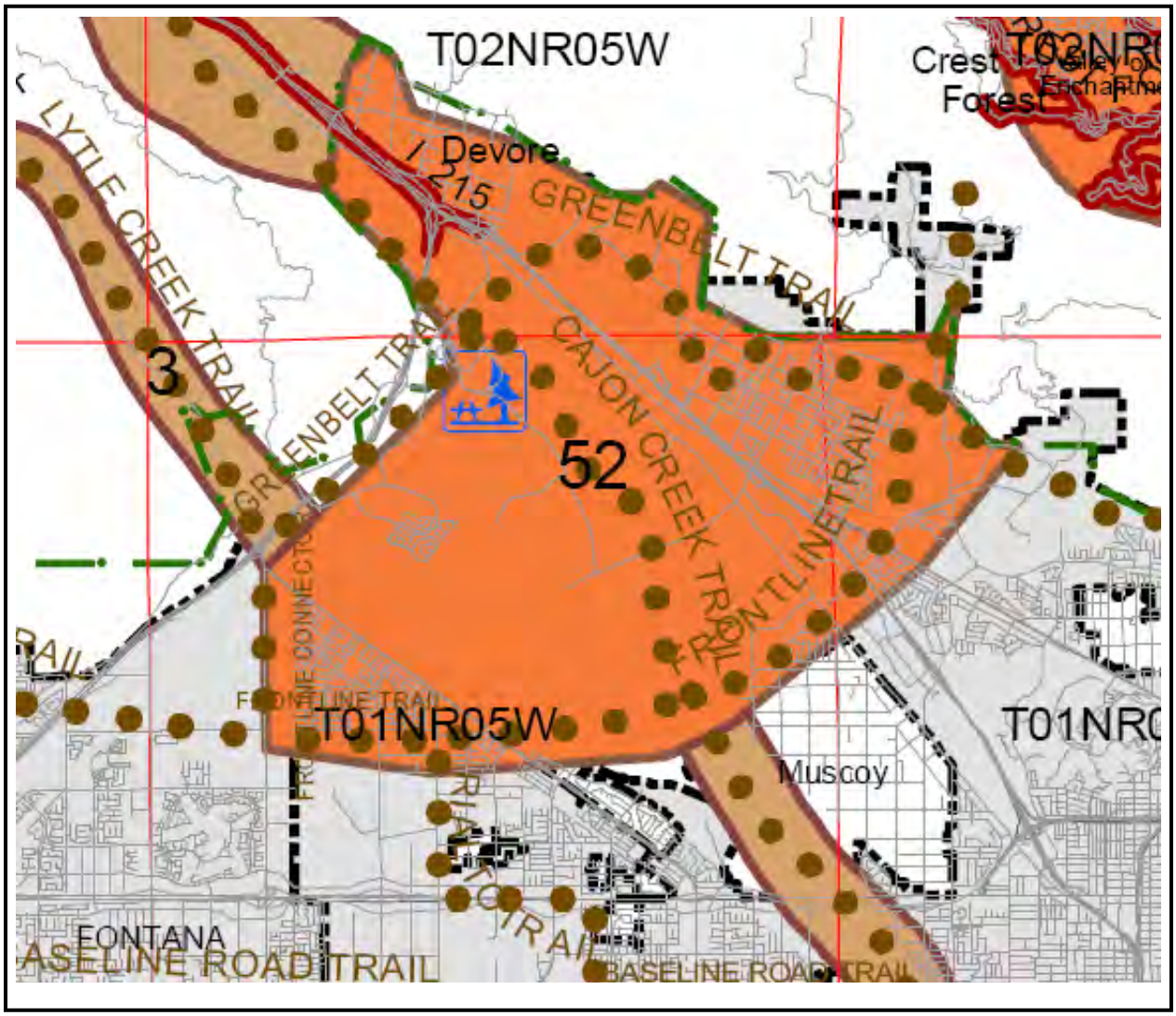


Figure 4.1-8
SAN BERNARDINO COUNTY GENERAL PLAN GEOLOGIC HAZARD OVERLAY MAP
Source: San Bernardino County



Incorporated Cities
National Forest Boundary
Military & National Parks Boundaries

Figure 4.1-9
SAN BERNARDINO COUNTY GENERAL PLAN PORTION OF THE BIOTIC RESOURCES OVERLAY MAP
Source: San Bernardino County



Legend

- Buffer Zones
- Policy Areas
- Wildlife Corridors
- Areas of Critical Environmental Concern
- National Parks
- Greenbelt
- Wilderness Areas
- Wilderness Study Areas
- Cities
- National Forest
- Military Bases
- County Designated Scenic Routes
- Proposed Regional Trails
- Parks

Figure 4.1-10 (1 of 2)
SAN BERNARDINO COUNTY GENERAL PLAN OPEN SPACE ELEMENT RESOURCES OVERLAY
Source: San Bernardino County

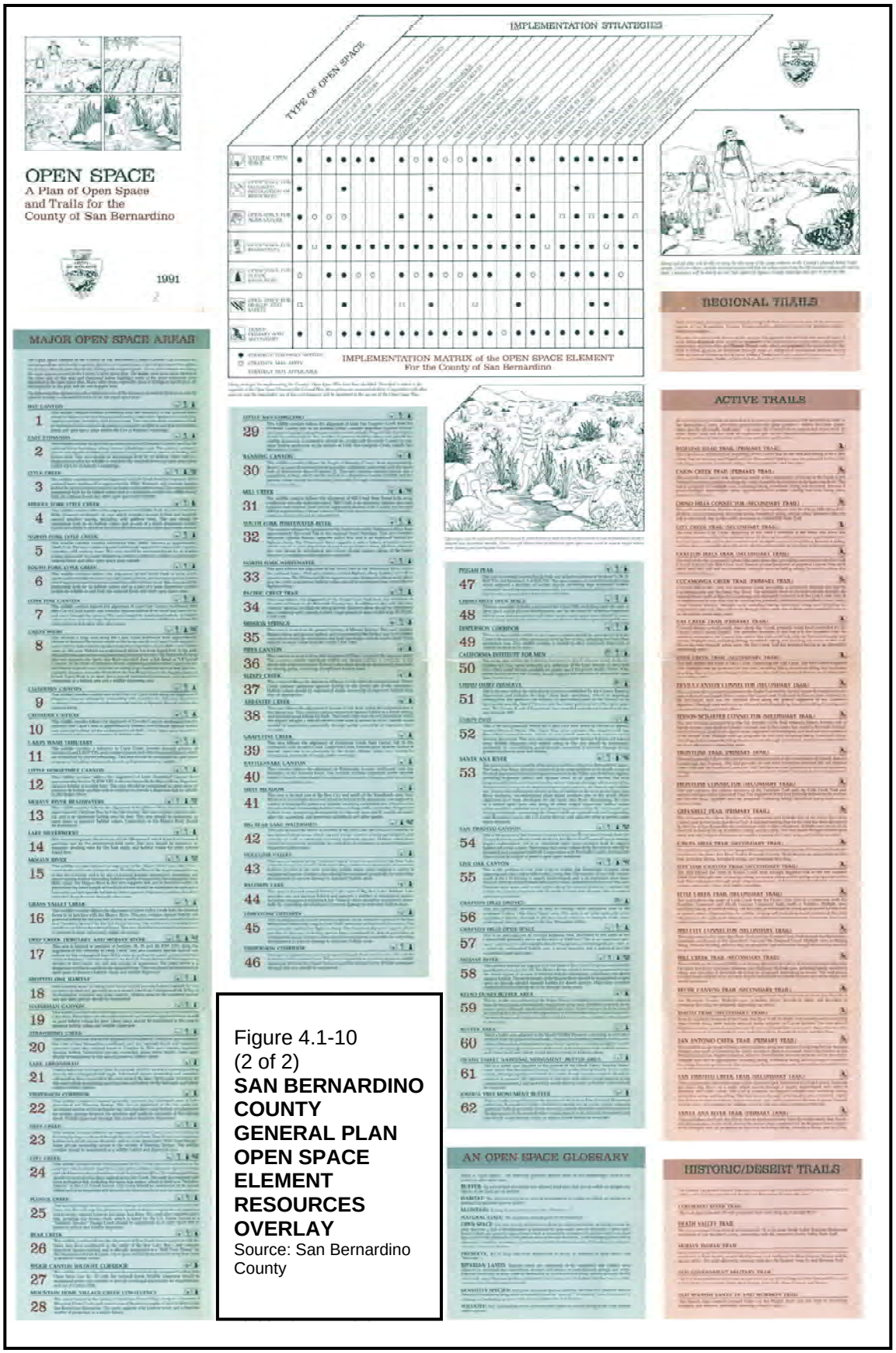


Figure 4.1-10
(2 of 2)
SAN BERNARDINO COUNTY GENERAL PLAN OPEN SPACE ELEMENT RESOURCES OVERLAY
Source: San Bernardino County

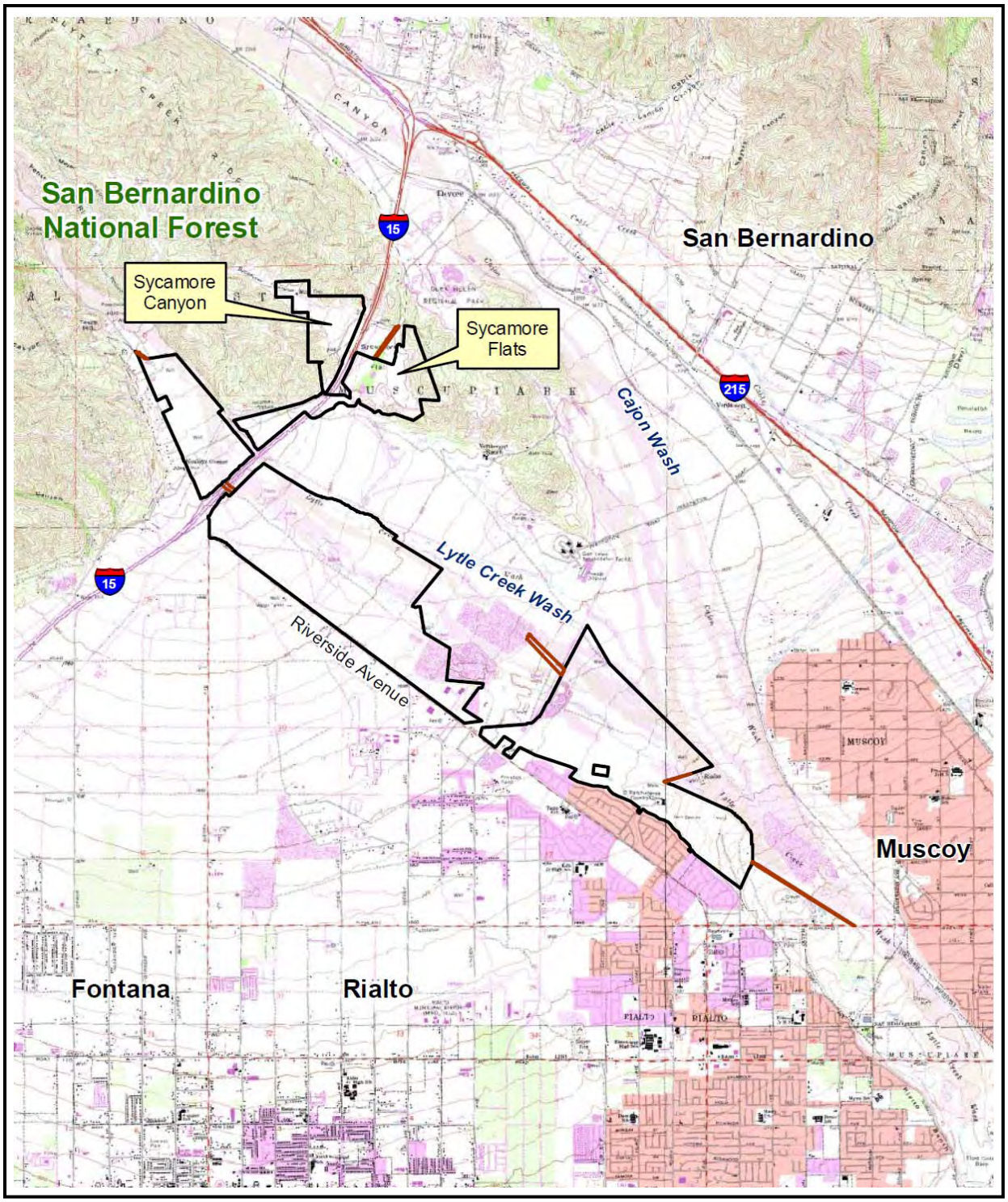


Figure 4.1-11
SYCAMORE FLAT AND SYCAMORE CANYON
Source: Lytle Development Joint Venture III

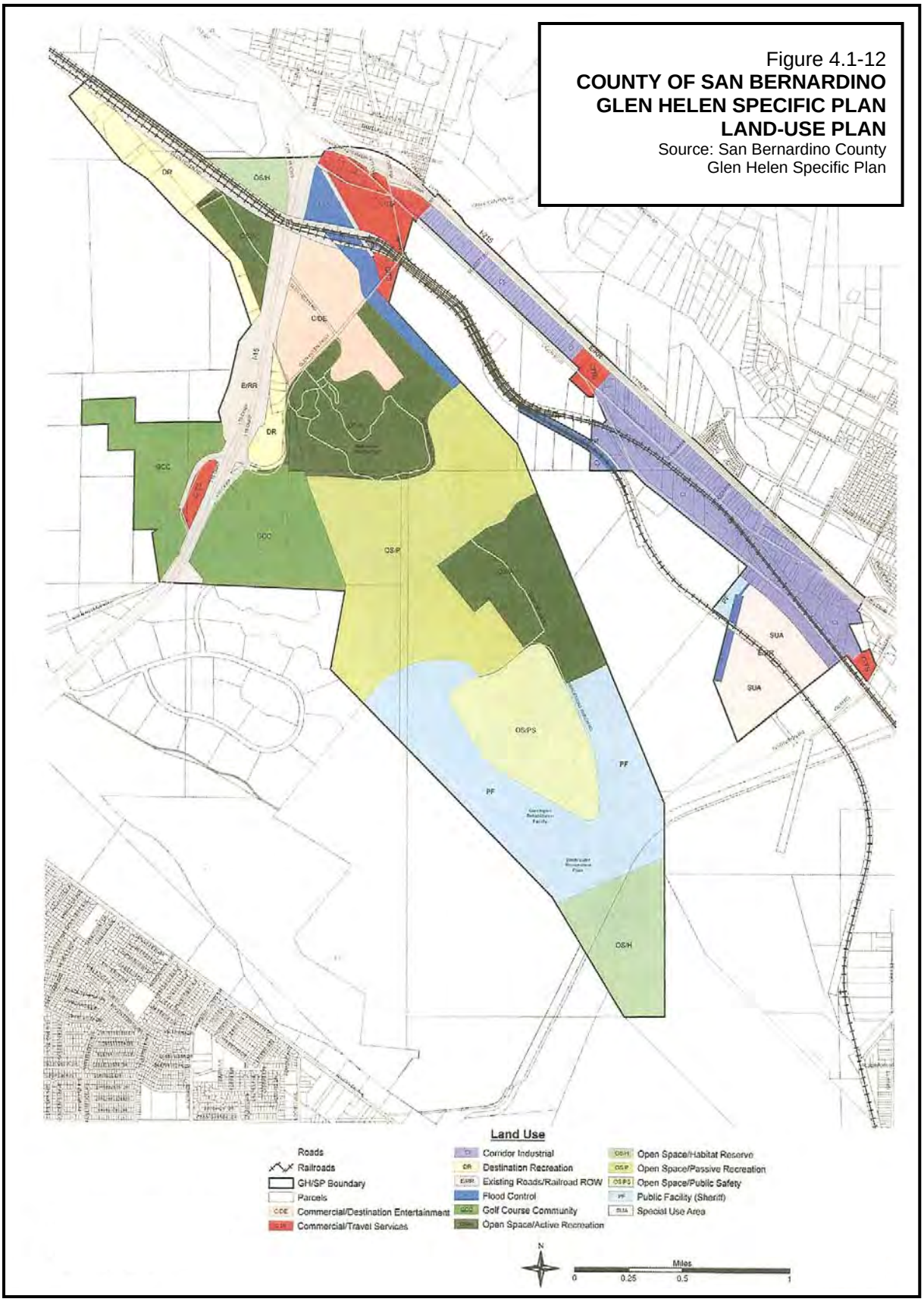


Figure 4.1-12
COUNTY OF SAN BERNARDINO GLEN HELEN SPECIFIC PLAN LAND-USE PLAN
Source: San Bernardino County Glen Helen Specific Plan

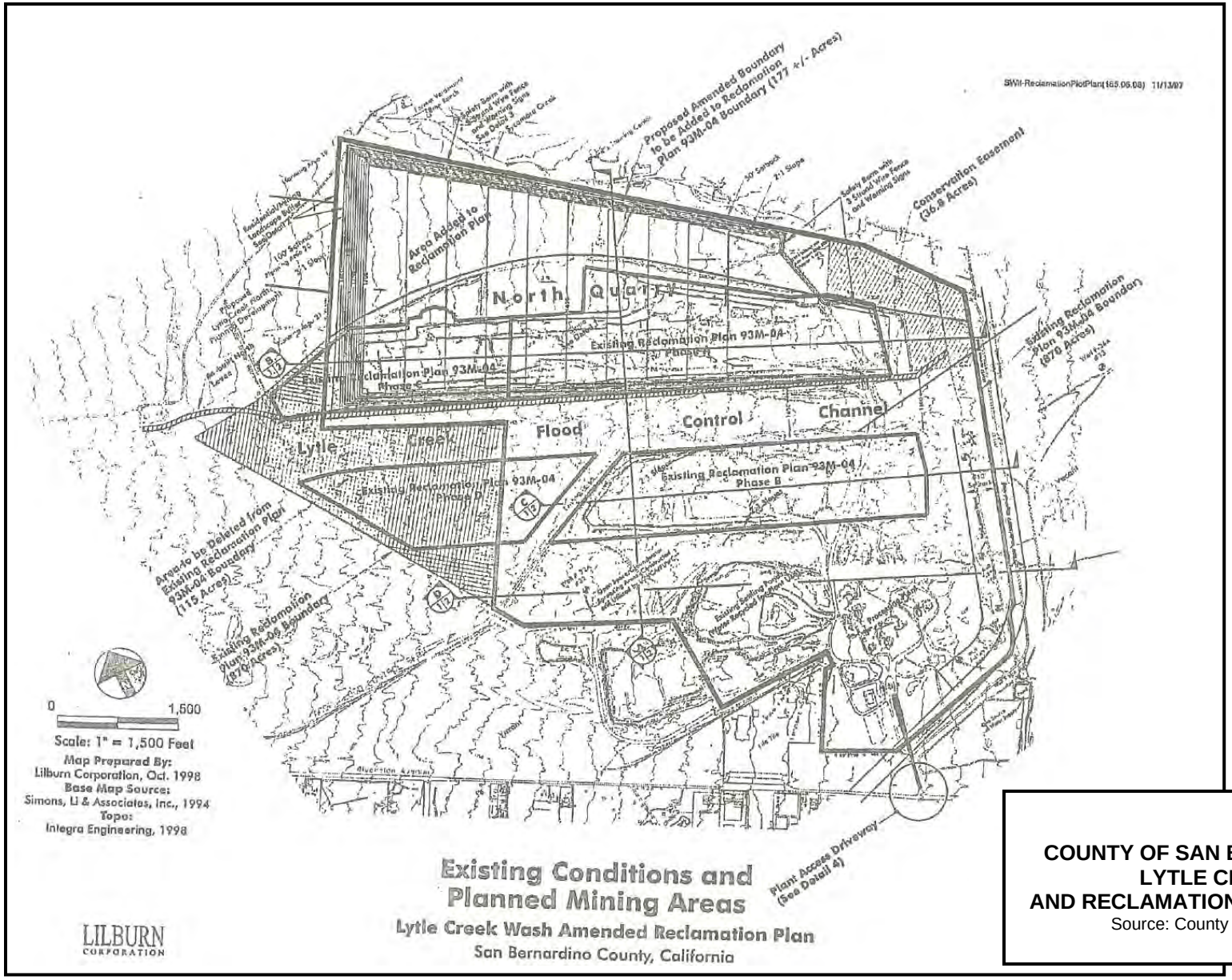


Figure 4.1-13
COUNTY OF SAN BERNARDINO LYTLE CREEK MINING AND RECLAMATION PLAN (2001)
Source: County of San Bernardino

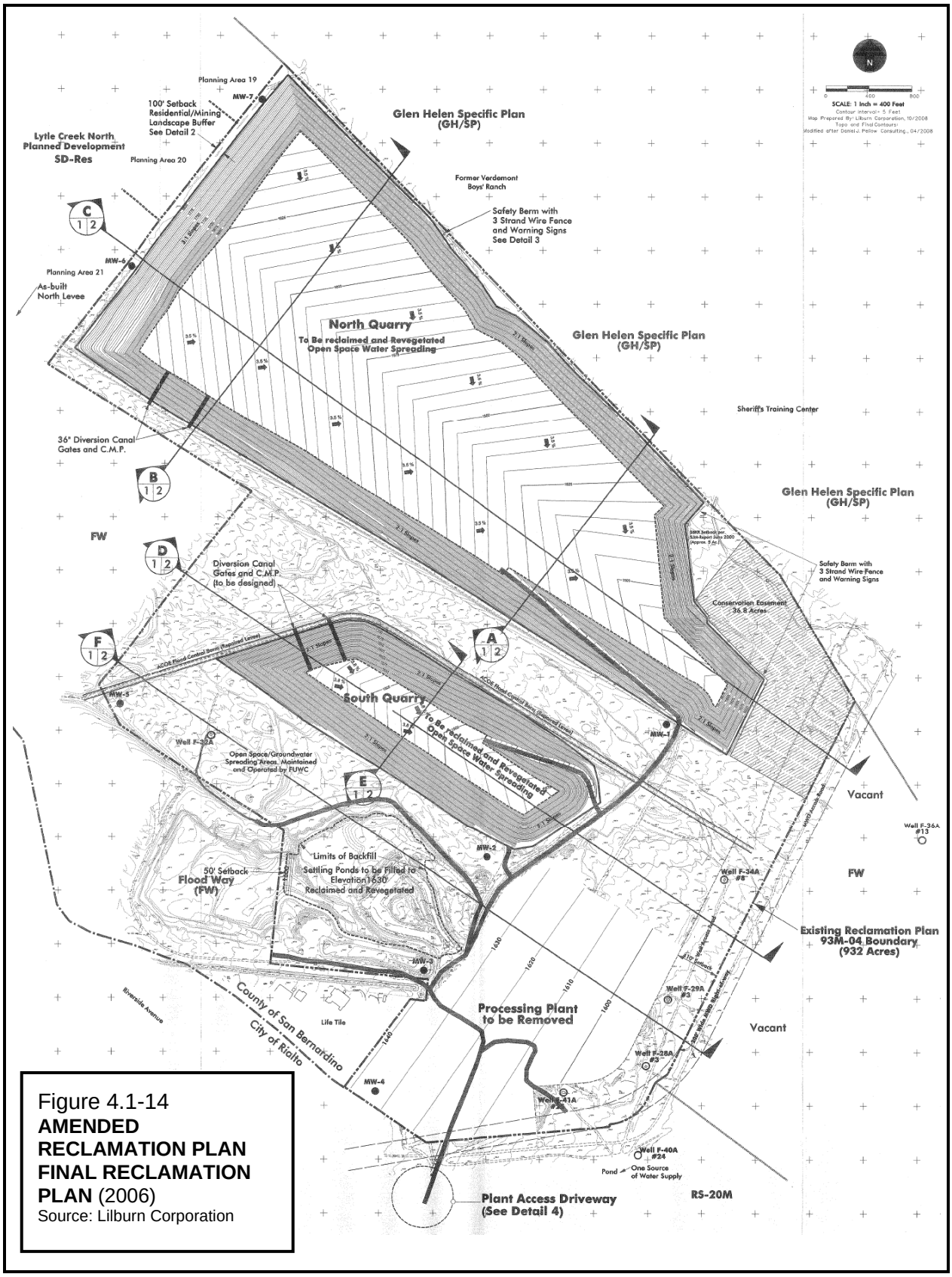


Figure 4.1-14
AMENDED RECLAMATION PLAN FINAL RECLAMATION PLAN (2006)
Source: Lilburn Corporation

- **Cemex USA Mining and Reclamation Plan**. As illustrated in Figure 4.1-13 (County of San Bernardino – Lytle Creek Mining and Reclamation Plan [2001]) and Figure 4.1-14 (Amended Reclamation Plan – Final Reclamation Plan [2006]), the project site abuts the 932-acre Cemex USA Construction Materials, Inc.[74,75] (Cemex USA) property on the northeast and southwest but is not inclusive of any portion of that property. Cemex USA's Lytle Creek Plant (3221 N. Riverside Drive, Rialto) is included on the California Department of Conservation - Office of Mine Reclamation's (OMR) "AB3098 List."[76]

  On April 19, 2001,[77] the San Bernardino County Planning Commission approved the Revised Reclamation Plan 93M-04 for the Lytle Creek Mine (Mine Identification No. 91-36-0040).[78,79] The decision became final on April 29, 2001. The adopted plan is effective for a period of 25 years (with a two-year revegetation monitoring period), expiring on April 29, 2028. As described in the "Lytle Creek Reclamation Plan," final reclamation will consist of final contouring of slopes and the pit floor as mining is completed. Equipment and refuse will be removed within six months. Access into the quarries will be restricted by locked gates, rock barricades, fencing and safety berms. Compacted areas, including the process plant facilities (which may remain in use after the termination of mining subject to County regulations), will be revegetated and most haul roads will be scarified to a depth of one foot to promote plant growth. The settling pond area will be allowed to dry and any slopes pushed to 2:1 (horizontal:vertical) or less. The area will be covered with one foot of native alluvium material and revegetated. Upon final reclamation, the project will consist of revegetated open space with the availability of the two large recharge basins bisected by the Lytle Creek channel to be utilized for ground water recharge activities. The plant area will be graded for positive drainage to the southeast and will be revegetated.[80]

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[74]/ Other references to the underlying ownership interest refer to "Cemex Construction Materials Pacific, LLC." Because ownership interests and corporate identities routinely change, all references to Cemex USA herein are intended to refer to the owner and operator of that sand and gravel quarry located between Neighborhoods II and III of the proposed LCRSP. Names used herein are for convenience purposes only and are not intended to create or infer legal interests where no such interests now exist.

[75]/ Cemex USA's parent company is the third largest cement producer in the world (Source: Kohler, Susan, California Non-Fuel Minerals 2004, California Geological Survey, undated, p. 3).

[76]/ OMR periodically publishes a list of mines (generally referred to as the "AB3098 List" based on the 1992 legislation that established it) regulated under SMARA meeting the provisions set forth in Section 2717(b) of the PRC. Sections 10295.5 and 20676 of the Public Contract Code preclude mining operations that are not on the AB3098 List from selling sand, gravel, aggregates or other mined materials to State or local agencies.

[77]/ In 2001, the County adopted a mitigated negative declaration for Revised Reclamation Plan 39M-04, allowing for the continuance of mining operations for a period of 25 years, provided the following additional background information concerning the historic mining operations that have occurred with and adjacent to the project site: "Mining activities were initiated on this site in 1954 under a lease entered into between Owl Rock Company and Fontana Union Water Company. The site was subsequently purchased by Sunbelt Corporation with operations conducted by its subsidiary, Cemex USA Construction Materials, Inc. Because Owl Rock Company obtained a Local and Development Plan covering 3,000 acres approved on September 27, 1954, the Lytle Creek operation is considered a legally established vesting operation pursuant to SMARA Section 2776 and a Settlement Agreement between Sunwest Materials and the County" (Source: County of San Bernardino, County of San Bernardino Initial Study for the Lytle Creek Wash Amended Reclamation Plan, February 9, 2001, p. 2).

[78]/ As specified in Section 2770(a) of SMARA, except as otherwise provided, no person shall conduct surface mining operations unless a permit is obtained from, a reclamation plan has been submitted to and approved by, and financial assurances for reclamation have been approved by the lead agency for the operation.

[79]/ The permit was subsequently revised on August 2, 2002 and December 19, 2006.

[80]/ Cemex USA (Lilburn Corporation), Amended Reclamation Plan for Lytle Creek Wash, November 2000, p. 23.

The site includes two quarry areas, known as the North Quarry (North Pit) and South Quarry (South Pit) that are separated by the active channel of Lytle Creek. Flows from Lytle Creek were previously constrained from entering both quarries by levees. In 2005, the earthen levee along the north side of the South Quarry breached during a flood event, resulting in inundation of the South Quarry. A large amount of sand and gravel was deposited in the South Quarry as a result of the breach.[81]

In January 2009, the quarry operator submitted an application for a reclamation plan revision.[82] In September 2009, the County disseminated a public notice concerning a proposed expansion of the existing Cemex USA Lytle Creek quarry.[83] Under the original mining permit, the quarry operator was authorized to excavate the North Quarry and South Quarry to a uniform depth of 100-feet below ground surface (bgs). As modified in 2008, Cemex USA was authorized to excavate the North and South Quarries to a uniform depth of 150-feet bgs. The 2008 permit modification included Cemex USA's agreement to provide additional ground water recharge areas on a long-term basis, thus allowing for the recharge of historic and potential additional storm flows benefiting the Lytle Groundwater Basin. Under the 2009 proposal, the depth of excavation within those pits would increase to a depth of 200-feet bgs.

The Fontana Union Water Company operates and maintains five public water supply wells within the quarry area, and two additional wells downstream, and has historically spread water over an unmined area to the west of the South Quarry.

The ultimate end use of both quarry areas is as open space and for ground water spreading purposes. Water will be conveyed by flumes into both quarries and will be allowed to percolate into the soil. Spreading may be conducted prior to the completion of reclamation via construction of low earthen berms in parts of the pits to confine spreading to reclaimed areas.[84]

- **Vulcan Materials Company Mining and Reclamation Plan**. Vulcan Materials Company (formally CalMat) received approval of a specific plan, conditional use permit, and reclamation plan in the early 1990's for an approximately 1,400-acre area within and adjacent to Cajon Creek (known as the San Bernardino and Cajon Creek Projects). That area has expanded somewhat in size since its original approval. Those project areas lie between Devore Road (the upstream limit) and Highland Avenue (the downstream limit). The two projects involve a combination of industrial uses, mining operations, reclamation of formerly-mined areas, and open space dedications. Some reclaimed mined areas (comprising several hundred acres) are to be reclaimed for industrial uses. Other formally-mined areas (comprising several hundred acres) are to be reclaimed for habitat/open space and revegetated with Riversidian alluvial fan sage scrub (RAFFS). Areas dedicated for open space habitat containing RAFSS are to be

[81]/ C.H.J. Incorporated, Update to Slope Stability Investigation – Proposed Amended Reclamation Plan, North and South Quarries, Cemex Lytle Creek Wash Quarry, Rialto Area of San Bernardino County, California, December 29, 2008, p. 3.

[82]/ Cemex Construction Materials Pacific LLC (Lilburn Corporation), Lytle Creek Quarry Reclamation Plan Revision Application, January 2009.

[83]/ San Bernardino County Land Use Services Department, Planning Division, A Revision to Excavate the North an [sic] South Quarry to a Maximum Depth of 200 Feet Below Natural Ground Surface on 933 Acres, September 2009.

[84]/ *Op. Cit.*, Update to Slope Stability Investigation – Proposed Amended Reclamation Plan, North and South Quarries, Cemex Lytle Creek Wash Quarry, Rialto Area of San Bernardino County, California, pp. 3-4.

managed as part of the Cajon Creek Habitat Conservation Management Area, as described below.

- **San Bernardino County Development Code**. The County Development Code[85] categorizes all privately owned lands into zoning districts. As depicted in Figure 4.1-6 (San Bernardino County General Plan – Land-Use District Designations), within the County, portions of the project site are designated "Rural Living (RL)," "Single Residential (RS)," "Floodway (FW)," "Special Development (SD)," and "Specific Plan (SP)." Uses may be approved by right or may be submit to Site Plan Permit, Conditional Use Permit, Minor Use Permit, Planned Development Permit, or other County approval. The County may establish use-specific requirements and standards. General categories of approved or permitted uses, applicable to the project's unincorporated areas where development is processed through the County, are separately discussed below.

  - ◊ **Rural Living** (RL). The "Rural Living (RL)" land-use zoning district provides sites for rural residential uses, incidental agricultural uses, and similar and compatible uses. As specified in Section 82.04 (Residential Land Use Zoning Districts), as specified by the County General Plan, uses shall be permitted where consistent with the intent and provisions of the "Rural Living (RL)" designation. Allowed or permitted uses include: agricultural, resource and open space uses; Industry, manufacturing and processing, and wholesaling; recreation, education and public assembly; residential; retail; business and professional services; other services; transportation, communications and infrastructure; and other uses as specified. Minimum lot size is 2.5 acres.

    The County's "Rural Living (RL)" zoning district currently applies to an approximately 12.5-acre portion of the proposed LCRSP. None of the additional off-site acreage included herein is located within this land-use designation.

  - ◊ **Single Residential** (RS). The "Single Residential (RS)" zoning district provides sites for single-family residential uses, incidental agricultural and recreational uses, and similar and compatible uses. As specified in Section 82.04 (Residential Land Use Zoning Districts), uses shall be permitted where shown to be consistent with the intent and provisions of the "Single Residential (RS)" designation as specified by the County General Plan. Allowed or permitted uses include agricultural, resource and open space uses; recreation, education and public assembly; residential; retail; business and professional services; other services; transportation, communications and infrastructure; and other uses as specified. While the minimum lot size is identified as 7,200 square feet, within the project boundaries, portions of the site are designated "RS-10M" and RS-20M," corresponding to a minimum lot size of 10,000 and 20,000 square feet, respectively.

    The "Single Residential (RS)" zoning district designation currently applies to an approximately 117.6-acre portion of the proposed LCRSP. None of the additional off-site acreage included herein is located within this land-use designation.

[85]/ County of San Bernardino, San Bernardino County 2007 Development Code, Adopted March 13, 2007, Effective April 12, 2007.

◊ **Floodway** (FW). The "Floodway (FW)" land-use zoning district provides sites for animal keeping, grazing, crop production, and similar and compatible uses. As specified in Section 82.03 (Agricultural and Resource Management Land Use Zoning Districts), uses shall be permitted where shown to be consistent with the intent and provisions of the "Floodway (FW)" designation as specified by the County General Plan. Agricultural, resource and open space uses are allowed or allowed via permit. Conditional and special permits allow for communications and infrastructure (electrical power generation; pipelines, transmission lines and control stations [subject to approval by the Public Utilities Commission], utility, wind energy and wireless communications); and other uses as specified. No structure or use shall be constructed, located or substantially improved and no land shall be graded or developed in the area designated as floodway, except upon approval of a plan which provides that the proposed development will not result in any increase in flood levels during the occurrence of the base flood discharge. Proposed land-use permits within the FW district shall comply with all of the requirements necessary for the approval of a permit in the Floodplain Overlay. Minimum lot size is identified as ten acres.

The "Floodway (FW)" zoning district currently applies to an approximately 1,175.5-acre portion of the proposed LCRSP. Approximately 16.3 acres of additional off-site acreage is also located within this County zoning district.

◊ **Special Development** (SD). The "Special Development (SD)" land-use zoning district provides sites for a combination of residential, commercial, industrial, agricultural, open space and recreational uses, and similar and compatible uses. As specified in Section 82.06 (Industrial and Special Purpose Land Use Zoning Districts), allowed or permitted uses include agricultural, resource and open space uses; industry, manufacturing and processing, and wholesaling; recreation, education and public assembly; residential; retail; business and professional services; limited other services; transportation, communications and infrastructure; and other uses as specified.

The "Special Development (SD)" land-use zoning district may have a suffix to indicate the focus of a particular zone. A "RES" suffix indicates that the focus is on residential Planned Development projects. A "COM" suffix indicates that the focus is on commercial Planned Development projects. An "IND" suffix indicates that the focus is on industrial Planned Development projects. However, all can still have mixed uses within these zones. Minimum lot size is identified as 40 acres, although approval of smaller lot sizes, as modified by map suffix or approval of a final development plan, may apply.

The County's "Special Development (SD)" zoning district designation currently applies to an approximately 160.8-acre portion of the proposed LCRSP. None of the additional off-site acreage included herein is located within this land-use designation.

In December 2001, the County approved the approximately 647.4-acre LNCPD. Because it constitutes a zoning tool, the LCNPD is separately discussed below.

◊ **Specific Plan** (SP). The "Specific Plan (SP)" land-use zoning district provides sites for a combination of residential, commercial, industrial, agricultural, open space, recreational, and similar and compatible uses, as determined by the specific plan. As specified in Section 82.06 (Industrial and Special Purpose Land Use Zoning Districts), the district shall be located as specified by the County General Plan and all permitted uses shall be as specified by each specific plan.

The County's "Specific Plan (SP)" zoning district designation current applies to an approximately 276.7-acre portion of the proposed LCRSP. An additional approximately 3.6 acres of the off-site acreage included herein, consisting of SoCalGas' easement, is presently included within the boundaries of the adopted GHSP and within the County's "Specific Plan (SP)" zoning district designation. In November 2005, the County adopted the approximately 3,400-acre GHSP. Because it constitutes a general plan tool, the GHSP is separately discussed above.

With regards to the County's overlay districts, Section 82.01.030 (Land Use Plan, Land Use Planning District, and Overlays) of the County Development Code notes: "The overlays established by Section 82.01.020 (Land Use Plan and Land Use Zoning Districts), and detailed in Chapters 82.13 through 82.19 are intended to guide development within the overlays by providing standards that apply to proposed development in addition to the standards and regulations of the primary land use zoning district, where important community, site, environmental, safety, compatibility, or design issues require particular attention in project planning."

As illustrated in Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlay Map), a portion of the project site is located in Fire Safety Overlay District "Fire Safety Area 3" (FS3) and a portion of the property is located in Flood Plain Safety Overlay District "Flood Plain 1" (FP1). As illustrated in Figure 4.1-8 (San Bernardino County General Plan – Geologic Hazard Overlay Map), a portion of the project site is located in a designated "Earthquake Fault Zone" and portions of the property are located in "Low," "Medium," or "High" Generalized Liquefaction Susceptibility areas. In addition, as discussed and described in Section 4.3.2.2 (Earth Resources - State of California), the project site is located within a State-designated "Mineral Resource Zone" (MRZ). Each of the corresponding overlay district designations is identified below.

◊ **Fire Safety Areas**. As specified in Section 82.13.010 (Purpose): "The Fire Safety Overlay District is created to provide greater public safety in areas prone to wildland brush fires, by establishing additional development standards for these areas." As described in Section 82.13.030 (Fire Safety Areas), FS3 "lands are primarily within the wildland-urban interface of the Valley Region and consist of varying terrain from relatively flat to steeply sloping hillside areas. Present and future development within FS3 is exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to FS1 (San Bernardino National Forest). These areas are subject to Santa Ana wind conditions that have the potential of dramatically spreading wildland fires during extreme fire behavior conditions." Corresponding development standards are presented in Section 82.13.060 (FS1, FS2 and FS3 Development Standards).

An approximately 1,522.1-acre portion of the proposed LCRSP is located within the County's "Fire Safety Overlay District." An additional approximately 19.9 acres of off-site acreage outside the proposed LCRSP boundaries but included in the project area are located within the County's "Fire Safety Overlay District."

◊ **Flood Plain Safety Areas**. As specified in Section 82.14.010 (Purpose): "The Flood Plain Safety (FP) Overlay established by Sections 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is created to provide greater public safety, promote public health, and minimize public and private economic losses due to flood conditions by establishing regulations for development and construction within flood prone areas. As described in Section 82.14.020 (Location Requirements), the overlays: "are applied to areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) or the Federal Insurance Administration in a scientific and engineering report entitled "Flood Insurance Study" for the County of San Bernardino, initially prepared in 1978, which has subsequent updates, with accompanying Flood Insurance Rate Maps (FIRMs).Subsequent report and map updates that may be published in the future shall further identify additional flood hazard areas. As described in Section 82.14.040 (Review Area Procedures and Construction Standards), FP1 include "areas subject to a base flood (also called "100-year flood) as defined by the Federal Flood Insurance Regulations."

An approximately 1,292.0-acre portion of the proposed LCRSP is located within the County's "Flood Plain Safety Overlay District." An additional approximately 16.3 acres of off-site acreage outside the proposed LCRSP boundaries but included in the project area are located within the County's "Flood Plain Safety Overlay District."

◊ **Geologic Hazard Areas**. As specified in Section 82.15.010 (Purpose), the "Geologic Hazard (GH) Overlay" is "created to provide greater public safety by establishing investigation requirements for areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow/mud flow, rockfall, liquefaction, seiche, and adverse soil conditions." As required under Section 82.15.030 (Professional Reports): "Except as provided for areas of adverse soil conditions, a detailed geologic study prepared by a California Registered Professional Geologist shall be submitted with all land use applications and development permits proposed within the GH Overlay, that would lead to the construction of roads or structures or the subdivision of land."

An approximately 940.0-acre portion of the proposed LCRSP and approximately 9.8 acres of additional off-site acreage located outside the proposed LCRSP boundaries but included in the project area examined herein are located within the County's "Geologic Hazard Overlay District."

◊ **Mineral Resource Areas**. As specified in Section 85.030401 (Purpose): "The Mineral Resources (MR) Overlay established by Sections 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is created with the following intent and objectives: "(a) Intent. (1) The extraction of mineral resources is essential to the economic well being of the County and the needs of the society. (2) Certain privately owned land areas of the County contain significant

amounts of mineral resources. Mineral Resources Overlays are created to protect these resources for present and future extractions. Since mineral extraction must take place on the physical site where the minerals naturally occur, special controls are needed to minimize conflicts with other land uses. The Mineral Resources Overlay functions as a "holding district" since the land will be redesignated and reclaimed for other land uses when mining operations cease. Also, the district will insure that land disturbances are minimized through regulations and through the prohibition of any other land uses in these districts that are incompatible with mining. (3) Once the mining activity ceases, the mined lands shall be reclaimed for new uses in order to prevent or minimize adverse effects on the environment and to protect the public health, safety and welfare. (b) Objectives. The MR Overlay shall have the following objectives: (1) Prevent or minimize all adverse environmental effects. (2) Reclaim mined lands to a usable condition that is readily adaptable for alternative land uses. (3) Encourage the production and conservation of minerals while preserving areas relating to environmental and recreational amenities if such amenities are located within the mining locale. (4) Eliminate residual hazards to the public health and safety."

As indicated in Section 82.17.040 (Development Standards): "(a) MR Overlays shall be free from any land use that is incompatible with mining activity. (b) When mining activity ceases, the landowner and/or mining company shall be responsible for the reclamation of the site. (c) Reclamation shall include but not be limited to the reasonable mitigation or elimination of residual hazards. (d) Incompatible land uses shall be suitably buffered from mining activity. Appropriate transition measures shall be taken in order to insure compatibility between mining activity and surrounding land uses. (e) Non-mining projects located within the MR Overlay may be approved only if the following finding is made in the affirmative: Even though the project may otherwise be determined to be incompatible with mineral resource protection policies, conditions of approval shall be applied to minimize potential conflicts with these policies."

As specified in Section 88.03.070(a) (Protection of Mines from Incompatible Uses) of the County Development Code: "Mine development is encouraged in compatible areas before encroachment of conflicting uses. Mineral resource areas that have been classified by the State Department of Conservation's Division of Mines and Geology or designated by the State Mining and Geology Board as Mineral Resource Zones (MRZ), as well as existing surface mining operations that remain in compliance with the provisions of this chapter, shall be protected from intrusion by incompatible land uses that may impede or preclude mineral extraction or processing, to the extent possible for consistency with the general plan. Before approving a use that would otherwise be incompatible with mineral resource protection, conditions of approval may be applied to encroaching development projects to minimize potential conflicts."

An approximately 1,899.1-acre portion of the proposed LCRSP is located within the County's "Mineral Resource Overlay District." An additional approximately 16.3 acres of off-site acreage outside the proposed LCRSP boundaries but included in the project area are located within the County's "Mineral Resource Overlay District."

The County has established "uniform performance standards for development within the County that promotes compatibility with surrounding areas and land uses" (Section 83.01.010) and "elaborate upon and otherwise augment the development standards specified for individual land use zoning districts" (Section 83.01.020). As indicated in Section 83.01.020 (Applicability) in Chapter 83.01 (General Performance Standards) in the County Development Code, these standards apply to all new and existing land uses in all land-use zoning districts. Specified performance standards are "designed to mitigate the environmental impacts of existing and proposed land uses within the community. . .These general performance standards are intended to protect the health and safety of businesses, nearby residents, and workers and to prevent damaging effects to surrounding properties" (Section 83.01.010).

◊ **Air quality**. Required permits shall be obtained from either the Mohave Air Pollution Management District or the South Coast Air Quality Management District, depending on location (Section 83.01.040).

◊ **Electric disturbance**. No activity, land use, or process shall cause electrical disturbance that adversely affects persons or the operation of equipment across lot lines and that does not conform to the regulations of the Federal Communications Commission (FCC). Existing or proposed uses that generate electrical disturbance that are considered hazardous or a public nuisance shall be contained, modified, or shielded to prevent disturbance (Section 83.01.050).

◊ **Fire hazards**. Land uses that include the storage of solid materials susceptible to fire hazards and/or the storage of flammable liquids and gases shall be subject to specified storage standards (Section 83.01.060).

◊ **Heat**. Land uses in industrial districts shall not emit heat that would cause a temperature increase on any adjacent property in excess of 10°F, whether the change is in the air, on the ground, or in a structure (Section 83.01.070).

◊ **Noise**. Areas shall be designated as "noise-impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Section 83.01.080{d) and Section 83.01.080(e). New development of residential or other noise-sensitive land uses shall not be allowed in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to those standards. Noise-sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses (Section 83.01.080).

◊ **Vibration**. No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line nor shall any vibration be allowed which produces a particle velocity greater than or equal to 0.2 inches per second, measured at or beyond the lot line.

◊ **Waste disposal**. No liquids of any kind shall be discharged into a public or private sewage or drainage system, watercourse, body of water, or into the ground, except in compliance with applicable regulations of the County Development Code, Title 23 of the CCR, the CWC, and related federal regulations (Section 83.01.100).

As stipulated in Section 87.05.010 (Purpose) in Chapter 87.05 (Dedication and Exactions), this chapter establishes standards for dedications of land or payment of fees in conjunction with subdivision approvals. As a condition of map approval, the subdivider shall dedicate or make an irrevocable offer of dedication of all parcels of land within the subdivision needed for access rights and abutters' rights, alleys, drainage easements, public utility easements, streets, and other public easements. In addition, the subdivider shall improve or agree to improve all such parcels (Section 87.05.030[a]).

As further specified in Section 86.12.060 (Findings and Decisions) in Chapter 86.12 (Amendments) in the County Development Code, the County Board of Supervisors is required to make certain findings prior to the approval of any amendment to the County General Plan, County Development Code, or to a community plan or area plan. Those findings include: (1) the proposed amendment is internally consistent with all other provisions of the respective plan, the general plan, or an applicable specific plan; (2) the proposed amendment would not be detrimental to the public interest, health, safety, convenience, or welfare of the County; (3) the proposed land-use zoning district change is (a) in the public interest, there will be a community benefit, and other existing and allowable uses will not be compromised; (4) the proposed land-use zoning district change will provide a reasonable and logical extension of the existing land-use pattern in the surrounding area; (5) the proposed land-use zoning district change does not conflict with the provisions of the County Development Code; (6) the proposed land-use zoning district change will not have a substantial adverse effect on surrounding properties; and (7) the affected site is physically suitable in terms of design, location, shape, size, operating characteristics, and the provision of public and emergency vehicle access and public services and utilities, fire protection, police protection, potable water, schools, solid waste collection and disposal, to ensure that the proposed or anticipated uses and/or development would not endanger, jeopardize, or otherwise constitute a hazard to the property or improvements in the vicinity in which the property is located.

As further stipulated in Section 86.14.070 (Adoption of Specific Plan) in Chapter 86.14 (Specific Plan Adoption and Amendment) in the County Development Code, the Board of Supervisors (Board) may adopt a specific plan only if all of the following findings can be made: "(1) The proposed development is generally in compliance with the actions, goals, objectives, and policies of the [County] General Plan; (2) The design, location, shape, size, operating characteristics, and the provisions of public and emergency vehicle access and public services and utilities, would ensure that the proposed development would not endanger, jeopardize, or otherwise constitute a hazard to the public convenience, health, interest, safety, or welfare, or injurious to the property or improvements in the vicinity and land use zoning district in which the property is located; (3) The proposed development would: (A) Ensure quality development by encouraging greater flexibility with more creative and aesthetically pleasing designs for major developments; (B) Ensure the timely provision of essential public services and facilities consistent with the demand for the services and facilities; and (C) Promote a harmonious variety of housing choices and commercial and industrial activities; attain a desirable balance of residential and employment opportunities; and result in a high level of amenities and the preservation of the natural and scenic qualities of open space. (4) The subject property is physically suitable for the proposed land use zoning district designation(s); (5) The proposed project has been reviewed in compliance with the provisions of the California Environmental Quality Act and the County's Environmental Review Procedures; and (6) There would be no potential negative effects upon

environmental quality and natural resources that would not be properly mitigated and monitored, unless a Statement of Overriding Considerations is adopted by the Board."

- **Lytle Creek North Planned Development**. While a "specific plan" is a tool for the systematic implementation of the general plan, a planned development, also referred to as a planned unit development (PUD), is a type of zoning classification. A PUD designation applies to the development of land where it is desirable to apply regulations in a more flexible manner than those pertaining to other zoning classifications and to allow diversification in the location of structures and other site qualities. The PUD zoning process is implemented through approval of a master or precise plan for the development area and typically includes specific planning and development conditions governing the plan's implementation.[86]

  On December 18, 2001, the County approved the LCNPD, adopting a master plan and authorizing the construction of 2,466 dwelling unit on an approximately 647.4-acre site located to the north of the Lytle Creek channel.[87] With the County's adoption of the LCNPD, the County General Plan and County Development Code designations were changed to "Planned Development (PD)." A copy of the LCNPD master plan is included as Figure 4.1-15 (Lytle Creek North Planned Development Master Plan).

  As proposed, portions of the approved LCNPD will be extracted from that project area and incorporated into the boundaries of the proposed LCRSP. If subsequently approved, those areas would be annexed into the City and not be then subject to the provisions of the "Lytle Creek North Planned Development Project." Those areas include an approximately 48.3-acre portion of the Sycamore Canyon area located to the south of the I-15 Freeway (designated as a portion of PAs 8-10 in the proposed LCRSP) and an approximately 56.0-acre area located to the north of the I-15 Freeway and east of Lytle Creek Wash (designated as PAs 11-15 in the proposed LCRSP).[88]

  As illustrated, those portions of the LCNPD located within the project site and south of the I-15 Freeway are currently designated "Open Space (OS)" and "Single-Family Residential (SF-7) (7,200 sq. ft. min.)." Those portions of the LCNPD located within the project site and north of the I-15 Freeway are currently designed "Commercial (C)" and "Open Space (OS)." Under the "Commercial (C)" designation, retail commercial (including community, general/highway, and service-oriented commercial), office, and light-industrial use are authorized.

- **Rialto Municipal Airport/Art Scholl Memorial Airport**. The Rialto Municipal Airport is a Federal Aviation Administration (FAA) designated Category 3 General Aviation airport, operating pursuant to an airport operating permit issued by the California Department of Transportation (Caltrans) Division of Aeronautics. The airport encompasses about 442 acres and has two runways: Runway 06-24 (4,500 feet by 100 feet) and Runway 17-35 (2,650 feet by 50 feet). The runways are lighted to provide for night operations. Airport

[86]/ California Department of Real Estate, Reference Book – A Real Estate Guide, LDA-ISBN 0-916478-02-5, 2000, p. 436

[87]/ Lennar Homes subsequently purchased an approximately 387-acre portion of the LCNPD, south of the I-15 Freeway, and is constructing about 2,081 dwelling units on that property, being market as Rosena Ranch.

[88]/ Including PA 8 (36.3 acres), PA 9 (1.0 acre), PA 10 (11.0 acres), PA 11 (3.0 acres), PA 12 (3.0 acres), PA 13 (29.0 acres), PA 14 (2.0 acres), and PA 15 (9.0 acres), plus 10.0 acres of roadways.

tenants occupy the area southerly and easterly of the runways. No commercial airlines operate at the airport and the airport does not have an air traffic control tower.[89]

Pursuant to Chapter 4, Article 3.5 (Appendix A, Section 21670 *et seq*.,) of the California Public Utilities Code (PUC), the San Bernardino County Airport Land Use Commission (ALUC) has adopted a "Final Comprehensive Land Use Plan – Rialto Municipal Airport"[90] for the Rialto Municipal Airport/Art Scholl Memorial Airport (formerly Miro Field). The airport, which is classified in the National Plan of Integrated Airport Systems (NPIAS) as a "general utility – reliever airport,"[91] has a 4,500 foot primary runway (6/24) and a 2,600 foot cross-wind runway (17/35). A number of fixed wing and helicopter flight training schools are based at the airport. Complete maintenance facilities, fuel (100 and Jet-A) and a café are located on the airfield. The County Sheriff's Department operates a helicopter facility. The City of San Bernardino Fire Department and an Emergency Air Ambulance Service operate from the airport.[92]

As specified, three "primary referral areas" have been established in proximity to the airport. "Referral Area A" is made up of the FAA's classified primary surface of the airport, the Runway Protection Zone (RPZ) and a portion of the approach and departure surface. "Referral Area B" is made up of Safety Zone II and the balance of the approach and departure zones not located within the RPZ. "Referral Area C" is made up of Safety Zone III and the horizontal and transitional surfaces. The proposed LCRSP, inclusive of the off-site areas examined herein, is not located within any Rialto Municipal Airport referral areas and no associated land-use restrictions apply to the proposed project.

As indicated in City Council Resolution 5468 (A Resolution of the City Council of the City of Rialto, California, Declaring its Intent to Close the Rialto Municipal Airport and Approving the Draft Closure Plan and the Relocation Plan for the Proposed Rialto Municipal Airport Closure), as adopted on April 17, 2007, the City adopted a "Draft Closure Plan" and directed City staff to "take all necessary actions" to develop a final closure plan, culminating in the following actions: (1) closure of the Rialto Municipal Airport will occur no earlier than May 1, 2008 and no later than August 1, 2008, subject to the appropriate relocation of all qualified tenants; (2) after closure of the Rialto Municipal Airport in accordance with the final closure plan, the airport will no longer be open to normal flight operations; (3) after closure, only restricted operations will be permitted, including emergency take offs and landings and the operations of the County Sheriff's Department, Mercy Air, and Western Helicopter; and (4) an appropriate statutory 90-day notice of closure will be submitted to the FAA.

4.1.2.4 City of Fontana

The northwestern portion of the proposed project abuts lands located within the jurisdiction of the City of Fontana. As indicated in the "City of Fontana General Plan," Fontana's incorporated area encompasses 23,455 acres and the adopted Sphere of Influence adds another 9,973 acres. The City of Fontana's Sphere of Influence is bounded on the north generally by Foothill

[89]/ City of Rialto (Mead & Hunt, Inc.), Draft Airport Closure Plan–Rialto Municipal Airport, April 3, 2007, p. 1.
[90]/ San Bernardino County Airport Land Use Commission (Ray A. Vidal), Final Comprehensive Land Use Plan – Rialto Municipal Airport, January 1991.
[91]/ *Ibid*., p. 1-7.
[92]/ San Bernardino County Airport Land Use Commission, Final Comprehensive Land Use Plan – Rialto Municipal Airport, January 1991, p. 1-7.

Boulevard and encompasses roughly the western half of the City from Foothill Boulevard to the I-10 Freeway, as well as large portions of the area between the I-10 Freeway and south to Jurupa Avenue.[93] The City of Fontana planning area incorporates 16,620 total acres of residential and 16,848 acres of non-residential land uses. At the mid-point of the density range for each residential land-use category, a total of 56,986 dwelling units could be developed in the incorporated portion and 10,207 dwelling units could be developed in the Fontana Sphere of Influence.[94]

The City of Fontana's existing corporate boundaries and its adopted SOI extend westward from Lytle Creek Road and Sierra Avenue and southward from Lytle Creek Road. As illustrated in Figure 4.1-16 (City of Fontana General Plan – Land-Use Map), to the north of the I-15 Freeway, the land-use designations presented in the "City of Fontana General Plan" include "General Commercial (C-G)" and "Residential Estate (R-E) (up to 2 du/ac)." As specified, the "General Commercial (C-G)" designation is intended for retailing, wholesaling, and service activities, including automobile dealerships and malls. Authorized uses include offices and businesses providing professional services, including legal services, financial institutions, administrative and corporate offices, medical offices, and clinics. Development densities range from 0.1-1.0 floor-area-ratio (FAR), with the upper end of this range intended primarily for office-type uses.[95] The "Residential Estate (RE)" designation reflects natural, environmental, and other constraints adjacent to the hillside areas in the community, as well as the lack of infrastructure. A minimum lot size of 0.5 acres is required. Depending on slope and geotechnical considerations, minimum lot size requirements may be increased in order to preserve hillside areas.[96]

To the south of the I-15 Freeway, land-use designations established under the "City of Fontana General Plan" include "Medium Density Residential (R-M) (SFD=5.1-7.6 du/ac, SFA or MF=7.7-12 du/ac) and "Regional Mixed Use (RMU)." The "R-M category accommodates a range of housing types, including multiple-family, single-family attached, and single-family detached.[97]

As specified by the City of Fontana, the preferred mix and range of uses within the "Regional Mixed Use (RMU)" district includes 10-30% retail, 5-15% office, 15-30% light industrial/business park, 25-35% residential, and 4-6% public open space. Areas designated "RMU" are intended as centers for employment generating commercial and industrial uses. Specific development types allowed in the RMU include research and development facilities, general commercial uses, corporate business parks, light manufacturing, warehouse retail, entertainment centers, hotels and convention centers, service and professional business offices, day-care centers, and public open space. Residential development at the "Multi Family" density designation is permitted if the residential development is part of a project developed with a specific plan.[98]

The corresponding zoning designations for those areas are illustrated in Figure 4.1-17 (City of Fontana – Zoning Map). As indicated therein, the zoning designation affiliated with the "Residential Estate (R-E)" general plan district is "Residential Estate (R-E) (2 du/ac)." The zoning designations affiliated with the "General Commercial (C-G) general plan district are "General Commercial (C-2) (0.1-1.0 FAR)" and "Utility Corridor (U-C)." The zoning designation affiliated with the "Regional Mixed Use (RMU)" general plan designation is "Regional Mixed Use

[93]/ City of Fontana, City of Fontana General Plan, Land Use Element, adopted October 21, 2003, p. 3-20.
[94]/ *Ibid*., p. 3-27
[95]/ *Ibid*., p. 3-14.
[96]/ *Ibid*., p. 3-11
[97]/ *Ibid*., p. 3-13
[98]/ *Ibid*., pp. 3-14 and 3-15

(RMU) (0.1-1.0 FAR for non-residential; 12-25 du/acre for residential)." The zoning designations affiliated with the "Medium Density Residential "R-M) general plan designation are "General Commercial (C-2) (0.1-1.0 FAR)," "Multi Family Residential (R-3) (up to 7.6 du/ac for single family detached product types; 7.7-12 du/ac for single family attached or multiple family product types)," and "Public Utility Corridor (P-UC)."

4.1.2.5 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**.[99] On March 31, 1992, the City adopted the current General Plan. From a land-use perspective, the City and its adopted SOI are divided into distinct land-use categories. As illustrated in Figure 4.1-18 (City of Rialto General Plan - Land-Use District Designations), excluding the ERVSP which was subsequently designated "Medium Density Residential (3-6 du/ac)/Recreation-Golf Course," an area located along Riverside Avenue in the vicinity of the Cemex USA's Lytle Creek Plant which is designated as "Open Space," an area located along Riverside Avenue in proximity to Larch Avenue which is designated "Low Density Residential (0-3 du/ac)," and the area located within the existing Southern California Edison (SCE) right-of-way which is designated as "Open Space – Edison Easement," the City General Plan identifies that portion of the proposed project within the City and its SOI as a "Special Study Area" and a "Specific Plan Zone" (SPZ).[100] The General Plan identifies much of the area north of Riverside Avenue and south of the I-15 Freeway as "Mineral Resources (Sector B-5)."[101]

  In describing its evolution, the City General Plan notes: "In revising a General Plan it is necessary to consider alternative means for reaching the agreed upon goals of the City. The 1984 Rialto General Plan, in effect at the time of the 1991 Revision, constitutes the first alternative to be considered. In other words, Alternative I is the continuation of the 1984 General Plan without revision. Alternative II is the existing 1984 General Plan revised by changes which were recommended by the Citizens' Advisory Committee to be approved by the Rialto City Planning Commission and adopted by the Rialto City Council. In final form, Alternative II will be the 1991 Rialto General Plan. . .While planning revisions to the 1984 General Plan, two major changes were suggested for the categories of zoning land use in Rialto. City staff prepared the changes, which have been adopted by [the] City Council."[102]

[99]/ On July 16, 2008, the City of Rialto released a "Notice of Preparation – City of Rialto General Plan Update and Related Zoning Ordinance Amendment" stating the City's intent to prepare an EIR for an update to the "City of Rialto General Plan." Pending the adoption of the plan, the existing 1992 "City of Rialto General Plan" contains the policies of the City with regards to the proposed project.

[100]/ City of Rialto, City of Rialto General Plan, Land Use Element, March 31, 1992, Figures II-2 and II-3, pp. II-20 and 23.

[101]/ *Ibid*., Conservation Element, Figure X-2, p. X-6.

[102]/ *Ibid*., Land Use Element, pp. II-17 and 21.

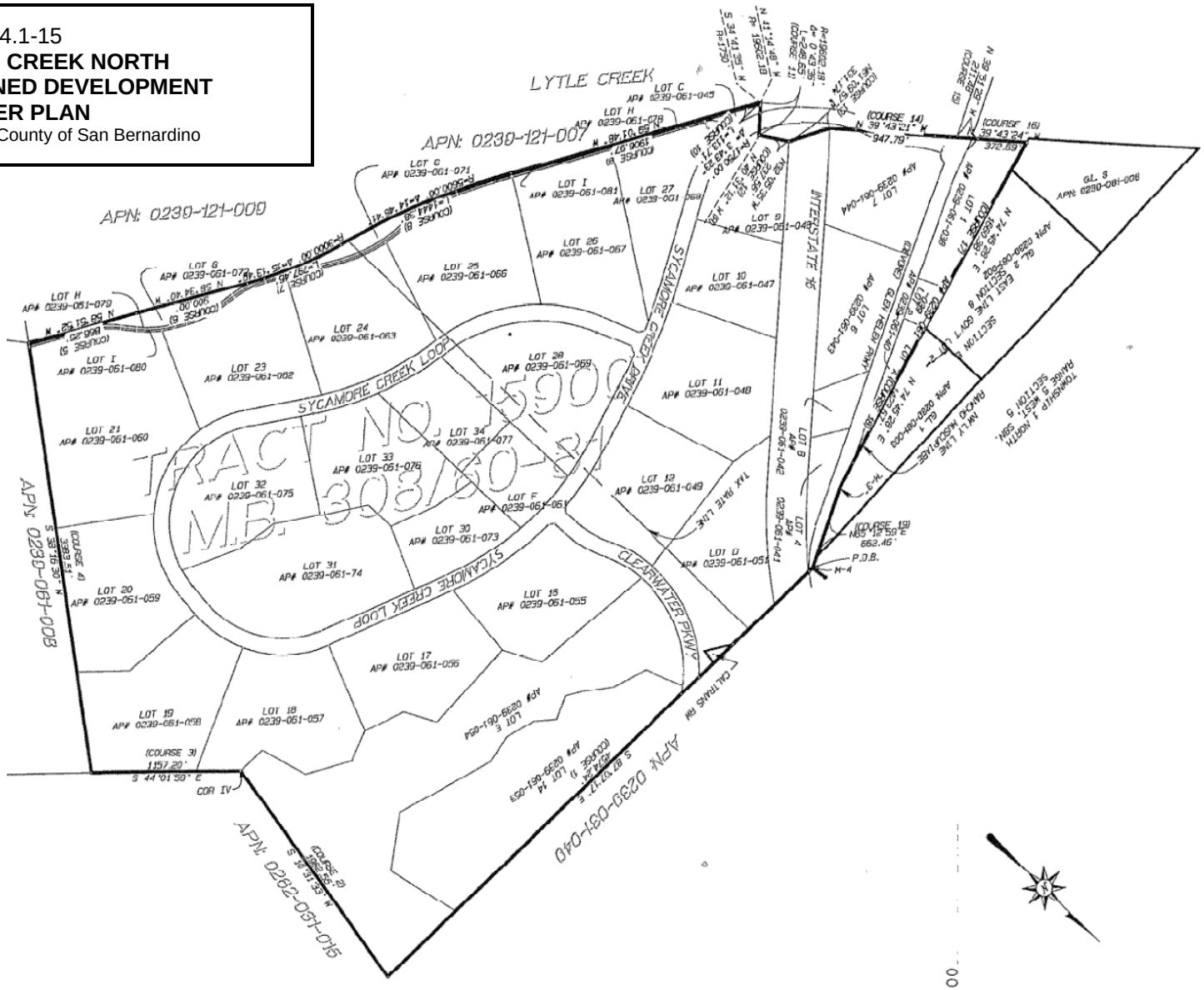
With regards to that portion of the project site located within the corporate boundaries of the City, prior to 1992, the City General Plan states that the "portion of undeveloped land called the Pharris Land, lying north of Riverside Avenue and within City boundaries had been zoned for residential use. Because this land is subject to a specific plan now in progress, the residential zoning classification was removed, and it is now designated as SPZ (Specific Plan Zone)."[103,104,105]

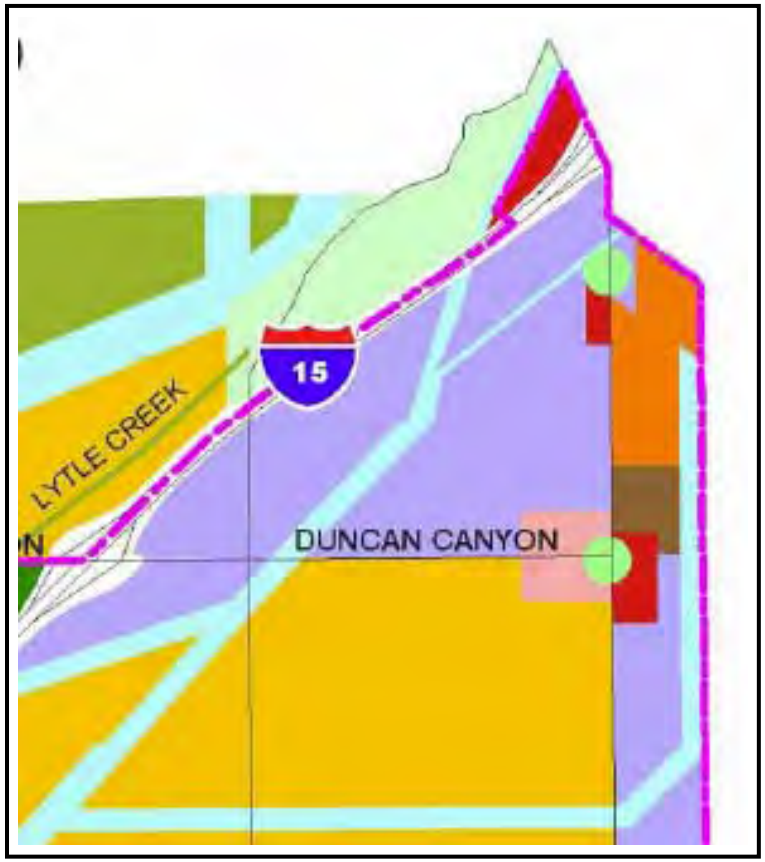
[103]/ *Ibid*., p. II-21.

[104]/ Reference to the "Pharris Land" or "Pharris Property" in the City General Plan and City General Plan MEIR is inclusive of the City and County area within the boundaries of the LCRCP, as well as those portions of the LCNPD located within the area of the County's "Glen Helen Specific Plan," the County's "Lytle Creek North Planned Development Project," and the City's ERVSP included within the proposed LCRSP boundaries.

[105]/ On July 29, 1992, a "declaration of covenants, conditions and restrictions" was recorded in the Office of the County Clerk of San Bernardino County (Instrument No. 92-314964) affecting all or a portion of the project site. As stipulated, in pertinent part, therein: "This declaration of covenants, conditions and restrictions ('Agreement') is made and entered into this 28 day of July, 1992, by and among Sunbelt Acquisitions, Inc., a Delaware corporation ('Sunbelt'), The Pharris Group, a California limited partnership ('Pharris'), and Lytle Creek Land and Resources, a California corporation and a subsidiary of Pharris ('Lytle' and, together with Pharris, the 'Declarants'), with reference to the following facts: (A). Lytle is the owner of that certain real property located in San Bernardino County, State of California, as more particularly described on Exhibit A attached herein(the 'Lytle Property'). The Declarants plan to develop a portion of the Lytle Property as a residential/golf course community and to develop other portions thereof for residential, commercial and/or industrial purposes (all such development being collectively referred to as the 'Project'), including, but not limited to, the sale of single family homes and condominiums to members of the general public pursuant to transactions which may require a Final Subdivision Public Report from the California Department of Real Estate ('DRE'), as contemplated by the Development Agreement dated February 28, 1992, by and between Lytle, Sunbelt Corporation and Sunbelt. (B). Concurrent herewith, Lytle has sold, granted and conveyed to Sunbelt, among other things, that certain real property located in San Bernardino County, State of California, as more particularly described on Exhibit 'B-1' attached hereto, together with those certain access easements over the real property more particularly described on Exhibit 'B-2' and Exhibit 'B-3' attached hereto (as may be relocated from time to time) (all such lands described in Exhibits B-1, B-2 and B-3 being referred to herein as the 'Mining Property'), all of which is adjacent to the Lytle Property. (C). Sunbelt and certain of its affiliates are in the business off: (1) processing sand and gravel and other natural resources on or from the Mining Property and its affiliates as well as for wholesale and retail sales; (2) manufacturing, batching and delivering ready-mix concrete and other similar products, which use rock, sand and/or gravel on or from the Mining Property; (3) conducting surface mining, dredging and drilling operations on or over all or a portion of the Mining Property to extract rock, sand, gravel and soils, including, without limitation, up to one hundred twenty five million (125,000,000) tons of aggregate; and (4) conducting transportation and trucking operations relating to the activities described in subparagraphs 1, 2 and 3 of this paragraph C. The business of Sunbelt and its affiliates as described in paragraphs C, D and E hereof, together with uses incidental thereto, that is being or may be operated on a twenty-four hour basis, and otherwise substantially as presently being conducted on and about the Mining Property, are collectively referred to herein as the 'Mining Operations'. . .Each Declarant for itself, its shareholders, officers, directors, partners, employees, agents, affiliates and related entities and each Declarant's respective successors-in-interest and assigns, including but not limited to, purchasers and lessees of commercial, industrial or residential units in the Project and any homeowners' associations or corporations formed for the Project (collectively the 'Declarant Entities'), and each of them hereby; (a) acknowledge and agree that the Mining Operations are being or may be operated on a twenty-four hour basis upon the Mining Property; (b) agree not to use, own, operate, lease, license, manage or otherwise exercise control over all or any portion of the Lytle Property, directly or indirectly, or otherwise permit all or any portion of the Lytle Property to be used, owned, operated, leased, licensed, managed or controlled, directly or indirectly, for any Mining Operations; (c) with respect to those portions of the Lytle Property which lie within 500 feet of any portion of the Mining Property and which are used for residential purposes and uses incidental thereto, waive and release any rights, claims, complaints, objections, protests, actions, judgments, liabilities, demands, losses, fees, costs and expenses (collectively 'Claims') of every nature and kind known, suspected or unsuspected, whether arising now or in the future, arising out of or relating to any Mining Operations on or about the Mining Property, whether now existing or hereafter lawfully conducted or commenced, including, without limitation, all Claims based upon nuisance, trespass or property damage resulting from directly or indirectly, sand, gravel, dust, smoke, noise, blast, shock, subsidence or odor or other elements emanating from the Mining Property into, on, over, under or about the Lytle Property, provided, however, that such waiver and release shall not apply to Claims arising out of Mining Operations that are conducted in an unlawful manner. . .The term of this Declaration shall commence upon the date hereof and shall continue in full force and effect for a term of 35 year hereafter."

Figure 4.1-15
LYTLE CREEK NORTH PLANNED DEVELOPMENT MASTER PLAN
Source: County of San Bernardino





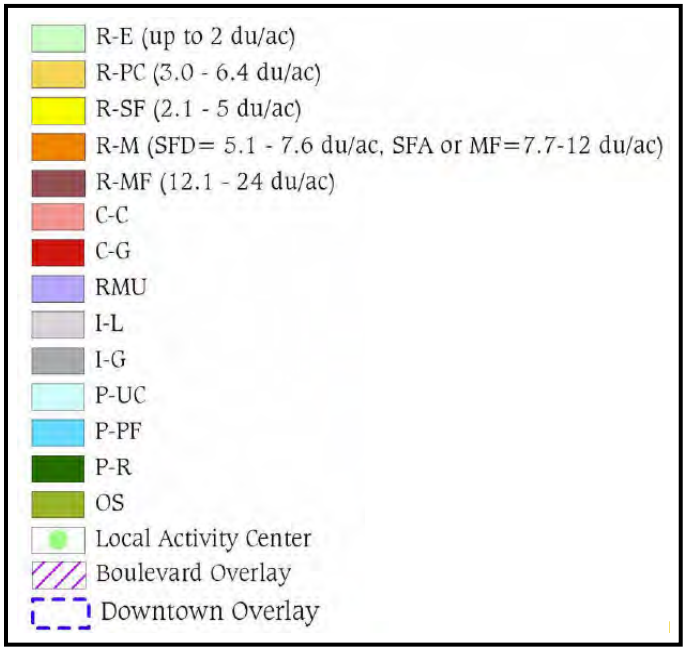
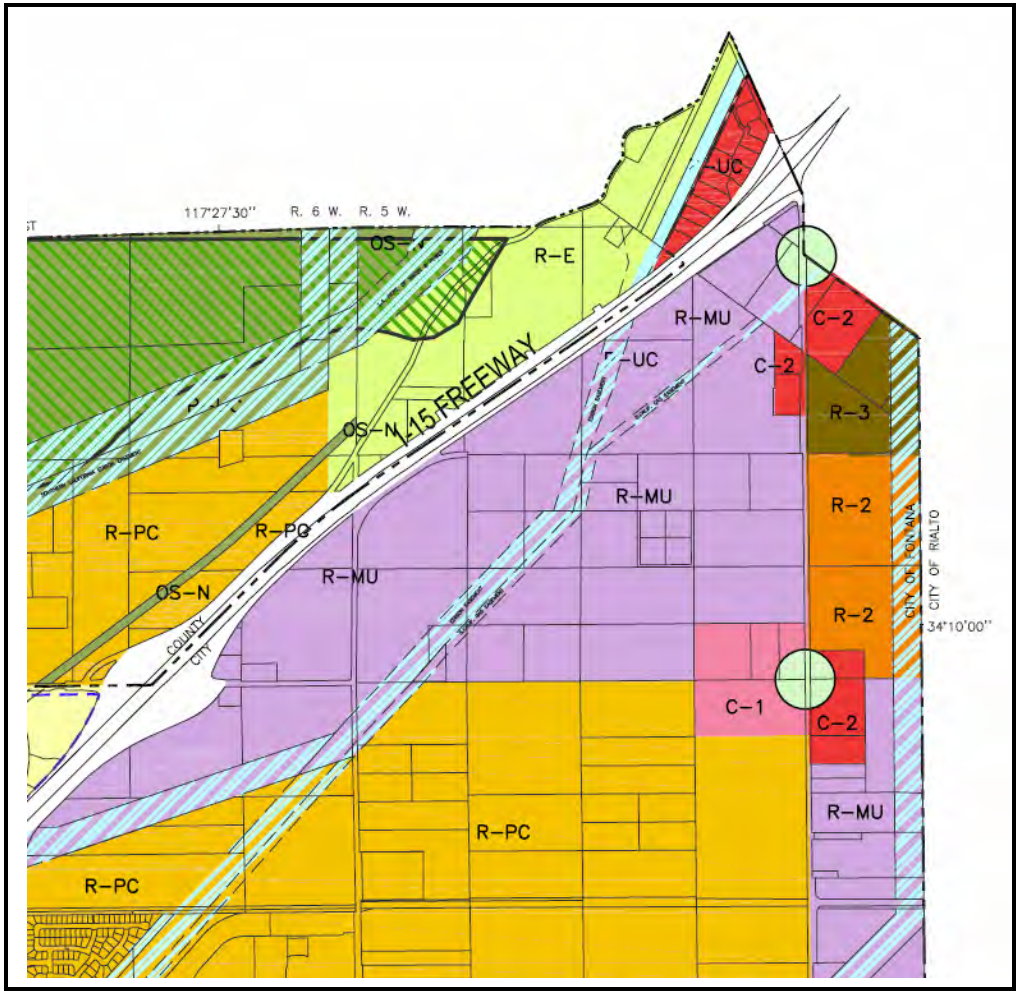


Figure 4.1-16
CITY OF FONTANA GENERAL PLAN LAND-USE PLAN
Adopted October 21, 2003, Revised November 1, 2006
Source: City of Fontana



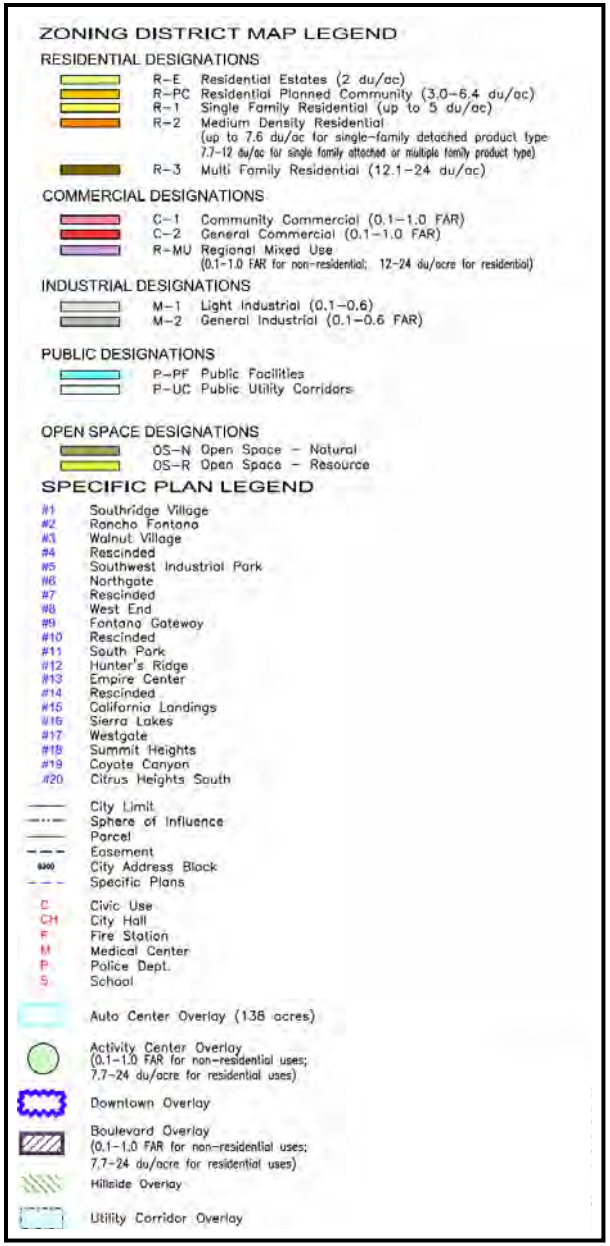
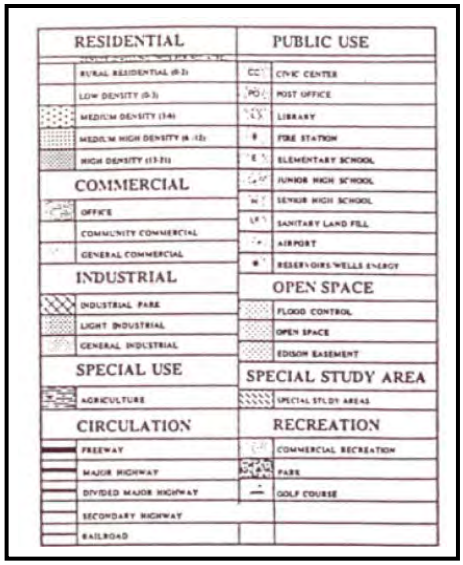


Figure 4.1-17
CITY OF FONTANA - ZONING MAP
Adopted April 15, 2004, Revised November 1, 2006
Source: City of Fontana



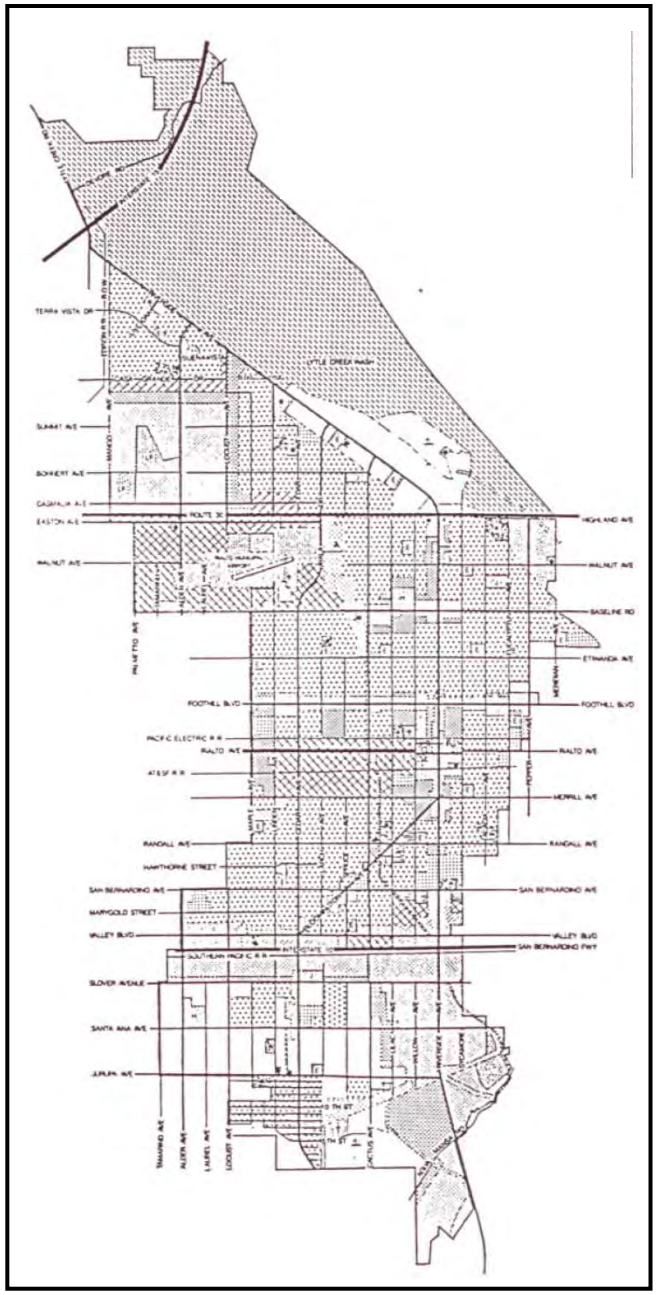


Figure 4.1-18
CITY OF RIALTO GENERAL PLAN LAND-USE DISTRICT DESIGNATIONS
Source: City of Rialto General Plan

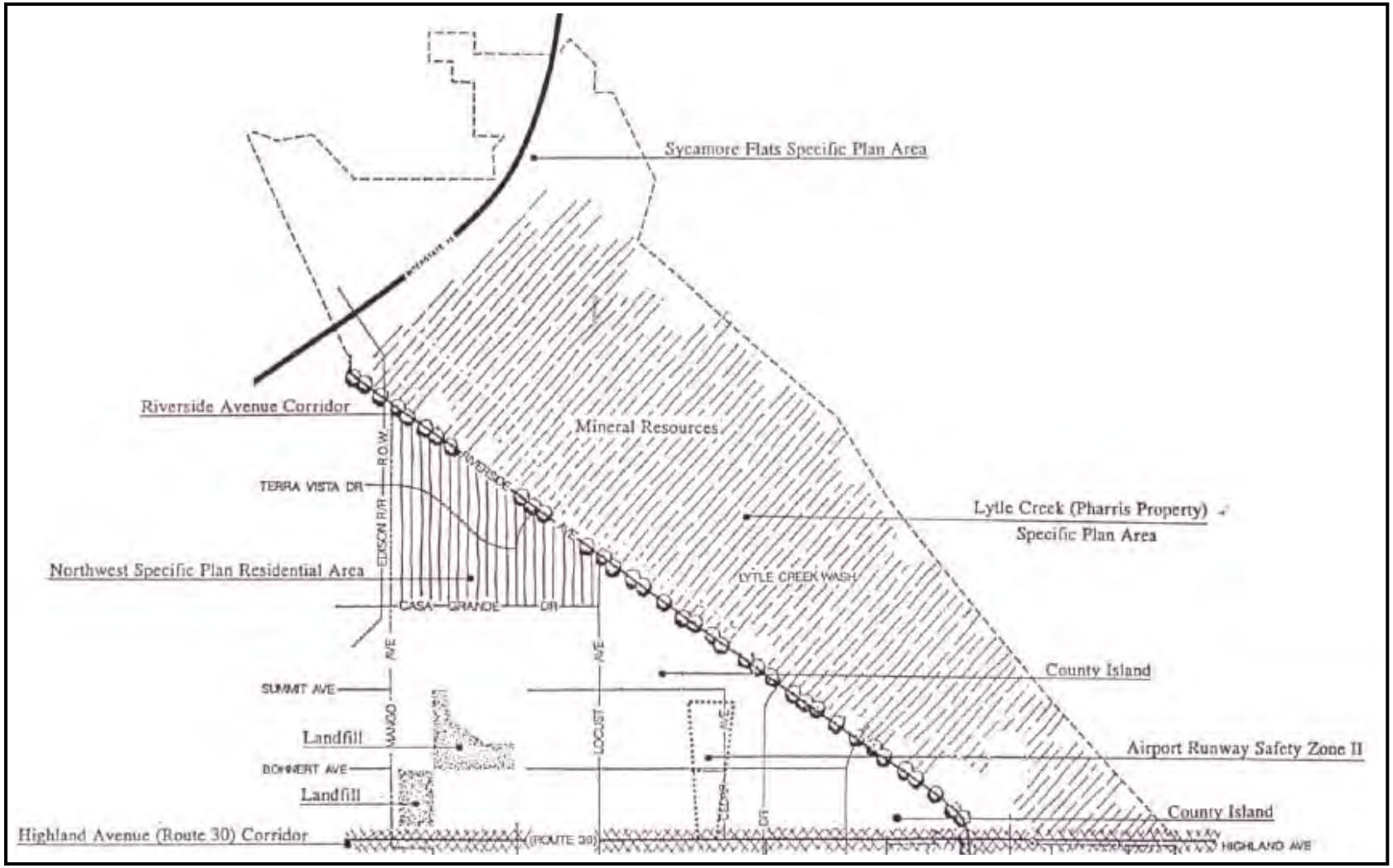


Figure 4.1-19
CITY OF RIALTO GENERAL PLAN
NORTHERN SECTOR PLANNING SECTOR
Source: City of Rialto General Plan

Figure 4.1-20
CITY OF RIALTO
EL RANCHO VERDE SPECIFIC PLAN CONCEPTUAL LAND-USE PLAN
Source: City of Rialto, El Rancho Verde Specific Plan

The City General Plan (Land Use Element), in order to allow the City to best focus on differing issues affecting various parts of the community, divides the City into six planning sectors. As illustrated in Figure 4.1-19 (City of Rialto General Plan – Northern Sector Planning Sector), as extracted from the City General Plan, the project site is located within the "North Sector," which extends northward from Highland Avenue and includes the City's adopted Sphere of Influence.[106]

In describing the "Northern Sector," the City General Plan notes that this "Sector contains the highest proportion of vacant land of any of the City's Sectors, thus offering the greatest flexibility for future land planning unconstrained by potential nonconforming uses. . .A specific plan for about 3,500 acres of land, located in the Lytle Creek area is now in process and plans for development of the Sycamore Flat area are expected later. At this time, the nature of the development proposed for these lands has not yet been made known. Six square miles of new development of any kind will have significant impacts on the City. These impacts cannot be planned for until the specific plans are presented to the City, and the character of the planned development is revealed."[107]

With regards to the "North Sector," those Land Use Element policies that appear most closely related to the proposed project and project site are presented below.

- Goal 4.1.1. Encourage annexation which will demonstrate net benefit to the City before being considered for approval.
  - ◊ Policy 4.1.1.1. All large annexations to Rialto should be required to have an approved specific plan prior to annexation.
  - ◊ Policy 4.1.1.2. The City shall encourage, where appropriate, the preparation of specific plans on large annexations, to include a fiscal impact statement to insure that the City enjoys financial benefits from annexation of the subject land.
  - ◊ Policy 4.1.1.3. Based on the approved specific plan for large annexation, impact fees will be charged on new development sufficient to assure timely construction of public facilities and provision of expanded City services. Impact fees shall provide full mitigation of financial costs to the City, and protect its existing levels of service from deterioration.
  - ◊ Policy 4.1.1.4. Specific plans for large annexations shall demonstrate compatibility of land uses both within and adjacent to the planning area.
  - ◊ Policy 4.1.1.5. Specific plans for large annexations shall demonstrate protection of all resources valued by the citizens of Rialto, including, but not limited to: views, trees and other landscaping features, aquifers, surface water courses, historic buildings, etc.

[106]/ As indicated in the City General Plan: "It is important to note that all elements and their goals and policies are of equal legal weight in the General Plan. The goals and policies cited in the following sectors are not chosen because they are more important than others, but because they are immediately applicable to physical planning concerns in specific areas, and thus form the basis of the implementation plan" (Land Use Element, p. II-22).
[107]/ *Op. Cit*., City of Rialto General Plan, Land Use Element, p. II-22.

◊ Policy 4.1.1.6. Specific plans for large annexations shall set aside land for community parks and other public facilities as appropriate to maintain the City's quality of life.

- Goal 4.1.3. Enhance Riverside Avenue to be the signature street of the City of Rialto.

- Goal 4.1.5.1. Develop, protect and enhance high quality residential and industrial land uses in Rialto.

- Goal 4.1.7. Ensure that all developed areas of the City are adequately served with essential public services and infrastructure including, but not limited to, streets, water, surface drainage, sanitary sewers, law enforcement, fire protection and public schools.

◊ Policy 4.1.7.1. The City will coordinate all development proposals with other affected public entities to ensure the provisions of adequate public facilities.[108]

Within the "Northern Sector," the City General Plan notes that there is a substantial amount of unincorporated land, frequently called "County islands." The following additional policies have been formulated with regards to those areas.

- Goal 4.1.4. Encourage the annexation of all County islands located within the boundaries of the City of Rialto.

◊ Policy 4.1.4.3. Work with County of San Bernardino to require that City of Rialto building and development standards are met in all new development within County islands.[109]

The following goals and policies are extracted from the City's Open Space and Recreation Element and add privately operated recreational facilities, such as the El Rancho Verde Royal Vista Golf Course.

- Goal 8.1. Attract desirable commercial recreation enterprises to Rialto.

◊ Policy 8.1.3. Protect residential and other sensitive areas from any external impacts of commercial recreation by separation of incompatible land uses, and buffering or screening, as necessary.

◊ Policy 8.1.5. Require review and approval of the City's Development Review Committee for any commercial recreation enterprise seeking location within Rialto.[110]

The City General Plan includes a Community Design Element for: (1) the protection and enhancement of the City's existing aesthetic attributes; (2) the promotion of community

[108]/ *Ibid*., Conservation Element, pp. X-5, and X-7.
[109]/ *Ibid*., Land Use Element, pp. II-25 and II-26.
[110]/ *Ibid*., Open Space and Recreation Element, p. VII-12.

design through the use of architectural standards, landscape and streetscape, amenities, and a variety of other design techniques; (3) the preservation of the community's rural atmosphere; (4) the harmonious incorporation of new development into existing public and private development; and (5) the preservation and enhancement of the historic character of the community.[111] As indicated therein, a number of distinct "neighborhoods shall be addressed separately by specific policies and/or documents," including "Sycamore Flats (Sycamore Flats Specific Plan)" and "Lytle Creek Area (Lytle Creek Specific Plan)." In these areas "design shall conform to the separate design standards found in their respective specific plan documents.[112]

- **El Rancho Verde Specific Plan**. On July 5, 2006, the City approved City General Plan Amendment No. 22 (GPA No. 22), revising the previously adopted (Resolution No. 4143, August 1, 1995) ERVSP. The approximately 221-acre ERVSP area, located north of Highland Avenue and east of Riverside Avenue, encompasses both the existing approximately 183-acre El Rancho Verde Royal Vista Golf Course[113] and approximately 70-acres of additional undeveloped land. A conceptual land-use plan for that planning area is presented in Figure 4.1-20 (City of Rialto – El Rancho Verde Specific Plan Conceptual Land-Use Plan).

  Based on the City's approval of "El Rancho Verde Specific Plan Amendment No. 1," (SPA No. 1) the revised General Plan land-use designation for the entire specific plan area is now "Medium Density Residential (3-6 du/ac)/Recreation-Golf Course," allowing for a residential density of 3-6 dwelling units per acre and providing broad flexibility on the ultimate siting of any resulting residential development. The City's approval of GPA No. 22 and SPA No. 1 increased the number of allowable single-family dwelling units that could be constructed within that specific plan's boundaries from 144 to 300 units and resulted in a relocation of the development area within that property. GPA No. 22 and SPA No. 1 also authorized the rerouting of the existing golf course, the construction of a 19,339 square foot clubhouse (approximately 3,878 square feet larger than the existing clubhouse), and allowed for the widening of Peach Street, at North Riverside Avenue, to provide for dedicated northbound and southbound turning lanes.

- **City of Rialto Municipal Code**. The City of Rialto Municipal Code constitutes a compilation of the adopted ordinances of the City. Development in the City is done in accordance with the City Municipal Code. As an overarching policy, the code states: "The zoning regulations and districts set forth are made in accordance with a comprehensive plan and designed to lessen congestion in the streets; to secure safety from fire, panic and other dangers; to promote health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentrations of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements. They are made with reasonable consideration, among other things, as to the character of the district and its peculiar suitability for particular uses, and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the City" (Section 18.02.010, Title 18, City Municipal Code).

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[111]/ *Ibid*., Community Design Element, p. VIII-1.
[112]/ *Ibid*., Policy 1.4.4, p. VIII-5.
[113]/ City of Rialto, Final Environmental Impact Report for the El Rancho Verde Specific Plan, SCH No. 1992082028, certified August 1, 1995 (Resolution No. 4143), pp. III-3 and V-13.

As indicated in the City Municipal Code, with the exception of the area comprising the ERVSP, which is designated "Specific Plan (SP)," that portion of the project site located within the City's corporate boundaries is designed "Single Family Zone (R-1-A)" on the City's "Land Use Zoning Map." Those zoning district designations are discussed below.

◊ **Single Family Zone**. As specified, permitted uses include, but are not limited to, single-family dwellings, accessory uses and structures, home occupations, public buildings and uses such as schools offering full curricula as required by State law, libraries, museums, parks, playgrounds, community centers, fire and police stations, and second residential units, subject to the limitations outlined in Section 18.10.020 (Permitted Uses) of the City Municipal Code.

The City's "Single Family (R-1-A)" zoning district designation current applies to an approximately 465-acre portion of the project site.

◊ **Specific Plan**. The City Municipal Code expressly authorizes the use of specific plans. As indicated in Section 18.78.010 (Authority for Specific Plans) in Title 18 (Zoning) in Chapter 18.78 (Specific Plans) of the City Municipal Code, the City Council is authorized to prepare, adopt, and implement specific plans for areas within the incorporated City and unincorporated sphere of influence.

As indicated, in part, in Section 18.78.070 (Conformity of Specific Plans to General Plan, Zoning, Street Improvements, Open Space and Landscaping) of the City Municipal Code, all specific plans shall be in conformance with the various elements, goals, objectives and policies of the "City of Rialto General Plan" (City General Plan). Where necessary, zoning shall be brought into conformance with the specific plan land uses within a reasonable time after adoption of the plan. Section 18.78.080 (Zoning on Property Annexed to the city within a Specific Plan Area) of the City Municipal Code stipulates that property annexed to the City within a specific plan area shall be automatically zoned in conformance with the specific plan effective upon the effective date of said annexation.

The City's "Specific Plan" zoning district designation currently applies to an approximately 221-acre portion of the proposed LCRSP. None of the additional off-site acreage included herein is located within this zoning district designation.

As stipulated in Section 18.02.080 (Newly Annexed Areas): "Any area annexed to the City after the effective date of this title is automatically placed in the 'R-1 A' single family zone, and remains in that zone until the land use zoning map for the area has been adopted by the Planning Commission and City Council unless the Commission and Council determine the precise zoning as a part of the annexation procedure."

As indicated in Section 18.78.060 (Procedures for Adoption and Amendment of Specific Plans) in Chapter 18.78 (Specific Plans) of the City Municipal Code: "Prior to approving or conditionally approving any specific plan or amendment thereto, the following findings shall be made by the Planning Commission and City Council that the specific plan: (1) Is consistent with the goal and policies of the [City] General Plan and with its purposes, standards and land use guidelines; (2) Will help to achieve a balanced community of all races, age groups, income levels and ways of life; (3) Results in development of desirable character which will be compatible with existing and proposed development in

the surrounding neighborhood; (4) Contributes to a balance of land uses that will enable local residents to work and shop in the community in which they live; (5) Respects the environmental and aesthetic assets of the community consistent with economic realities; and (6) Incorporates, where feasible, active and passive energy conservation measures" (Section 18.78.060[I]).

In accordance with the SMA, the City has adopted a subdivision ordinance regulating the design and improvement of land divisions within the City, as codified in Title 17 (Subdivisions) of the City Municipal Code. Referencing Section 17.04.010 (Authority) of the City Municipal Code, the City Council "assumes control of the design and improvement of land subdivisions of property, as such power is vested in the city by the provisions of the Subdivision Map Act of the state, and amendments thereto. It is unlawful for a subdivider, person, firm, corporation, partnership or association to sell, or offer to sell, or lease any lands within a subdivision until the subdivider, person, firm, corporation, partnership or association has first conformed to the requirements of said Subdivision Map Act and the provisions of this title."

Section 17.16.070 (Approval Denial) of the City Municipal Code states, in part, that the City's advisory body shall deny approval of a tentative subdivision map if it makes any of the following findings: (1) the proposed map is not consistent with applicable general and specific plans; (2) the design or improvement of the proposed subdivision is not consistent with applicable general and specific plans; or (3) the site is not physically suitable for the type of development. Section 17.04.030 (Conformity to General Plan Required - Exceptions) states, in part, that a report as to conformity to the general plan, which is required pursuant to Section 65402 of the CGC as the result of a proposed division of land, may be included as part of and at the same time as the action taken by the advisory agency on such division of land.

In accordance with the SMARA, codified in Chapter 18.76 (Surface Mining and Reclamation) in Title 18 (Zoning) of the City Municipal Code, the City has adopted a surface mining and land reclamation ordinance. As indicated in Section 18.76.010 (Purpose and Intent) therein:

> The City of Rialto recognizes that the extraction of minerals is essential to the continued economic well-being of the City and to the needs of society and that the reclamation of mined land is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety. The City also recognizes that surface mining takes place in diverse areas where the geologic, topographic, climatic, biological and social conditions are significantly different and that reclamation operations and the specifications therefor[e] may vary accordingly. It is the purpose and intent of the City to ensure the continued availability of important mineral resources, while regulating surface mining operations as required by California's Surface Mining and Reclamation Act of 1975 (Public Resources Code Sections 2710 et seq.), as amended, hereinafter referred to as "SMARA," Public Resources Code (PRC) Section 2207 (relating to annual reporting requirements), and State Mining and Geology Board regulations (hereinafter referred to as "State regulations") for surface mining and reclamation practice (California Code of Regulations (CCR), Title 14, Division 2, Chapter 8, Subchapter 1,

> Sections 3500 et. seq.), to ensure that: (A) Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses. (B) The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment. (C) Residual hazards to the public health and safety are eliminated.

Section 18.76.170 (Mineral Resource Protection) further states: "Mine development is encouraged in compatible areas before encroachment of conflicting uses. . .Land use decision within the City will be guided by information provided on the location of identified mineral resources of regional significance. Conservation and potential development of identified mineral resource areas will be considered and encouraged. Recordation of property titles of the presence of important mineral resources within the identified mineral resource areas may be encouraged as a condition of approval of any development project in the impacted area. Prior to approving a use that would otherwise be incompatible with mineral resource protection, conditions of approval may be applied to encroaching development projects to minimize potential conflicts."

The project site is neither located within an established redevelopment project area nor within the jurisdiction of the City of Rialto Redevelopment Agency (RRA). The RRA's approximately 7,865-acre "Merged Project Area" (comprised of the Industrial, Gateway, Aqua Mansa, and Central Business District Project Areas) does, however, extend northward and a portion of that redevelopment plan area terminates at Riverside Avenue (near but not encompassing any portion of the project site). There may, however, exist project-related and/or areawide and master planned off-site infrastructure improvements identified in this EIR that are located within a designated redevelopment project area.

4.1.3 Environmental Setting

4.1.3.1 Regional Setting

The southern California metropolitan area, which includes 129 municipalities, is the world's sixth largest economy and is evolving in the nation's largest metropolitan area. The region includes a population exceeding 16 million persons residing in an area of more than 38,000 square miles. Within that metropolitan area, the County encompasses approximately 20,106 square miles (52,072 square kilometers) with nearly 80 percent of the County land held in federal ownership and administrated by several different federal agencies. Approximately 90 percent of the County is desert and the remainder consists of valley and mountain areas.[114]

SCAG is the largest regional planning organization in the United States, functioning as the "metropolitan planning organization"[115] (MPO) for Los Angeles, Imperial, Orange, San Bernardino, Riverside, and Ventura Counties. SCAG is responsible for developing specific

[114]/ *Op. Cit*., County of San Bernardino 2007 General Plan, Open Space Element, p. VI-1.

[115]/ Federal legislation passed in the early 1970's required the formation of an MPO for any urbanized area with a population greater than 50,000 persons. MPOs were created in order to ensure that existing and future expenditures for transportation projects and programs were based on a continuing, cooperative, and comprehensive (3-C) planning process. One of the core functions of an MPO is to develop a regional transportation plan (RTP). MPOs federally required responsibilities are identified in Title 23 U.S.C. Section 134 and Code of Federal Regulations (CFR) 450.300.

regional plans, coordinating planning activities among regional stakeholders, providing a forum for public debate of regional issues, developing consensus on key regional issues, and serving as a regional clearinghouse. SCAG's core activities include: (1) mandated transportation system planning and programming; (2) other mandated planning and implementation activities; (3) regulatory compliance; and (4) program support activities.[116]

A number of SCAG-authored regional planning documents are potentially relevant to the Lead Agency's consideration of the proposed project, including, but not necessarily limited to, the 2004 "Southern California Compass – Growth Vision Report"[117] (2004 Compass or Compass Blueprint), the "Final 2008 Regional Transportation Plan: Making the Connection"[118] (2008 RTP), and the 2008 "Regional Comprehensive Plan – Helping Communities Achieve a Sustainable Future"[119] (2008 RCP). Each of those regional planning documents is briefly addressed herein and further discussed elsewhere in this EIR.

- **Southern California Compass - Growth Vision Report** (2004). Senate Bill (SB) 375 requires metropolitan panning organizations (MPOs), including SCAG, to prepare a sustainable communities strategy to reach the regional greenhouse gas (GHG) emissions reduction target provided by the CARB. MPOs would use the sustainable communities strategy for the land-use pattern underlying the region's transportation plan. As noted in the CARB's draft scoping plan: "Many regions in California have conducted comprehensive scenario planning, called Blueprint planning, that engages a broad set of stakeholders at the local level on the impacts of land use and transportation choices. The State has allocated resources to initiate or augment existing Blueprint efforts of MPOs. These efforts focus on fostering efficient land use patterns that not only reduce vehicle travel but also accommodate an adequate supply of housing, reduce impacts on valuable habitat and productive farmland, increase resource us efficiency, and promote a prosperous regional economy. Blueprint planning can play an important role in the SB 375 process by helping inform target-setting efforts and building strong sustainable communities strategies."[120]

  Given the magnitude of growth projections over the 30-year forecast period (2000-2030) examined in SCAG's 2004 "Regional Transportation Plan"[121] (2004 RTP) and its potential environmental effects, SCAG initiated a comprehensive growth visioning process, identified as the Southern California Compass (2004 Compass or Compass Blueprint), as part of the 2004 RTP. The 2004 Compass seeks to accommodate growth

[116]/ SCAG's responsibilities include the development of a regional transportation plan (RTP), regional transportation improvement program (RTIP), transportation-related portions of local air quality management plans (AQMP), and areawide waste treatment management agency under the Federal Clean Water Act. Under the Federal Clean Air Act, SCAG is responsible for determining that transportation plans and programs are in conformity with air quality control plans. SCAG's functions also include intergovernmental review of regionally significant development projects and periodic preparation of a regional housing needs assessment (RHNA).

[117]/ Southern California Association of Governments, Southern California Compass – Growth Vision Report, June 2004.

[118]/ Southern California Association of Governments, Final 2008 Regional Transportation Plan: Making the Connection, December 6, 2007, adopted May 8, 2008.

[119]/ Southern California Association of Governments, Regional Comprehensive Plan – Helping Communities Achieve a Sustainable Future, October 2, 2008.

[120]/ California Air Resources Board, Climate Change – Proposed Scoping Plan, A Framework for Change, October 2008, p. 48.

[121]/ Southern California Association of Governments, 2004 Regional Transportation Plan – Destination 2030, April 2004; Southern California Association of Governments, Final 2004 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2003061075, April 2004; Southern California Association of Governments, Final 2004 Regional Transportation Plan Amendment, July 27, 2006.

while maintaining mobility, livability, prosperity, and sustainability goals for all residents in the SCAG region. Specifically, the 2004 Compass aims to provide a policy framework for growth forecasts, consider balanced and efficient growth and transportation patterns, promote affordable housing choices, and provide direction on producing alternative urban form scenarios for the RTP.

At its core, the 2004 Compass utilizes a technique referred to as "scenario planning." Scenario planning, endorsed by the Federal Highway Administration (FHWA) and the United States Environmental Protection Agency (USEPA), explores multiple options for a region's future and how the choices made today affect future outcomes. Through an iterative process, different scenarios were defined, modeled, and analyzed, leading to one scenario selected as the growth alternative for the 2004 RTP.[122]

Centering along transportation corridors, the 2004 Compass plan constitutes SCAG's regional growth vision for the future of the Los Angeles metropolitan area through 2030. "California's biggest challenge is the extraordinary growth that it has experienced and will continue to experience. In recent years, Southern California has faced some of the most dramatic growth seen anywhere in the world for decades. The U.S. Census reports that between 1980 and 2000 the overall population in the region grew by 5 million people, from 11.5 million to 16.5 million. Projections indicate that 6.3 million more people will be added to the region between 2000 and 2030, bringing the total population to 22.8 million. The dynamic interplay between immigration, out-migration, and natural increase accounts for the complexity of the population change."[123]

With regards to housing, SCAG acknowledges that recent trends and existing housing conditions point to an unmet demand for greater housing diversity which will continue to grow absent a regional long-term planning effort. With regards to land supply, the 2004 Compass plan notes that the SCAG region has a "severe limit on the amount of undeveloped land suitable for development, which hinders its ability to accommodate new housing and jobs. . .Under current general plans, capacity on vacant land accommodates only 238,000 new households. That means that only 29 percent of the SCAG 2030 growth projections for this area could be accommodated through new development on vacant land."[124]

The Compass Blueprint presents a comprehensive growth vision for the six-county SCAG region. In furtherance of the declared goal of making the SCAG region a better place to live, work, and play, the following principles were established therein: (1) improve mobility for all resides; (2) foster livability in all communities; (3) enable prosperity for all people; and (4) promote sustainability for future generations.[125] Based on those principles, the following strategies emphasize the needed coordination between land use and transportation:

◊ **Focus growth in existing and emerging centers along major transportation corridors**. By accommodating growth in existing and emerging centers and corridors, the region can greatly improve transportation performance. The

[122]/ South Coast Air Quality Management District, Final 2007 Air Quality Management Plan, adopted June 1, 2007, Appendix IV-C, p. 6.
[123]/ *Op. Cit*., Southern California Compass – Growth Vision Report, p. 9.
[124]/ *Ibid*., p. 17.
[125]/ *Ibid*., pp. 6-7.

centers themselves will be easily accessible from major freeways and also will include their own internal strong street network. Balancing the location of jobs and housing is an important strategy in meeting regional goals or relieving congestion, reducing commute times and vehicle trips, encouraging alternative modes of transportation, and improving air quality. The Growth Vision Alternative achieves these goals via an in-fill strategy by locating job and housing centers in targeted livable communities suitable for accommodating additional growth.

◊ **Create significant areas of mixed-use development and walkable communities**. Mixed-use development uses the same strategy as centers-based development and ensures a strong balance between jobs and housing located near one another. Mixed-use development sometimes takes the form of well-designed retail shops and services with housing placed above or adjacent. Mixed-use development also refers to a large neighborhood area with an appealing mixture of housing, shops, small offices and services, all within walking distance. The use of in-fill in aging and underutilized sites provides a means of accommodating growth, revitalizing neighborhoods, districts, or communities and makes efficient use of the existing infrastructure. Many existing corridors lack the residential and commercial densities to adequately support non-auto transit uses. By intensifying these corridors with people-scaled and mixed-use development, the existing transit system can more fully realize its potential for accommodating additional trips and taking strain off systems that are already at or over-capacity.

◊ **Target growth around existing and planned transit stations**. The principal of transit-oriented development (TOD) is particularly relevant to employment. For commuting by transit to be effective, major employment areas should not be dispersed but instead should be easily accessible to transit investments. In the Growth Vision distribution, employment density near major transit corridors and stations is quite high, thus providing an innovative and efficient partnership between land-use and transportation policies. By intensifying these stations with people-scaled and mixed-use development, the existing transit system can more fully realize its potential for accommodating additional trips and taking strain off systems that are already at or over-capacity.

◊ **Provide housing opportunities to match changing demographics**. Changing demographics will have an impact on the region's economic future. The large baby-boomer cohort will begin retiring after 2010. Other changes on the horizon include increased immigrant (younger) population and household size and lower per capita income. These changes necessitate variation in housing products as well as amenities to serve the changing population.

◊ **Ensure adequate access to open space**. Demographic trends, the need for adequate job opportunities and shelter, and the region's historic development pattern set the stage for competing quality-of-life demands. Development patterns in the Growth Vision Alternative emphasize focusing growth in appropriate enters and corridors that make most efficient use of developed land and minimize encroachment on open public space.[126]

[126]/ *Op. Cit*., Final 2007 Air Quality Management Plan, Appendix IV-C, pp. 6-7.

The Compass Blueprint identifies "strategic opportunities areas"[127] and suggests that minor changes in land use and transportation within those areas can produce substantive economic, mobility, and environmental benefits, including reductions in vehicle emissions associated with new development. These 2004 Compass strategic opportunity areas make up about two percent of the SCAG region, leading to the name "Compass Blueprint 2% Strategy or "Compass 2% Strategy" for the implementation plan.

As illustrated in Figure 4.1-21 (Compass Blueprint 2% Strategy Opportunity Areas), the City is identified as a post-2010 Compass 2% strategy opportunity area with regards to "rail transit stops." Neither the City nor the project site is, however, identified as a "priority residential in-fill area."

The primary rail transit linkages in City are the Southern California Regional Rail Authority (Metrolink[128]) San Bernardino Line and SCAG's high-speed regional transport (HSRT) or Maglev system. As illustrated in Figure 4.1-22 (Metrolink Route Map), the Rialto Metrolink Station (John Longville Depot) (261 S. Palm Avenue) is located about 2.0 miles to the south of the project site. The San Bernardino Line is comprised of 13 transit stations situated along a 56.2-mile route, connects the City of San Bernardino with Union Station.

The United States Congress, through the passage of the Transportation Equity Act for the 21st Century (TEA-21), authorized the funding for a Maglev Deployment Program, created to examine the feasibility of Maglev technology in several transportation corridors across the nation. The California Maglev Project was one of seven projects selected by the Federal Railroad Administration (FRA) to receive funding for the first phase of deployment. If developed, the region's 275-mile Maglev system would interconnect the regional airports of Los Angeles International (LAX), March Inland Port (MIP), Ontario International (ONT), Palm Springs (PSP), Palmdale Regional (PMD), San Bernardino International (SBD), and regional hubs in West Los Angeles, Union Station, and West Covina. If and when operational, the Maglev system could accommodate an estimated 500,000 daily riders.[129]

SCAG has completed feasibility studies on four proposed Maglev corridors within the region. As illustrated in Figure 4.1-23 (SCAG Initially-Proposed Compass Blueprint High-Speed Regional Transport [Maglev] System), that portion of the proposed HSRT (Maglev) system located in the general project area is identified as being "under study" and no detailed plans and no implementation schedule for that segment has been developed by SCAG or the FRA. As noted, however, the illustrated alignment for the "proposed Maglev system" parallels the northern side of the I-15 Freeway and appears to traverse a portion of the project site (i.e., Neighborhoods I and IV).

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[127]/ "Strategy opportunity areas" are made up primarily of: (1) metro centers (local areas of regional significance that are currently or are projected to be major employment and residential centers, attracting large numbers of work commuters and well-accessible by both highway and transit); (2) city centers (local areas of subregional significance that are currently or are projected to be employment and residential centers, providing regional benefits as their share of jobs and housing increase); (3) rail transit stops (areas that have an existing or planned light rail, subway, commuter rail, Amtrack and/or Maglev station stop); (4) bus rapid transit corridors (areas that have an existing or planned bus rapid transit corridor); (5) airports, ports, and industrial centers; and (6) priority residential in-fill areas (areas that have the potential to absorb a fair share of projected regional growth and to provide regional/subregional transportation benefits).

[128]/ Metrolink, a five-county joint powers authority, operates the Metrolink commuter rail system.

[129]/ Southern California Association of Governments, California Maglev Deployment Program Overview – Launching Innovative Solutions, May 4, 2004, pp. 2 and 4.

- **Regional Transportation Plan** (2008). In compliance with Metropolitan Planning Regulations (23 U.S.C. 134, 49 U.S.C. 5303-5305), SCAG's congestion management process[130] comprises the following regional congestion management elements: regional transportation plan (RTP), congestion management programs (CMPs), and regional transportation improvement program (RTIP).[131] The RTP establishes overall long-term mobility policies for the movement of people and goods, includes congestion relief strategies for all regionally significant facilities and activities.[132]

  In February 2005, SCAG commenced preparation of growth forecast updates (Integrated Growth Forecast) which were subsequently used to provide the basis for developing the land-use strategies that encourage development patterns which increase transportation options and the use of alternative modes of transportation to reduce vehicle miles traveled (VMT). Based on those land-use assumptions, the Regional Council adopted the following set of policies: (1) Identify regional strategic areas for infill and investment (Identify strategic opportunity areas for infill development of aging and underutilized areas and increased investment in order to accommodate future growth); (2) Structure the plan on a three-tiered system of centers development (Identify strategic centers based on a 3-tiered system of existing, planned, and potential relative to transportation infrastructure); (3) Develop "complete communities" (Created mixed-use districts or "complete communities" in strategic growth areas through a concentration of activities with housing, employment, and a mix of retail and services located in close proximity to each other); (4) Develop nodes on a corridor (Intensify nodes along corridors with people-scaled mixed-use developments); (5) Plan for additional housing and jobs near transit (Pedestrian-friendly environments and more compact development patterns in close proximity to transit serve to support and improve transit use and ridership); (6) Plan for a changing demand in types of housing; (7) Continue to protect stable existing single-family areas; (8) Ensure adequate access to open space and preservation of habitat; (9) Incorporate local input and feedback on future growth; and (10) Promote land-use patterns supportive of goods movement an logistics industries (Promote growth and land-use patterns that support regional economic development).[133]

  On May 8, 2008, SCAG adopted the 2008 RTP and identified the following seven goals: (1) Maximize mobility and accessibility for all people and goods in the region; (2) Ensure travel safety and reliability for all people and goods in the region; (3) Preserve and ensure a sustainable regional transportation system; (4) Maximize the productivity of our transportation system; (5) Protect the environment, improve air quality, and promote energy efficiency; (6) Encourage land-use and growth patterns that complement our transportation investments and improve the cost-effectiveness of expenditures; (7) Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies. In addition, the

[130]/ The Federal Highway Administration defines the congestion management process as a "systematic approach required in transportation management areas (TMAs) that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under Title 23 U.S.C. and Title 49 U.S.C., through the use of operational management strategies." SCAG's congestion management process is a comprehensive strategy designed to relieve traffic congestion and maintain high levels of service on roadways within the Southern California region.

[131]/ Transportation investments in the SCAG region that receive federal transportation funds must be consistent with the RTP and must be included in the regional transportation improvement program (RTIP).

[132]/ Southern California Association of Governments, Final 2008 Regional Transportation Plan: Making the Connection, December 6, 2007, adopted May 8, 2008, pp. 190-191.

[133]/ *Ibid.*, pp. 86-88.

following policies serve to guide the development of the 2008 RTP: (1) transportation investment shall be based on SCAG's adopted Regional Performance Indicators; (2) ensuring safety, adequate maintenance, and efficiency of operations on the existing multi-modal transportation system will be RTP priorities and will be balanced against the need for system expansion investments; (3) RTP land-use and growth strategies that differ from currently expected trends will require a collaborative implementation program that identifies required actions and policies by all affected agencies and subregions; (4) HOV (high-occupancy vehicle) gap closures that significantly increase transit and ridership usage will be supported and encouraged, subject to Policy No. 1; and (5) progress monitoring on all aspects of the plan, including timely implementation of projects, programs, and strategies, will be an important and integral component of the plan.[134]

Specific transportation-improvements projects are listed in the 2008 RTP. In the general project area, "financially constrained RTP projects" include adding one high-occupancy vehicle (HOV) lane in each direction (PM 0.0-16.0) along the I-15 Freeway between the Riverside County line and the I-215 Freeway (RTP ID 4H01004).[135] The California Maglev Project's identified regional HSRT (Maglev) corridors, as illustrated in Figure 4.1-23 (SCAG Initially-Proposed Compass Blueprint High-Speed Regional Transport [Maglev] System), were modified in the 2008 RTP and the segment of the HSRT system paralleling the I-15 Freeway and located in proximity to the project site was deleted from the 2008 RTP. Additionally, the HSRT system was identified as an "area of controversy" in the 2008 RTP PEIR.[136]

- **Regional Comprehensive Plan** (2008). In October 2008, SCAG's Regional Council "accepted"[137] the 2008 RCP, updating the "Regional Comprehensive Plan and Guide"[138] (1996 RCPG). As indicated therein, in 2004, "SCAG's Regional Council directed the preparation of "Regional Comprehensive Plan' as part of SCAG's Ten-Year Strategic Plan. Specifically, the Regional Council established the agency's goal to create a RCP to guide regional development, with the RCP representing "a comprehensive overview of the region's economic, social and environmental future with special attention being given to housing and transportation.' Similar to the 'Regional Comprehensive Plan and Guide' adopted by the Regional Council in 1996, the updated 2008 RCP is a long-term comprehensive plan which addresses the SCAG region's many challenges, and provides a strategic vision for handling the region's land use, housing, economic, transportation, environmental and overall quality of life needs."[139]

  The 2008 RCP contains goals, outcomes, and an action plan. The goals create a definition for sustainability, the outcomes establish what might be achieved by pursuing

[134]/ *Op. Cit*., Final 2008 Regional Transportation Plan: Making the Connection, p. 11.

[135]/ Southern California Association of Governments, 2008 Regional Transportation Plan: Making the Connection, Supplemental Report, Project List, adopted May 8, 2008, p. 148.

[136]/ Southern California Association of Governments, Final 2008 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2007061126, January 2008, certified May 8, 2008, Addendum, p. 6-1.

[137]/ Southern California Association of Governments, Regional Council, Resolution No. 08-502-2 (Resolution of the Southern California Association of Governments Accepting the 2008 Regional Comprehensive Plan for the SCAG Region – Helping Communities Achieve a Sustainable Future, October 2, 2008.

[138]/ Southern California Association of Governments, Regional Comprehensive Plan and Guide, March 1996.

[139]/ *Op. Cit*. Resolution No. 08-502-2 (Resolution of the Southern California Association of Governments Accepting the 2008 Regional Comprehensive Plan for the SCAG Region – Helping Communities Achieve a Sustainable Future, October 2, 2008.

the action strategy, and the action plan proposes specific action steps that could be undertaken by SCAG, State, federal, and local governments, and other entities. The action plan is divided into "constrained policies" (i.e., policies that can be reasonably achieved given current political will, funding, and other variables) and "strategic initiatives" (i.e., actions that, while not currently practical, would be required to achieve the stated goals). The 2008 RCP constitutes a "voluntary framework" and "voluntary action plan and includes the following "guiding principles": (1) improve mobility for all residents; improve the efficiency of the transportation system by strategically adding new travel choices to enhance system connectivity in concert with land-use decisions and environmental objectives; (2) foster livability in all communities; foster safe, healthy, walkable communities with diverse services, strong civic participation, affordable housing and equal distribution of environmental benefits; (3) enable prosperity for all people; promote economic vitality and new economies by providing housing, education, and job training opportunities for all people; (4) promote sustainability for future generations; promote a region where quality of life and economic prosperity for future generations are supported by the sustainable use of natural resources.[140]

The 2008 RCP contains nine chapters (land use and housing, open space and habitat, water, energy, air quality, solid waste, transportation, security and emergency preparation, and economy) that focus on specific areas of planning or resource management. Many of these areas may be applicable to the general project area and those specific planning efforts now underway. For example, with regards to land use and housing goals, SCAG goal is to successfully integrate land and transportation planning and achieve land use and housing sustainability by implementing the "Compass Blueprint 2% Strategy" by, in part,: (1) focusing growth in existing and emerging centers and along major transportation corridors; (2) creating significant areas of mixed-use development and walkable, "people-scaled" communities; (3) providing new housing opportunities, with building types and locations that respond to the region's changing demographics; (4) targeting growth in housing, employment, and commercial development within walking distance of existing and planned transit stations; and (5) protecting important open space, environmentally sensitive areas, and agricultural lands from development. SCAG's desired land use and housing outcomes include, but are not limited to: (1) significantly increasing the number of city and county general plans consistent with the Compass Blueprint principles by 2012; (2) significantly increase the number and percentage of new housing units and jobs created within the Compass Blueprint "2% Strategy Opportunity Areas" by 2012 and improve the regional jobs-housing balance; (3) reduce total regional vehicle miles traveled to 1990 levels by 2020; (4) add one new housing unit for every three persons in population growth and one new housing unit for every 1.5 full-time equivalent jobs, whichever is greater; (5) increase regional homeownership; and (6) significantly decrease the rate of land consumed for urbanization between 2007 and 2035.[141]

The 2008 RCP contains a total of 206 constrained and strategic regional policies, many of which have multiple benefits with regards to their inter-connection amongst resource areas. With regards to the nine areas or planning and resource management presented in the 2008 RCP, those constrained and strategic regional policies that appear most applicable to the proposed project are presented later in this land-use analysis (see Table 4.1-7 [Preliminary Consistency Assessment - Regional Plans and Policies]).

[140]/ *Op. Cit*., Regional Comprehensive Plan – Helping Communities Achieve a Sustainable Future, pp. 5-6.
[141]/ *Ibid*., pp. 17 and 18.

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System® was developed by the United States Green Building Council (USGBC) as a national standard for developing high-performance, sustainable buildings. The USGBC has joined with the National Resources Defense Council (NRDC) and the Congress for the New Urbanism (CNU) to develop the LEED-Neighborhood Development (LEED-ND) standards. The LEED-ND rating system integrates the principles of smart growth, urbanism, and green building into the first national standard for neighborhood design and development. LEED-ND criteria include compact design, proximity to transit, mixed-use, mixed housing type, and pedestrian and bicycle-friendly design.

4.1.3.2 Local Setting

Existing On-Site Land Uses

Existing land uses in the City are generally presented in Figure 4.1-24 (Existing Land Uses – City of Rialto). Reference to "existing land uses" should be seen as dynamic since land uses and ownership interests are often complex and are constantly subject to change, independently from the proposed project. The Lead Agency has attempted to identify the major uses known to the City at the time of the document's preparation. The following discussion may not, however, be inclusive of all the uses and all the improvements that may exist both on the project site and within the general project area (e.g., public roadways, local utility lines). Similarly, the following discussion is not intended to be inclusive of activities that have not been expressly authorized either by a public agency with jurisdiction over the project site or by the Applicant, such as off-highway vehicle (OHV) use and hiking and bicycling on the project site.

With the exception of the El Rancho Verde Royal Vista Golf Course and certain infrastructure improvements (e.g., flood control facilities), the project site is predominately vacant and undeveloped. There are, however, a variety of lifelines, infrastructure improvements, and utility easements that exist upon, across, and/or beneath the project site. Those lifelines, improvements, and easements are individually addressed below and, in an effort to balance disclosure with potential security considerations, their general locations are illustrated in Figure 4.1-25 (Existing Lifelines, Improvements, and Easements).

Names assigned to the following facilities are presented for convenience only since each facility may be permitted and/or operated under other nomenclature either now or in the future.

- **El Rancho Verde Royal Vista Golf Course**. Located within the area Neighborhood II, is the El Rancho Verde Royal Vista Golf Course (355 East Country Club Drive, Rialto). The golf course, established in 1959, is located on an approximately 150-acre site. The 18-hole public golf course and related facilities include an approximately 15,460 square foot clubhouse, parking area, cart barn, driving range, tennis courts, an auxiliary office building, associated maintenance facilities, and an above-ground potable water reservoir. The golf course consists of rolling terrain, interwoven with landscaped fairways and greens and sand bunkers. A lake and reservoir are located in the northwestern portion of the course. A driving range is located north of the clubhouse. The clubhouse houses typical facilities for golf, including a pro shop, restaurant/banquet facility, and restrooms. The cart barn is an enclosed structure located north of the clubhouse.

- **Monier Lifetile**. Monier Lifetile (3511 North Riverside Avenue, Rialto) is an active industrial use located in the proposed Neighborhood III area. The Irvine-based company manufactures, stores, and distributes concrete roof tile at multiple locations throughout

the United States. The facility in the City of Rialto serves the southern California marketplace. The approximately 20.0-acre facility is located on leased land and its occupancy is subject to the provisions of that agreement.

- **I-15 (Ontario) Freeway**. The I-15 Freeway is a limited access facility and is part of the federal interstate highway program. The freeway crosses the project site in generally a north-south direction, with access provided at both Sierra Avenue and Glen Helen Parkway. Through the project site, the freeway has four travel lanes in each direction and, in 2005, carried approximately 140,000 average annual daily trips.

- **Lugo-Mira Loma 500-kV Transmission Line**. Constructed in the 1960's and upgraded to 500 kilovolts (kV) in the 1970's, Southern California Edison (SCE) operates an overhead transmission line within an approximately 150 to 355-foot wide right-of-way, extending generally north-to-south across the project site, crossing the I-15 Freeway in the northern portion of the project area, and linking the Lugo Substation on the north and the Serrano Substation, looping into the Mira Loma Substation, on the south.[142]

- **Metropolitan Water District Foothill Feeder – Rialto Pipeline**. The Inland Empire Utilities Agency (IEUA), a member of the Metropolitan Water District of Southern California (MWD or Metropolitan), imports water from the Day-Delta in central California and delivers the imported water to the Chino Basin via the 108-inch diameter Foothill Feeder – Rialto Pipeline. The Rialto Pipeline, located within an approximately 200-foot wide right-of-way, conveys State Water Project (SWP) water from the California Department of Water Resources' (DWR) Devil Canyon Power Plant to MWD's San Dimas Flow Control Facility (San Dimas Power Plant) near Live Oak Reservoir delivering up to 450,000 gallons of imported water per minute to about 6 million residents. The Rialto Pipeline, which is the only source of supplemental water for communities which served by the IEUA, extends generally north-to-south east of the Cemex USA Lytle Creek Plant. IEUA relies on water for about 30 percent of its water supply needs.

- **San Gabriel Valley Municipal Water District Lytle Pipeline**. The San Gabriel Valley Municipal Water District (SGVMWD) Lytle Pipeline is located within an approximately 65-foot wide right-of-way and delivers SWP water to the western portion of the SGVMWD's service area and to the San Gabriel Valley. The right-of-way runs in a general north-south direction and is located to the east of the Cemex USA Lytle Creek Plant.

- **Calnev (Kinder Morgan) Interstate Pipeline**. Nevada and Arizona do not have any refineries that can produce transportation fuels. As a consequence, those states must import all of their transportation fuels from refineries located outside their borders. Refineries located in California export petroleum products via pipelines that are linked to distribution terminals in Reno, Las Vegas, and Phoenix. This network of interstate pipelines is owned and operated by the Kinder Morgan Pipeline Company (KMP). Figure 4.1-26 (Kinder Morgan Interstate Pipeline System) illustrates the KMP petroleum product pipeline system in the southwestern United States.[143]

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[142]/ Federal Emergency Management Agency, Collation Impacts of the Vulnerability of Lifelines During Earthquakes with Application to the Cajon Pass, California, Study Overview, FEMA 221, Earthquake Hazard Reduction Series 59, October 1991, p. 11.

[143]/ California Energy Commission, Transportation Energy Forecasts for the 2007 Integrated Energy Policy Report, Final Staff Report, CEC-600-2007-009-SF, September 2007, Figure 22, p. 39.

Kinder Morgan Energy Partners, L.P. (KMEP), or a subsidiary thereof (Calnev Pipe Line LLC), owns and operates an approximately 550-mile liquid fuel (gasoline, jet fuel, and diesel) pipeline connecting KMEP's terminal located in Colton to Barstow and Las Vegas. The pipeline, which represents the main fuel source for southern Nevada, is designed to carry approximately 143,200 barrels of fuel per day (bpd). Plans have been proposed to increase that capacity to 186,000 bpd.[144]

The Calnev Pipe Line LLC (Calnev) system consists of two parallel 248-mile pipelines, one 14 inches in diameter (built between 1979 and 1973) and one 8 inches in diameter (built in 1960), form an interconnection with the Santa Fe Pacific Pipeline Partners, L.P.[145] (SFPP) pipeline, and extend from a tank farm in Colton (California) to Las Vegas (Nevada). The 8-inch diameter pipeline transports exclusively commercial jet (Jet-A) fuel. The 14-inch diameter pipeline transports gasoline, diesel, military jet fuel, and, when the 8-inch pipeline is full, commercial jet fuel.[146]

When installed, the 8-inch and 14-inch diameter liquid fuel pipelines, located to the east of the Cemex USA's quarry and within an approximately 30-foot wide right-of-way on the site and extending off the site through the City and surrounding jurisdictions were designed in accordance with the then current American Petroleum Institute's standards. Those standards required that reasonable protection for anticipated and unusual external conditions be included in the design, but specific earthquake criteria were not identified. The fuel pipelines are buried 3-14 feet deep, depending on their location.[147]

On March 13, 2008, the United States Department of the Interior – Bureau of Land Management (BLM) announced the commencement of a federal environmental process, leading to the preparation of an environmental impact statement (EIS), in response to an application filed by Calnev to expand and reconstruct 233 miles of pipeline in California and Nevada.[148] Calnev is seeking approval from BLM, the County, and other agencies to add a 16-inch diameter pipeline expanding the capacity along its Colton Terminal (2359 S. Riverside Avenue, Rialto) to Las Vegas.[149] The proposed pipeline would run along the same right-of-way as the existing pipelines and allow Calnev to ship more gasoline, diesel, and jet fuel. The new pipeline system would have an initial capacity of about 200,000 barrels per day but could be increased to over 300,000 barrels per day. Under the proposed plan, Calnev would take the 8-inch diameter pipeline out of service but would continue using the 14-inch pipeline.[150]

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[144]/ Federal Energy Regulatory Commission, Order on Petition for Declaratory Order, Docket No. OR07-10-000, Issued July 20, 2007, p. 2.

[145]/ A subsidiary of Kinder Morgan Energy Partners, L.P.

[146]/ Federal Energy Regulatory Commission, Order on Petition for Declaratory Order, Docket No. OR07-10-000, Issued July 20, 2007, p. 1.

[147]/ Federal Emergency Management Agency (INTECH Inc.), Inventory of Lifelines in the Cajon-Pass, California, FEMA 225, Earthquake Hazard Reduction Series 60, February 1992, p. 53.

[148]/ 73 FR 13558 (March 13, 2008).

[149]/ Calnev Pipe Line, LLC, as operating partner with KMEP, has applied for a right-of-way on public lands to expand and reconstruct 233 miles of pipeline in California and Nevada. The existing Calnev system provides petroleum products delivery to the Las Vegas area through two existing pipelines from the North Colton Terminal (Colton, California) to Bracken Junction (Las Vegas, Nevada). Pipeline construction will take place over 12 months and is anticipated to begin in late 2009 or early 2010 (Source: County of San Bernardino, Notice of Preparation of a Draft Environmental Impact Statement and a Draft Environmental Impact Report – Calnev Pipeline Expansion Project, March 17, 2008).

[150]/ Bender, Mary, Rialto City Council to Hear about Pipeline from Colton Terminal to Las Vegas, The Press Enterprise, May 6, 2008.

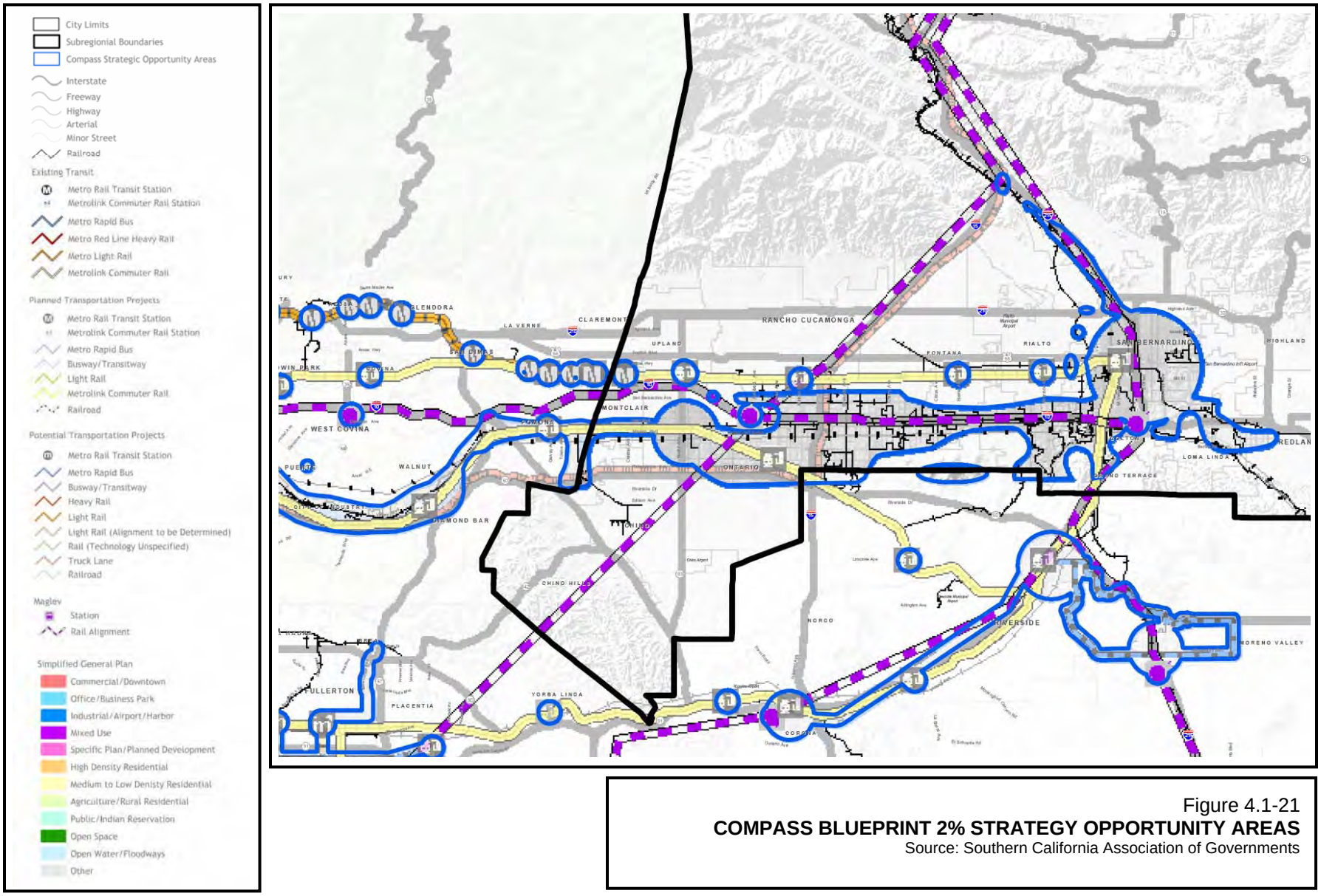

Figure 4.1-21
COMPASS BLUEPRINT 2% STRATEGY OPPORTUNITY AREAS
Source: Southern California Association of Governments

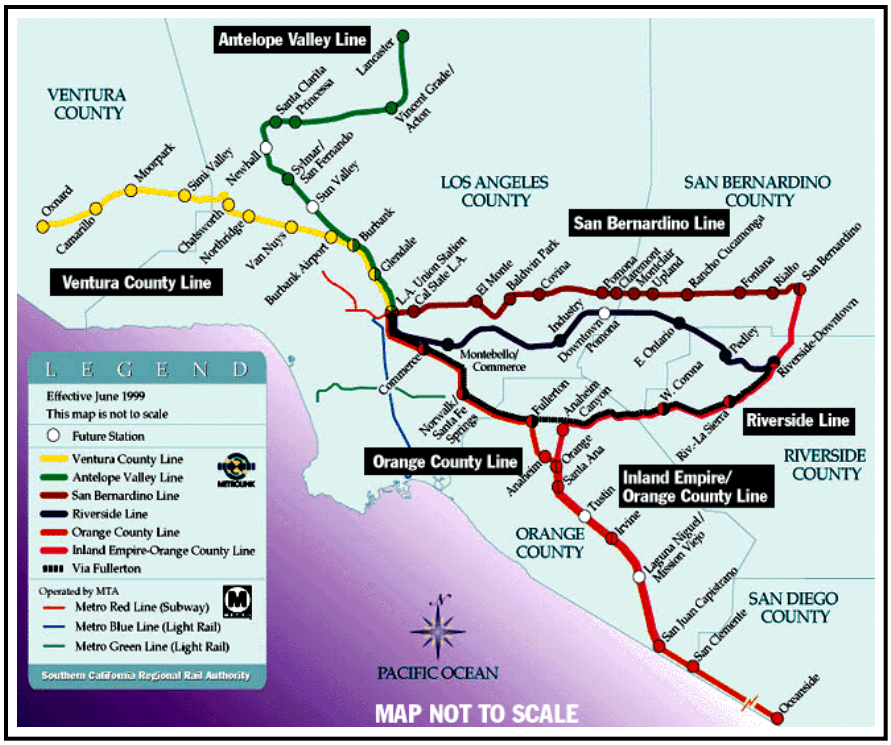

Figure 4.1-22
METROLINK ROUTE MAP
Source: Metrolink

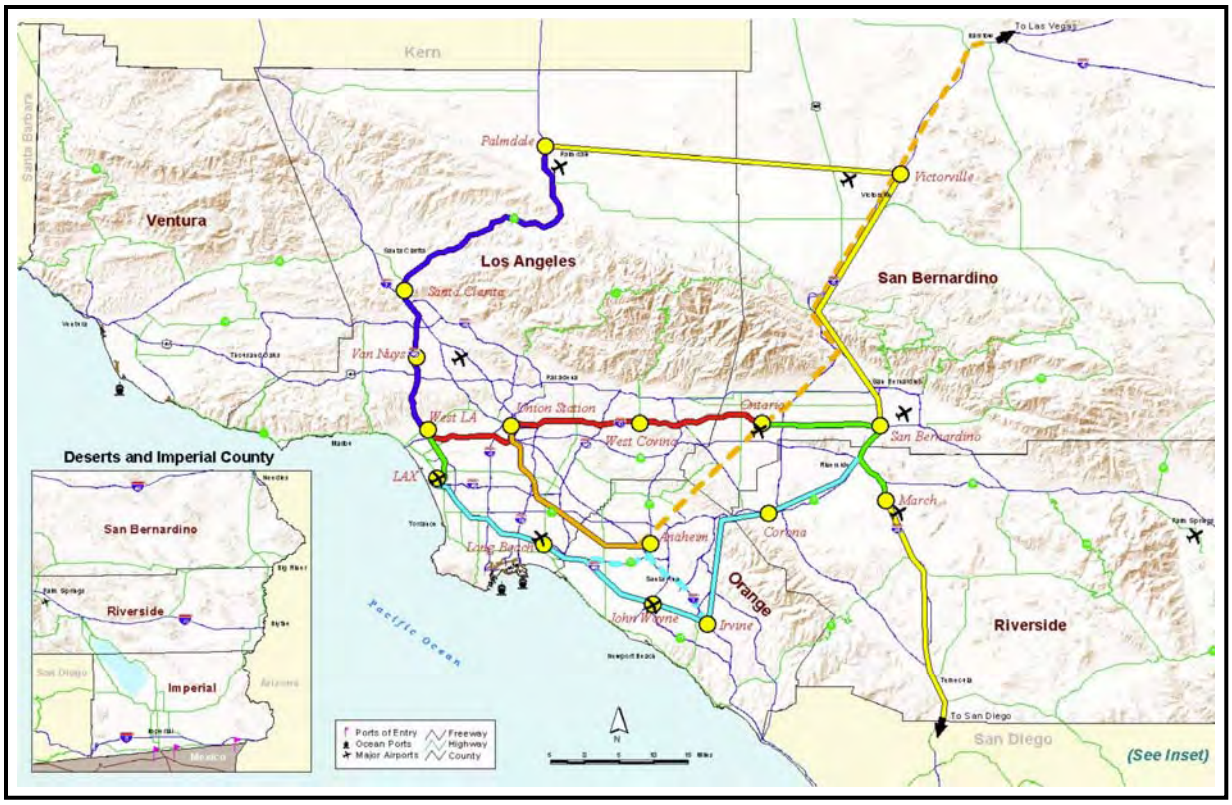

Figure 4.1-23
SCAG INITIALLY PROPOSED COMPASS BLUEPRINT HIGH-SPEED TRANSPORT (MAGLEV) SYSTEM
Source: Southern California Association of Governments

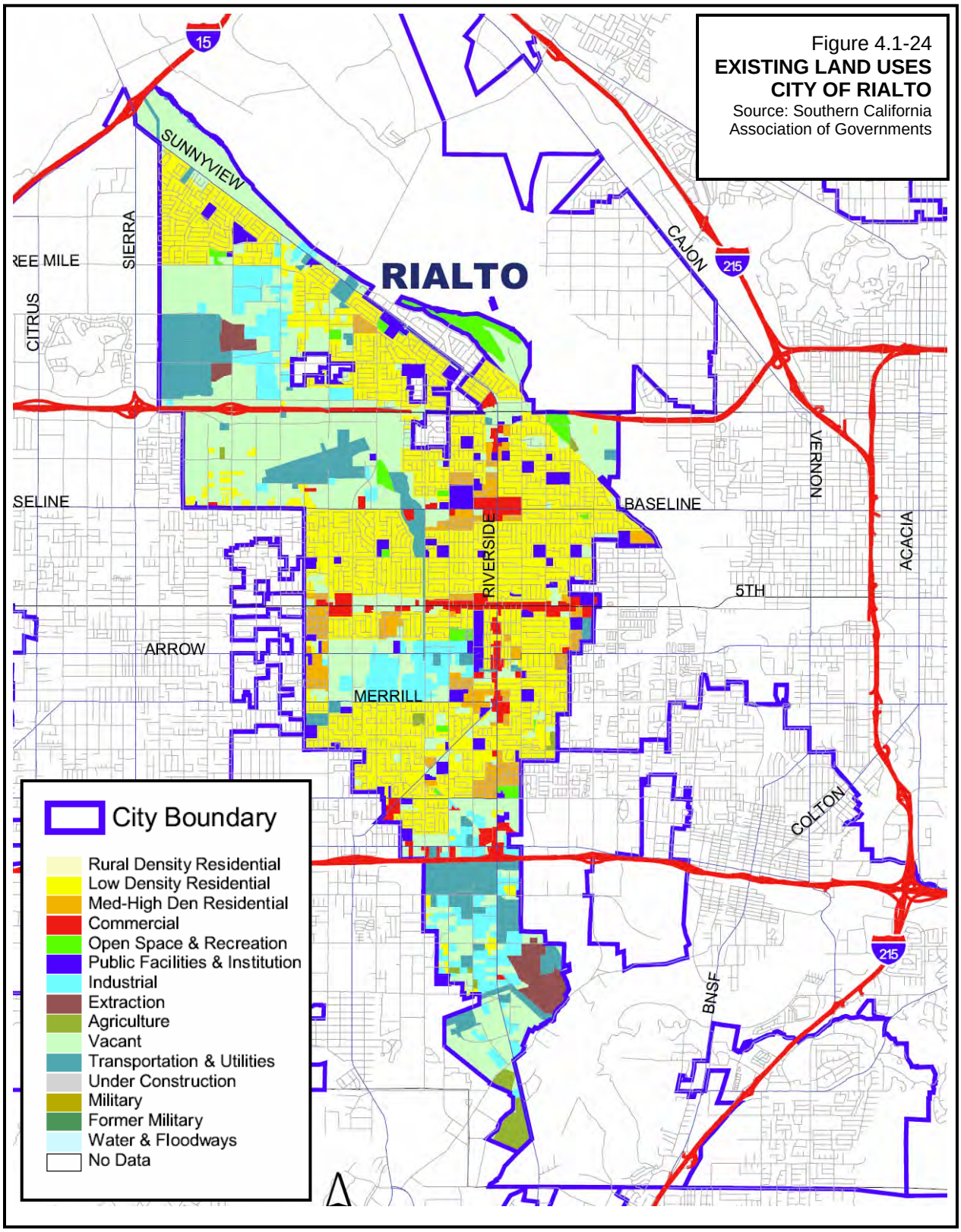
Figure 4.1-24
EXISTING LAND USES
CITY OF RIALTO
Source: Southern California Association of Governments
RIALTO
SUNNYVIEW
SIERRA
CITRUS
CAJON
VERNON
ACACIA
BASELINE
RIVERSIDE
5TH
ARROW
MERRILL
COLTON
BNSF
15
215
City Boundary
Rural Density Residential
Low Density Residential
Med-High Den Residential
Commercial
Open Space & Recreation
Public Facilities & Institution
Industrial
Extraction
Agriculture
Vacant
Transportation & Utilities
Under Construction
Military
Former Military
Water & Floodways
No Data

LEGEND

- CAL NEV EASEMENT
- SOUTHERN CALIFORNIA GAS COMPANY EASEMENT
- SOUTHERN CALIFORNIA EDISON EASEMENT
- SOUTHERN CALIFORNIA EDISON RIGHT-OF-WAY
- FONTANA POWER COMPANY EASEMENT
- METROPOLITAN WATER COMPANY PIPELINE EASEMENT
- INTERSTATE 15 FREEWAY
- SAN BERNARDINO FLOOD CONTROL DISTRICT EASEMENT
- CALIFORNIA ELECTRIC POWER COMPANY EASEMENT
- CITY WATER LINE EASEMENT

Figure 4.1-25
EXISTING LIFELINES, IMPROVEMENTS, AND EASEMENTS
Source: Lytle Development Joint Venture III

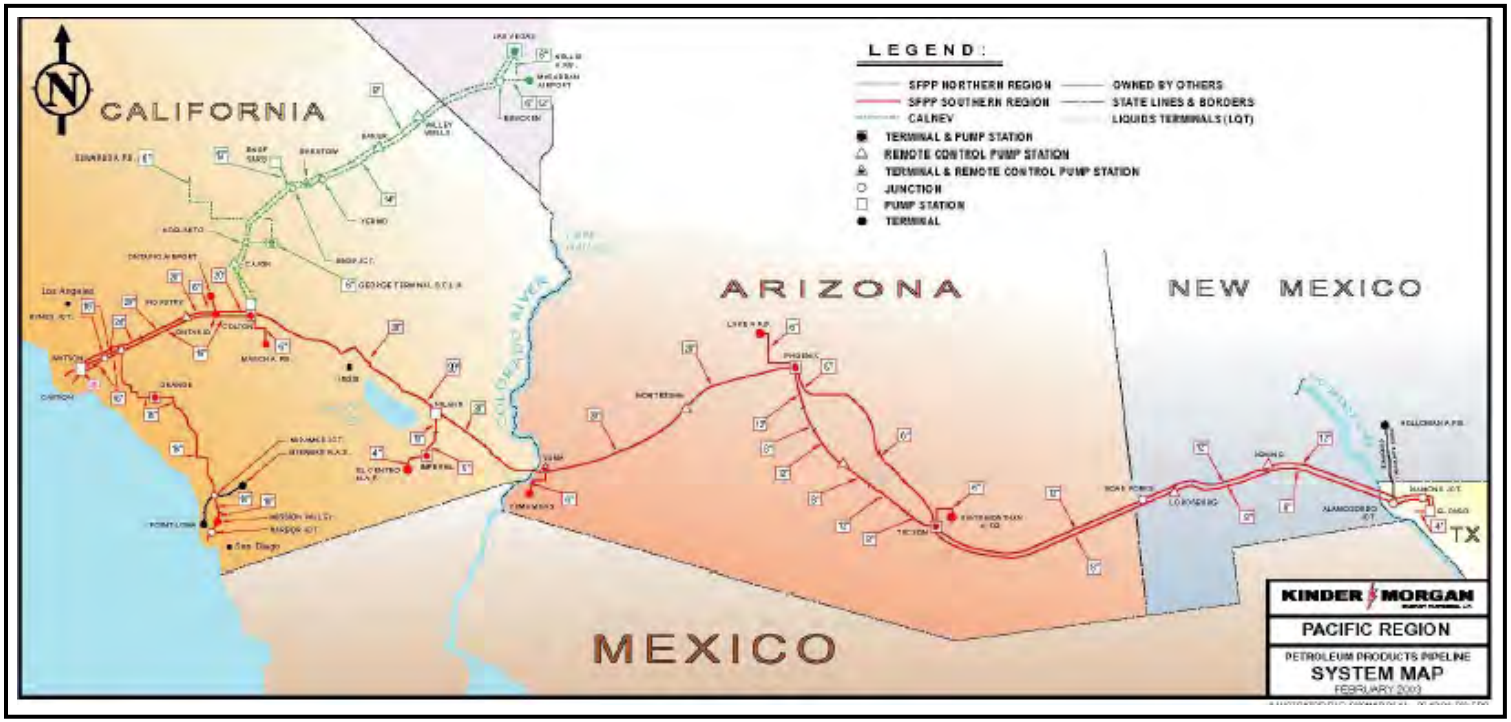

Figure 4.1-26
KINDER MORGAN INTERSTATE PIPELINE SYSTEM
Source: California Energy Commission

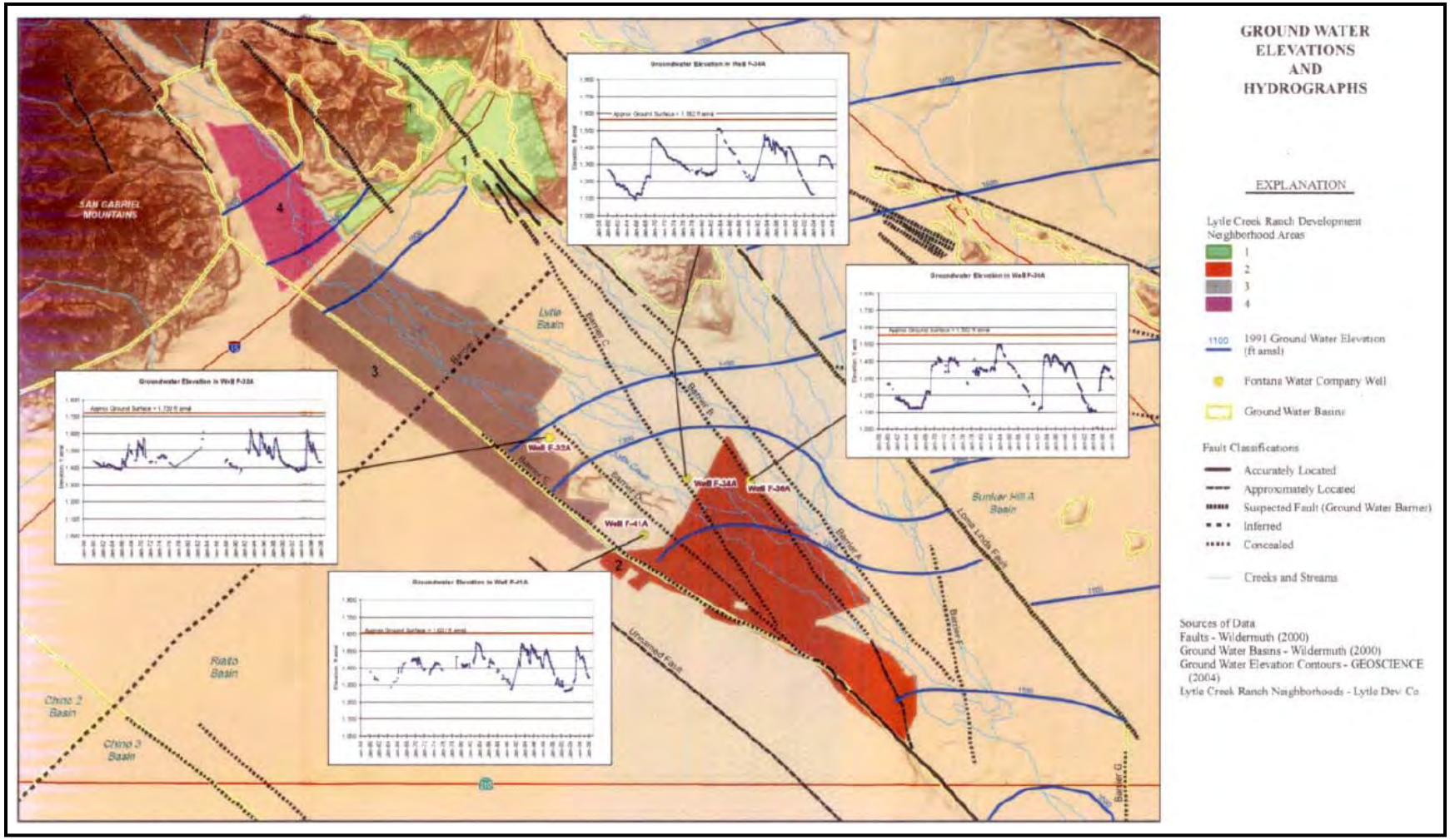

Figure 4.1-27
GROUND WATER ELEVATIONS AND HYDROGRAPHS
Source: GEOSCIENCE Support Services, Inc.

All operation and maintenance of the pipeline is in accordance with the requirements specified in Title 49, Code of Federal Regulations, Part 195. The pipeline route is visually inspected at intervals not exceeding every three weeks but at least 26 times per year by the line rider patrols and/or aerial inspections. A cathodic protection survey is also conducted at least once every calendar year with intervals not exceeding 15 months and the rectifiers are inspected at least six times every calendar year using "smart pigs" (inspection devices that move inside the pipeline and inspect the pipeline interior for signs of corrosion and reductions in wall thickness).

- **Southern California Gas Company Natural Gas Transmission Pipeline**. Located within an approximately 100-foot wide right-of-way, SoCalGas owes and operates two 36-inch diameter natural gas transmission pipelines which cross the project site in generally a northeast-southwest direction.

- **Ground Water Wells**. Figure 4.1-27 (Ground Water Elevations and Hydrographs) shows the locations of production wells in the general vicinity of the proposed project. Collectively, these wells in the Lytle Creek area are planned to produce over 20,000 acre-feet per year (AFY).[151]

  There are several ground water wells owned and operated by both the Fontana Water Company and the WVWD that are located within and in close proximity to the project site. The vast majority of these existing operating wells are located within those portions of the proposed LCRSP's that contain an "open space" designation. There are currently no known plans to remove and/or relocate or otherwise alter any of those existing wells.

  Any development activities that may occur in proximity to those existing wells must be undertaken in recognition of their presence, need for continuing operation (including access, maintenance, and security obligations), and potential impacts on any proposed adjacent land uses.

- **Ground Water Recharge Basins/Ponds**. Lytle Creek originates in the San Gabriel Mountains and is the major tributary to the Lytle Basin. Minor ground water recharge to the Lytle Basin is also supplied by infiltration in the Cajon Cree stream channel and underflow across the Loma Linda fault. Ground water flow generally follows the slope of the land (from the northwest to the southeast). Numerous faults transect the area, which tend to compartmentalize ground water flow. Artificial recharge of native waters at spreading grounds along Lytle Creek has historically been practices by forming low-level earthen berms to retain diverted flows during the wet winter period.

  A number of existing ground water recharge basins/ponds exists in the general project area. Of those, the Linden Spreading Ponds are located on the south side of Riverside Avenue and are not located on the project site. The Fontana Water District's infiltration ponds are separately described below.

- **Fontana Water District Infiltration Ponds**. Four ground water infiltration ponds, used by the Fontana Water District, are located in the Neighborhood II within PAs 82, 91, and 92. The areas in which these infiltration ponds are located are proposed for development and, upon implementation of the proposed project, will no longer be used for

[151]/ San Bernardino Valley Municipal Water District, Upper Santa Ana River Integrated Regional Water Management Plan, 2008.

groundwater infiltration. These ponds will be relocated and incorporated into the golf course design for Neighborhood II.

- **San Bernardino Kangaroo Rat Conservation Area**. As mitigation for impacts upon San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR) associated with the development of the LCNPD, an approximately 212.7-acre "SBKR Conservation Area" was established in the vicinity of Lytle Creek. This 212.7-acre area encompasses the 160.5-acre "SBKR Conservation Area" previously set aside by the LDC for the long-term preservation of the species and an additional 52.2-acre set aside as mitigation in connection with the County's approval and adoption of the LCNPD. In connection with mitigation of the WVWD Reservoir Nos. 7-3 and 7-4 construction projects along Lytle Creek Road, this area was expanded by four acres in 2006, thus bringing the entire acreage set aside for SBKR conservation to 216.8 acres.

- **Lytle Creek**. The Lytle Creek watershed spans approximately 50 square miles of a southeastern portion of the San Gabriel Mountains. The existing northern bank of Lytle Creek is fully improved, extending from Glen Helen Parkway to the Lytle Creek confluence with Sycamore Creek. An 8-foot thick grouted riprap revetment extends down 30-feet below the existing flowline and spans from Glen Helen Parkway to the Cemex USA quarry site, approximately 6,300-feet downstream of the northbound I-15 Freeway bridge. This reach of Lytle Creek also has an existing 20-foot wide asphalt concrete access/maintenance road at the top of the bank. The Cemex USA quarry is protected by an existing levee that is constructed of soil cement capped with grouted riprap. The combined span of these two Lytle Creek bank improvements extends from 1.2 miles upstream of to 5.7 miles downstream of the I-15 Freeway crossing near the confluence with Cajon Creek. The Glen Helen Parkway roadway crossing at Lytle Creek is improved to the ultimate condition. The roadway crossing is a dip crossing that would be inundated in a large storm event.

- **Sycamore Creek**. Sycamore Creek is a small tributary to Lytle Creek. The Sycamore Creek watershed is approximately 953 acres, spanning several small canyons between foothills of the southeastern portion of the San Gabriel Mountains. The reach of Sycamore Creek within the project site was fully improved as part of the LCNPD. The existing culverts beneath the I-15 Freeway convey runoff from the west side to the east side of the freeway. These culverts discharge to unimproved creeks just east of the freeway embankment. Two arch culverts (one for Sycamore Creek North Fork and one for Sycamore Creek South Fork) were constructed along with improvements to Clearwater Parkway.

A number of the lifelines, improvements, easements, conservation areas and physical features identified above extend beyond the project boundaries and also constitute existing proximal land uses. It is noted that several utilities crossing the San Jacinto fault are vulnerable to breakage and/or deformation owing to surface rupture during a large earthquake on the San Jacinto fault.[152]

Electrical transmission facilities, crude oil, refined petroleum, and natural gas pipelines, public waterworks, and transportation choke points (e.g., bridges and tunnels, highway interchanges),

[152]/ GeoSoils, Inc., Preliminary Geotechnical Investigation Proposed Master Plan Development, The Villages at Lytle Creek, Lytle Creek Development, San Bernardino County, California, Volumes I-III, October 31, 1994, Volume I, p. 4.

as well as a number of additional sectors, are identified as "critical infrastructure," defined in Section 1016(e) of the Critical Infrastructure Protection Act of 2001 (42 U.S.C. 5195c)[153] as those "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health and safety, or any combination of those matters," by the United States Department of Homeland Security.[154]

Existing Proximal Land Uses

The following information presents general information concerning existing (2008) land uses in close proximity to the project site. Based on the size of the proposed project, it is not the intent of this description to identify all land uses abutting the property, but merely to describe the nature of the predominate uses. In addition, the following discussion may not, however, be inclusive of all the uses and all the improvements that may exist both on the project site and within the general project area (e.g., public roadways, local utility lines). Similarly, uses that are proposed but not permitted and uses that may be authorized under existing public policies but not widely evident are not addressed.

As depicted in Figure 2-4 (Proximal Existing Land Uses), a number of existing residential, commercial, industrial, institutional, and recreational uses are located in proximity to the project site. The project site is bordered by a variety of land uses within the Cities of Fontana and Rialto, within County unincorporated areas, and within the SBNF. Excluding the National Forest, uses to the west and northwest of the project site, in the City of Fontana, include single-family residential, community facilities, and freeway-oriented commercial uses (e.g., Nealey's Corner). Uses to the south and southwest of the project site, located in the City of Rialto, include single-family residential units (e.g., Las Colinas and County Club Estates), industrial uses, community facilities (e.g., Oliver P. Roemer Water Filtration Facility and Zone 4 Reservoir Complex), and a neighborhood park (i.e., Birdsall Park). In addition, a number of religious facilities (e.g., Kingdom Hall – Jehovah's Witness [3416 North Riverside Drive, Rialto] and Sunrise Church [2759 North Ayala Drive, Rialto]) and public educational facilities (e.g., W.J.C. Trapp Elementary School and Rialto Unified School District Preschool [2750 North Riverside Drive, Rialto] and Wilmer Amina Carter High School [2630 North Linden Avenue, Rialto]) are located along North Riverside Drive within the City.

Near the central portion of the project site, located within unincorporated County areas, are a number of industrial uses, including Monier Lifetile (3511 North Riverside Avenue, Rialto), Burlingame Industries, Inc. (3345 North Riverside Avenue, Rialto), and SCE's Fontana Power Plant (Riverside Drive, Rialto). The Fontana Powerhouse complex, built in 1917 by the Fontana Power Company, consists of a stucco building, related outflow conduits, and an underground, concrete covered penstock. Also located therein is Cemex USA's Lytle Creek Plant, which has operated at that site since 1954.[155] The pits are situated on the north and south sides of the Lytle Creek main channel and are separated from the flows by two earthen levees.

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[153]/ Part of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (Public Law 107-56) (USA Patriot Act).

[154]/ United States Department of Homeland Security, The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets, February 2003.

[155]/ Lytle Creek mining operations have been operating downstream of the I-15 Freeway since September 27, 1954. Owl Rock Products obtained a permit from the County and operated this mining facility until June 10, 1993 when the operation was purchased by C.L. Pharris Sand & Gravel, Inc. Mining takes place easterly and westerly of the main Lytle Creek Wash channel within the historic floodplain. A combination of grouted and ungrouted levees direct Lytle Creek Wash flows between the excavated quarries. These existing mining pits are located approximately

Lytle Creek Wash traverses the project site in a northwest to southeast direction. As it traverses the project site, storm flows are generally confined within an existing groin and levee system. To the north of the project site, within the National Forest, Lytle Creek serves as a recreational area within the easternmost extension of the San Gabriel Mountains. As indicated in the Forest Plan: "Riparian and water resources are affected by the large numbers of recreationalists that come into contact with the water. Recreational dams impede downstream flow during periods of low water and affect species dependent upon a consistent flow regime. Riparian vegetation is fragmented and discontinuous along many sections of Lytle Creek due to the dynamic nature of rain events in the drainage, and is generally limited to a narrow swath along the stream. . .Lytle Creek Canyon contains the community of Lytle Creek, as well as two tracts of nearby recreation residences on National Forest System land." [156]

Northeast of the project site, within a County unincorporated area, is the area of Rosena Ranch (Tract 15900). The Rosena Ranch development is presently being developed for a variety of land uses, including low- and medium-density residential, parks and open space, a school, and other community facilities (e.g., wastewater treatment plant).

To the east of the Sycamore Flat and Sycamore Canyon areas is the approximately 1,340-acre Glen Helen Regional Park (GHRP), Glen Helen Off-Highway Vehicle Park, and the Hyundai Pavilion at Glen Helen (2575 Glen Helen Parkway, San Bernardino). Further to the east and north of Lytle Creek and not contiguous to the project site is the Glen Helen Regional Rehabilitation Center – North Facility (formerly the Verdemont Boys Ranch). the Glen Helen Rehabilitation Center, and the Glen Helen Regional Training Center (18000 Institution Road, Devore). These facilities are operated by the County Sheriff's Department.

The Vulcan Materials Company operates a screening facility which produces materials for asphalt, asphalt aggregate, base materials, concrete aggregate, natural sand, and recrushed concrete. Those operations Include a concrete ready-mix plant which is located approximately 3,000 feet east of the project site's easternmost boundaries.

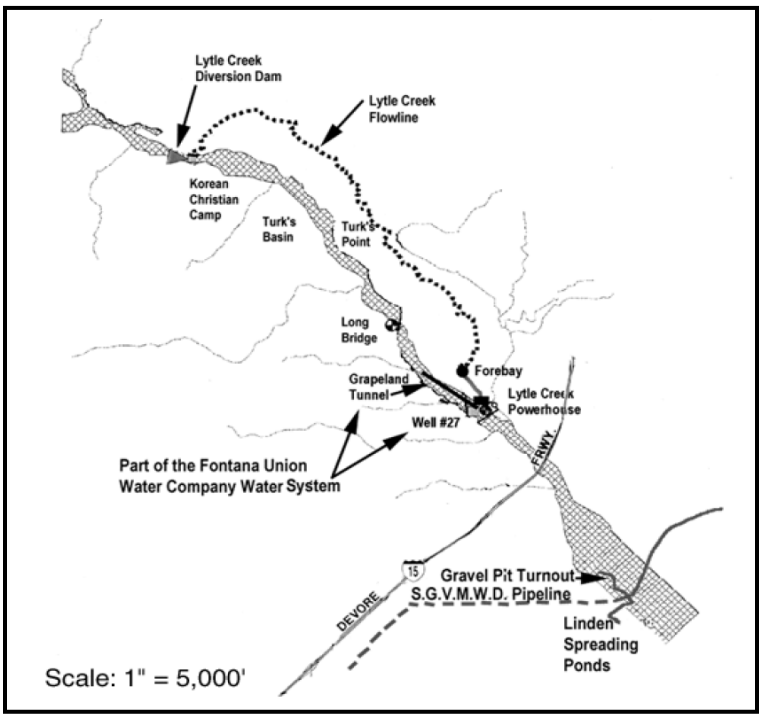
North of the project site is the SBNF (Cajon Ranger District). Uses within the National Forest include rural residential uses, open space, and the Sycamore Fire Station No. 32 (Glen Helen Parkway, San Bernardino). In addition, the USFS operates the Lytle Creek Ranger Station (1209 Lytle Creek Road, Lytle Creek) which provides recreation visitor information and issues adventure passes. North of Nealey's Corner, within the SBNF, the West End Gun Club operates a firing range in Meyers Canyon.

As illustrated in Figure 4.1-28 (Federal Energy Regulatory Commission Lytle Creek Hydroelectric Project), located north of the I-15 Freeway within the SBNF is SCE's Lytle Creek Hydroelectric Project (FERC Project No. 1932-004). That existing facility, recently relicensed by the Federal Energy Regulatory Commission (FERC), is a run-of-the-river hydroelectric facility, generating 3,056,000 kilowatt hours (kWh) of electricity annually. Land uses in the vicinity of that project include power generation, open space, recreational, residential, agricultural, and limited commercial uses, and natural resource management.[157]

10,000 feet downstream of the I-15 Freeway bridge and approximately 17,000 feet upstream from the Highland Avenue bridge.

[156]/ United States Department of Agriculture, Forest Service, Land Management Plan, Part 2, San Bernardino National Forest Strategy, R5-MB-079, September 2005, pp. 72 and 73.

[157]/ Federal Energy Regulatory Commission and United States Forest Service, Final Multiple Project Environmental Assessment for Hydropower Licenses, Santa Ana River Projects, Lytle Creek Hydroelectric Project,



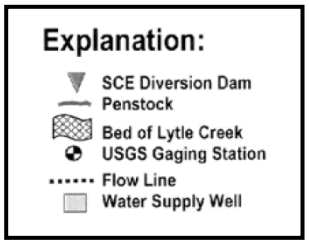


Figure 4.1-28
FEDERAL ENERGY REGULATORY COMMISSION LYTLE CREEK HYDROELECTRIC PROJECT
Source: Federal Energy Regulatory Commission

Water is conveyed via flowlines along the canyon walls to a forebay and dropped through a penstock to the powerhouse, about 3.5-miles downstream of the diversion dam. Undiverted water spills at the dam and from the nearby settling pond (sandbox) and returns water to the creek a few hundred feet downstream of the dam. Powerhouse discharge enters the Fontana Canal, belonging to the City of Fontana. Fontana also owns the Grapeland tunnel, an underground water collector located in the alluvium below the Lytle Creek bed upstream of where the powerhouse discharges into the Fontana Canal. The tunnel provides water to the Fontana Canal. Fontana operates a river pick-up on Lytle Creek adjacent to the Lytle Creek powerhouse discharge which also discharges to the Fontana Canal. Fontana either extracts water from the canal for use or passes it downstream to SCE's Fontana Hydroelectric Project.[158]

The SBNF has one of the highest visitor rates in the nation. Because it is within a 2-hour drive for over 17 million people, is considered by the USFS as one of the most heavily used National Forest System lands in the nation. Activities within the SBNF include fishing, nature study, snow-related activities, horseback riding, camping, picnicking, and off-road vehicle use. In 2001, annual recreation visitor days exceeded seven million.[159]

Since 1992, the California Regional Water Quality Control Board, Santa Ana Region (SARWQCB) has been conducting an extensive investigation of perchlorate discharges in Rialto, Colton, and Fontana. On February 28, 2005, the SARWQCB issued a cleanup and abatement order (CAO No. R8-2005-0053) concerning perchlorate discharges at facilities located on a 160-acre site in the City of Rialto, formally operated by West Coast Loading

FERC Project No. 1932-004, Santa Ana River 1 and 3 Hydroelectric Project, FERC Project No. 1933-010, Mill Creek 2/3 Hydroelectric Project, FERC Project No. 1934-010, California, September 2002, pp. 179 and 184.

[158]/ *Ibid*., p. 12.

[159]/ *Ibid.*, p. 169.

Corporation, Goodrich Corporation, and a number of pyrotechnics manufacturers. The order was amended and reissued on December 2, 2005.[160]

As indicated by the SARWQCB, the Goodrich Corporation, Pyro Spectaculars, Inc., Kwikset Locks, Inc., Emhart Industries, Inc., Kwikset Corporation, and Black & Decker, Inc., have caused or permitted, are causing or permitting, or threaten to cause or permit waste to be discharged or deposited into waters of the State from a 160-acre property bounded approximately by Casa Grande Park Avenue on the west and the extension of Summit Avenue on the south.[161] That property, located to the southwest of but not contiguous with the LCRSP property, is the site of the former Rialto Ammunition Back-Up Storage Point (RASP). The RASP was active during World War II and is the site where a large portion of the munitions used in the Pacific theater were temporarily stored. After the war, many of the original bunkers continued to be used for commercial and industrial purposes, including the manufacture, use, storage, transport, and disposal of explosives, fireworks, and other potentially hazardous substances. Records indicate that perchlorate and trichloroethene may have been associated with many historic RASP activities. These compounds have been identified as the primary threat to ground water quality affecting certain City wells.[162]

South of the project site, the existence of a perchlorate and TCE groundwater plume, as illustrated in Figure 4.1-29 (Approximate Extent of Perchlorate and/or Trichloroethene Contamination in the Rialto-Colton Groundwater Basin),[163] has resulted in the closure of a number of the City's wells in the Rialto-Colton Basin (Rialto Groundwater Management Zone).[164] The area of contamination is at least several miles long and has reached depths of 800 feet below ground. Those figures show the approximate area where the concentration of contaminants in the groundwater exceeds federal and State drinking water standards (Maximum Contaminant Levels [MCLs]). On September 23, 2009, the USEPA added the site to its Superfund National Priorities List, designating the area the B.F. Goodrich Superfund Site (CAN000905945).[165] The B.F. Goodrich Superfund Site includes the 160-acre area where volatile organic compounds (VOCs) and perchlorate have contaminated soil and groundwater and additional downgradient areas of groundwater contamination.

Generally separating the areas of Neighborhoods II and III, within an unincorporated County area, is Cemex USA's Lytle Creek Plant (3221 N. Riverside Drive, Rialto). South of the project site, in an unincorporated County area, is the Vulcan Materials Company's San Bernardino Sand and Gravel Plant (2400 W. Highland Avenue, Rialto).

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[160]/ California Regional Water Quality Control Board, Santa Ana Region, Resolution No. R8-2006-0079, Directing the Executive Officer to Delegate Certain Authorities to an Independent Hearing Officer for the Purpose of Considering the Issuance of Investigation and/or Cleanup and Abatement Order and Conducting Hearings as Necessary in the Rialto 160-Acre Site Perchlorate Investigation and Remediation, October 13, 2006, p. 1.

[161]/ California Regional Water Quality Control Board, Santa Ana Region, Amended Cleanup and Abatement Order No. R8-2005-0053, Goodrich Corporation, Pyro Spectaculars, Inc., Kwikset Locks, Inc., Emhart Industries, Inc., Kwikset Corporation, and Black & Decker, Inc. – 160-Acre Property Located in the City of Rialto, San Bernardino County, Draft - November 27, 2006, p. 1.

[162]/ County of San Bernardino (GeoLogic Associates), Draft Interim Remedial Investigation/Feasibility Study Perchlorate and VOC Impacts to Groundwater, Rialto, California, September 2004, p. v.

[163]/ United States Environmental Protection Agency, B.F. Goodrich Superfund Site, EPA Seeks Public Comment on Groundwater Cleanup Plan, January 2010, Figure 2, p. 2.

[164]/ City of Rialto, Roadmap to Remedy Selection Rialto-Colton Basin, California, Version 1.1, May 4, 2007, Figure 6.

[165]/ The USEPA completed a remedial investigation and feasibility study (RI/FS) in which it evaluated options for an initial groundwater cleanup project at the site. On February 3, 2010, the USEPA released the proposed groundwater cleanup plan (January 2010), RI/FS (January 25, 2010), and administrative record (February 2, 2010).

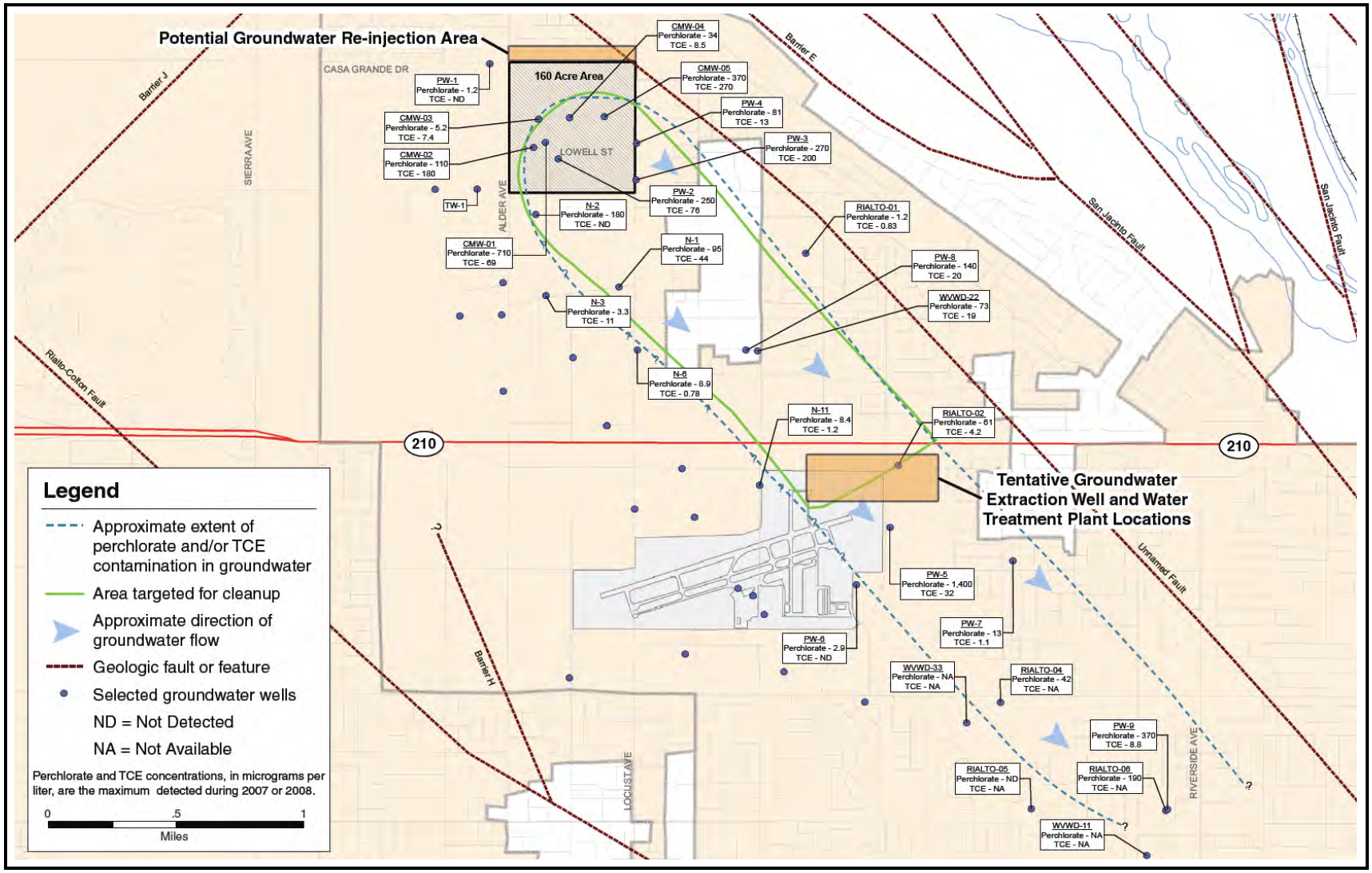

Figure 4.1-29 (1 of 2)

APPROXIMATE EXTENT OF PERCHLORATE AND/OR TCE CONTAMINATION IN THE RIALTO-COLTON GROUNDWATER BASIN

Source: United States Environmental Protection Agency

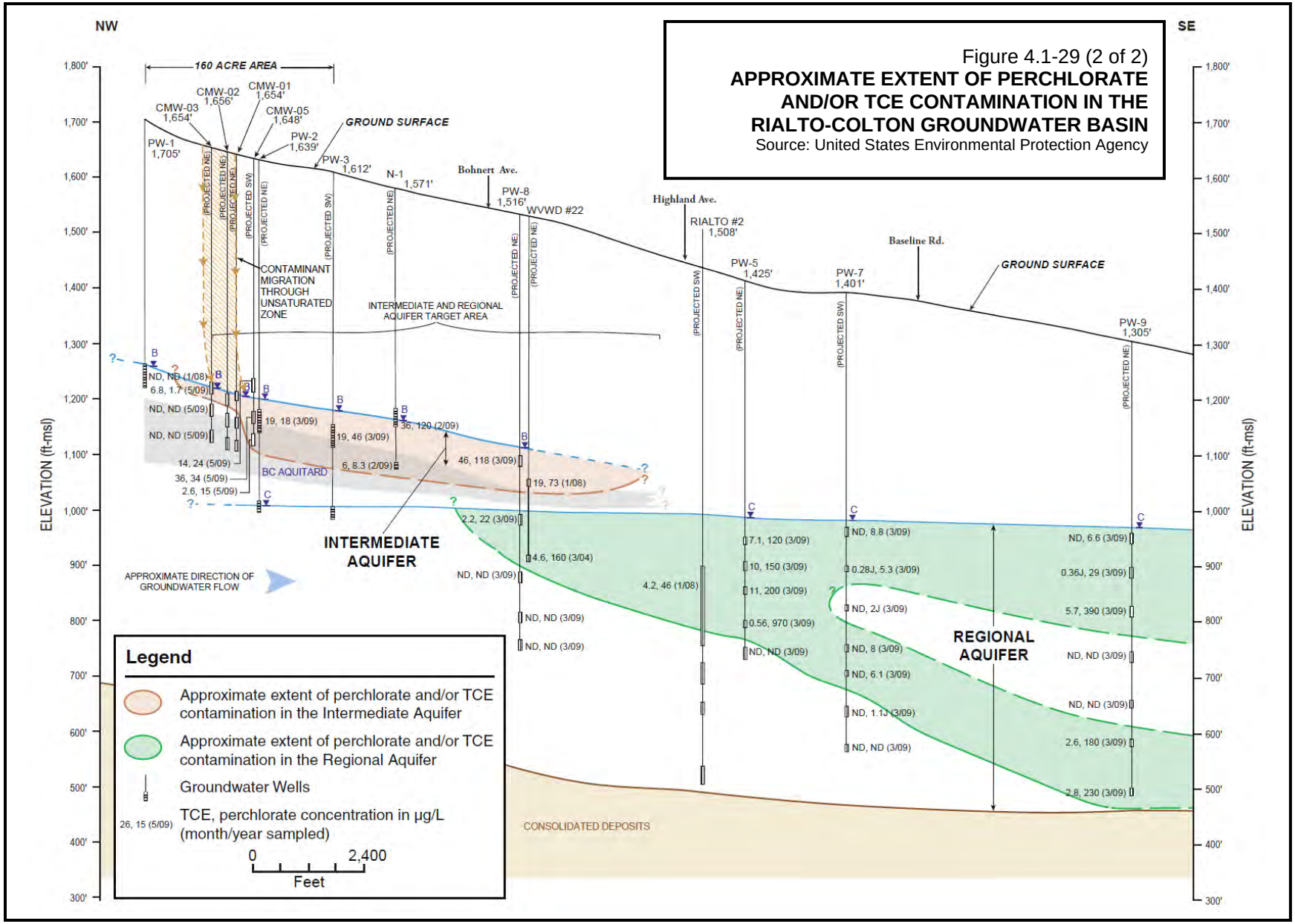

Figure 4.1-29 (2 of 2)
APPROXIMATE EXTENT OF PERCHLORATE AND/OR TCE CONTAMINATION IN THE RIALTO-COLTON GROUNDWATER BASIN
Source: United States Environmental Protection Agency

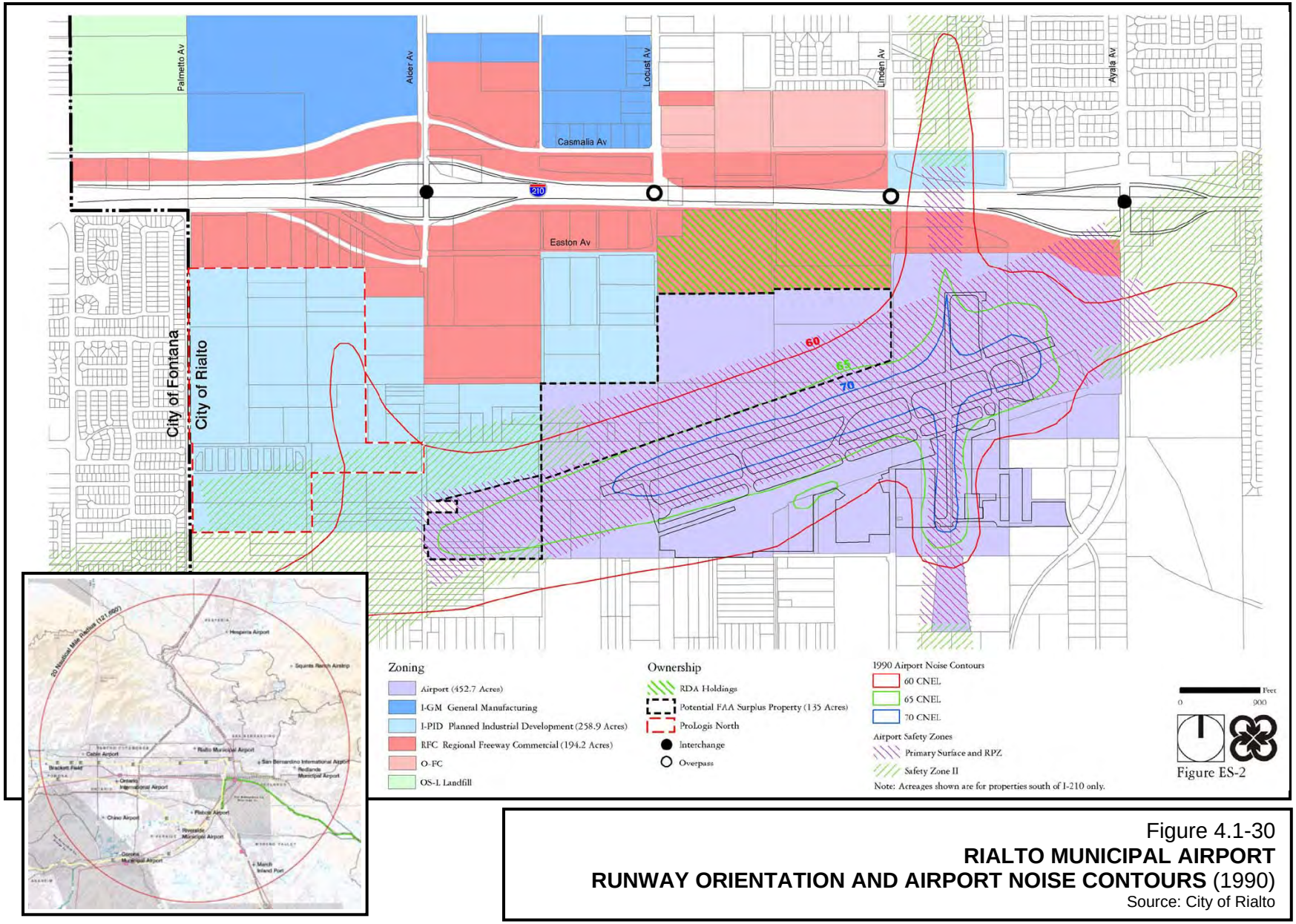

Figure 4.1-30
RIALTO MUNICIPAL AIRPORT
RUNWAY ORIENTATION AND AIRPORT NOISE CONTOURS (1990)
Source: City of Rialto

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Further to the south of the project site (south of Highland Avenue) is the approximately 453-acre Rialto Municipal Airport/Art Scholl Memorial Airport (formerly Miro Field). The general aviation airport is part of the approximately 3,100-acre "Rialto Airport Specific Plan." Runway orientation and airport noise contours associated with that facility are illustrated in Figure 4.2-30 (Rialto Municipal Airport Runway Orientation and Airport Noise Contours [1990]).[166] Based, in part, on the decline in based aircraft and aviation operations due to increased regional capacity, the federal government has consented to the closure of the Rialto Municipal/Art School Memorial Airport.[167] Lewis-Hillwood Rialto, LLC has submitted plans to convert the airport and adjoining properties into a mixed-use development (Renaissance Rialto) containing about 2,118 dwelling units and 16,470,472 square feet of retail commercial, office, and light industrial uses.[168]

Also located to the south of the project site is the Mid-Valley Sanitary Landfill (Fontana Refuse Disposal Site), owned and operated by the County of San Bernardino Solid Waste Management Division. The Mid-Valley Sanitary Landfill (MVSL) is a Class III municipal solid waste landfill located about 0.25 miles north and east of the intersection of Sierra and Highland Avenues. The permitted disposal area at the MVSL consists of 142 acres of lined area and 60 acres of composite-lined area. Another 206 acres of composite-lined area will be constructed for the disposal of municipal solid waste (MSW) and treated wood waste (TWW).[169]

4.1.4 Threshold of Significance Criteria

Presented herein are the thresholds of significance criteria identified by the Lead Agency, as identified in the State CEQA Guidelines, relative to this topical issue. The threshold criteria excerpted from the State CEQA Guidelines (Appendix G) constitutes general standards promulgated by the OPR for possible Statewide application. As a result, each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold.

In formulating threshold of significance criteria, the Lead Agency considered information from a number of sources, including the State CEQA Guidelines (Appendix G). Threshold criteria listed therein included, but were not limited to, the following:

- Convert prime farmland, unique farmland, or farmland of Statewide importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.[170]
- Result in a safety hazard for people residing or working within an airport land-use plan or, where such a plan has not been adopted, within two miles of a public or public use airport.

[166]/ City of Rialto (The Planning Center), City of Rialto Municipal Airport Asset Strategy – Phase 1 Report, Executive Summary, March 19, 2004, p. 2.

[167]/ Section 4408 (Rialto Municipal Airport) in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Public Law 109-59) (SAFETEA-LU), August 10, 2005.

[168]/ The Planning Center, Renaissance Specific Plan, Screencheck Draft, December 2007, p. 2-14.

[169]/ California Regional Water Quality Control Board, Santa Ana Region, Staff Report – Amendments to Existing Waste Discharge Requirements for the Mid-Valley Sanitary Landfill, County of San Bernardino Waste System Division, Order No. R8-2006-0040, July 14, 2006.

[170]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section II (Agricultural Resources).

- Result in a safety hazard for people residing or working within the vicinity of a private airstrip.[171]

As with any set of generic standards, not all standards universally apply to every project. The City has determined that the above referenced criteria are not directly applicable to the proposed project or the project site and can and should be appropriately "ruled out" because the specific variables that those criterion seek to judge are not known to exist within the project site.

As indicated in the CDC's "San Bernardino County Important Farmland 2004 (Sheet 2)"[172] map, the entire project site is identified as "grazing land," defined as land on which the existing vegetation is suited to the grazing of livestock." No portion of the project site is identified as prime farmland, unique farmland, or farmland of Statewide importance. As a result, neither of the following threshold standards are applicable to an assessment of the proposed project: (1) convert prime farmland, unique farmland, or farmland of Statewide importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use; and (2) involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

Similarly, the nearest public or private airport or airstrip to the project site is Rialto Municipal Airport/Art Scholl Memorial Airport, located approximately 1.5 miles to the southeast. The project site is not within the boundaries of the airport land-use plan or referral area for that facility and no associated land-use restrictions apply to the proposed project. Additionally, on April 17, 2007, the City adopted a "Draft Closure Plan" for that airport. As a result, neither of the following threshold standards are applicable to an assessment of the proposed project: (1) result in a safety hazard for people residing or working within an airport land-use plan or, where such a plan has not been adopted, within two miles of a public or public use airport; and (2) result in a safety hazard for people residing or working within the vicinity of a private airstrip.

A number of other threshold criteria are cited in the State CEQA Guidelines (Appendix G) that appear to have potential application to the proposed project. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant land-use and/or planning impact if the project or if project-related activities were to:

- Physically divide an established community.
- Substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect.[173]
- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land-use plan.[174]
- Induce substantial[175] population growth in an area, either directly or indirectly.

[171]/ *Ibid*., Section VII (Hazards and Hazardous Materials).
[172]/ *Op. Cit*., San Bernardino County Important Farmland 2004, Farmland Mapping and Monitoring Program, September 2005.
[173]/ *Ibid*., Section IX (Land Use and Planning).
[174]/ *Ibid*., Section X (Mineral Resources).

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere and/or displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.[176]

Two potential school sites have been identified in the proposed LCRSP. Certain State standards for new school sites have been established. As specified in Section 14010(c) in Title 5 of the CCR, "[t]he property line of the [proposed school] site even if it is a joint use agreement as described in subsection (o) of this section shall be at least the following distance from the edge of respective power line easements: (1) 100 feet for 50-133 kV line. (2) 150 feet for 220-230 kV line. (3) 350 feet for 500-550 kV line." The California Department of Health Services (DHS) acknowledges that those standards are not based on specific biological evidence but on the rationale that the electromagnetic field drops to background levels at the specified distances.[177]

As specified, a new school site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard (5 CCR 14010[h]). If the proposed site is on or within 2,000 feet of a significant disposal of hazardous waste, the school district shall contact the Department of Toxic Substances Control for a determination of whether the property should be considered a Hazardous Waste Property or Border Zone Property (5 CCR 14010[t]). In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant land-use and/or planning impact if the project or if project-related activities were to:

- Locate a new public school within the following separation distances from an existing or proposed above-ground electrical line: (1) 100 feet for 50-133 kV power lines; (2) 150 feet for 220-230 kV power lines; and (3) 350 feet for 500-550 kV power lines.
- Locate a new public school within 1,500 feet from an existing or proposed above or underground pipeline that would, as a result of the contents, design, or characteristics of that pipeline, pose a substantial safety hazard to the school or its occupants thereupon.
- Locate a new public school near an existing or proposed above-ground water or fuel storage tank that would, as a result of the contents, design, or characteristics of that storage tank, pose a substantial safety hazard to the school or its occupants thereupon.
- Locate a new public school within 2,000 feet of a site containing a significant disposal of hazardous wastes that would, as a result of the nature of that disposal site, pose a substantial safety hazard to the school or its occupants thereupon.

Senate Bill (SB) 352, Chapter 668, Statutes of 2003, amended Section 17213 of the California Education Code and Section 21151.8 of the PRC and established certain procedures that school districts must follow, including additional determinations and findings that school districts must make, prior to approving the acquisition of a new school site or when approving a CEQA document for a school site acquisition or new school construction project. SB 352 expanded the requirements school districts must follow in identifying and reviewing the impacts of hazardous air emitters and hazardous material handlers within 0.25 miles of a new school site and created new requirements if the site is within 500 feet of a busy freeway or traffic corridor.

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[175]/ Except where otherwise noted, certain terms, such as "substantial," are neither defined in CEQA nor in the State CEQA Guidelines and require a local determination whether a proposed action would meet or exceed the stated standard.

[176]/ *Op. Cit*., State CEQA Guidelines, Section XII (Population and Housing).

[177]/ California Department of Health Services, Electric and Magnetic Fields Measurements and Possible Effects on Human Health – What We Know and What We Don't Know in 2000, California Electric and Magnetic Fields Program, December 2000, p. 7; California Department of Health Services, Electric and Magnetic Fields in California Public Schools, California Electric and Magnetic Fields Program, April 2001, p. 4.

In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant land-use and/or planning impact if the project or if project-related activities were to:

- Result in short-term and/or long-term exposure to air emissions at a proposed school site which poses significant health risks to pupils.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or other environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative land use and/or planning impacts.

4.1.5 Impact Analysis

The proposed project includes, but is not limited to, a general plan amendment (GPA), a specific plan amendment (SPA), and a zone change (ZC). Through those actions, in combination with the proposed annexation of unincorporated County lands into the corporate boundaries of the City (and other changes of organization or reorganization), the Lead Agency will change both the jurisdictional authority and the land-use designations governing the use of the real property comprising the proposed LCRSP. If adopted, the proposed public policies, in combination with those of the underlying land-use authority, will control the use of the land on the project site while existing public policies will continue to control the use of the lands beyond the area of annexation and the LCRSP's boundaries.

With regards to environmental impacts, from a land-use perspective, the distinction and differentiation between construction and operation, as used throughout this EIR, may not be directly relevant to the assessment of land use and planning. Since construction relates to the process whereby the individual uses, facilities, public work projects, and other improvements are erected and not the end result of those physical changes, the potential effects of those actions are more appropriately addressed under the other topical analyses presented elsewhere in this EIR.

As indicated by OPR, an EIR prepared for the adoption of an amendment to a general plan should "discuss any inconsistencies between the proposed plan and adopted regional plans as they may relate to environmental issues."[178] In lieu of an assessment of construction impacts, the Lead Agency has conducted a "consistency analysis." The "consistency analysis" evaluates the proposed project in the context of those adopted broad-based plans and policies that relate, either directly or indirectly, to the proposed LCRSP project. In recognition of the presence of a proposed GPA, SPA, and ZC, it is not the intent of this analysis to evaluate the proposed project in the content of those site-specific, land-use policies now being proposed for modification. To the extent that the proposed project was to be deemed consistent with those policies, consistency would already be established and no GPA, SPA, and/or ZC would be required for the project's effectuation.

Because the analysis of land-use and planning impacts does not lend itself to the separate analyses of construction-term and operational impacts, as presented elsewhere in this EIR, and because this "consistency analysis" is expressly required under CEQA and focuses only on the

[178]/ Governor's Office of Planning and Research, 2003 General Plan Guidelines, October 2003, p. 136.

proposed action's consistency and inconsistency with applicable general and regional plans, the threshold of significance criteria presented in Section 4.1.4 (Threshold of Significance Criteria) presented herein must be more narrowly applied since those public policies are not themselves subject to evaluation, only the project's consistency or inconsistency therewith. As a result, from a land-use perspective, in addition to those "mandatory findings of significance" listed in Section 4.0 (Impact Analysis), of those threshold criteria identified above, the following threshold criterion is deemed to be the only applicable standard against which the project's land-use "consistency analysis" should be appropriately judged:

- Substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect.

As further stipulated by OPR: "When a new general plan or a revision is being considered, the EIR must evaluate the proposed plan's or revision's effects on both the existing physical conditions of the actual environment and the environment envisioned by the existing general plan (Environmental Planning and Information Council v. County of El Dorado [1982])."[179] The issue posed in the referenced case was "whether the requirements of CEQA are satisfied when the EIRs prepared for use in considering amendments to the county general plan compare the environmental impacts of the proposed amendments to the existing plan rather than to the existing environment." The court held that "the EIRs must report on the impact of the proposed plans on the existing environment." In keeping with the provisions of that case, this EIR defines the project as the whole of the action and not merely as the difference in the number of dwelling units and square footage of non-residential use that could be developed under the proposed LCRSP as opposed to the current general plans.

As a specific plan, with the exception of a limited number of uses, the proposed LCRSP does not expressly dictate the precise placement of individual land uses. In the absence of that information, it is necessary to consider the operational characteristics of the uses that are permitted in each neighborhood in order to determine whether those uses and those associated characteristics may raise or have the potential to impose or create potential land-use conflicts affecting other on-site and near-site areas. In lieu of an assessment of operational impacts, the Lead Agency has conducted a "compatibility analysis" which serves to provide a reasonably comparable evaluation of the project's operational impacts. The "compatibility analysis" examines the compatibility between the proposed land uses, as authorized under the proposed LCRSP, and those existing and reasonably foreseeable future land uses that may exist in proximity to those uses, based on the land-use policies of the local agency with jurisdiction thereupon.

Similarly, the project's "compatibility analysis" focuses on whether the proposed "on-site" land uses are compatible with each other and with other "off-site" land uses and whether requisite infrastructure systems are reasonably in place to support and service those land uses. In recognition of that limited focus, with regards to the project's "compatibility analysis," the threshold of significance criteria presented in Section 4.1.4 (Threshold of Significance Criteria) presented herein must be more narrowly applied. The resulting "compatibility analysis" is based on the inherent compatibility of the general operational characteristics of different types of land uses (e.g., residential, commercial, and light industrial), the timed provision of requisite

[179]/ *Ibid*.

infrastructure improvements,[180] and, with regards to specific land uses, the project's likely compliance with those quantitative and other performance-based standards applicable to those uses. As a result, from a land-use perspective, in addition to those "mandatory findings of significance" listed in Section 4.0 (Impact Analysis) and those-use specific threshold standards cited above with regards to the siting of school facilities, the following threshold criteria are deemed to be the only applicable standards against which the project's land-use "consistency analysis" should be appropriately judged:

- Substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect.
- Physically divide an established community.

Section 7.0 (Alternatives Analysis) herein presents a discussion of the "no project/no development" alternative, describing the physical changes that might reasonably be expected to occur to the project site in the foreseeable future if the proposed GPA and ZC were not adopted based on the application of existing City General Plan and County General Plan policies and available infrastructure services. Under the "no project/no development" alternative, it is assumed that those discretionary actions critical to the advancement of the proposed LCRSP project do not materialize. In addition, with regards to both the project site and other off-site areas, the "no project/existing entitlements" alternative, as discussed in Section 7.0 (Alternatives Analysis), presents an examination of those likely future conditions that might reasonably exist in the general project area if areawide development were to continue to occur in accordance with the general provisions outlined under current City and County land-use policies.

In response to issues raised by LAFCO following the dissemination of the NOP, the proposed annexation of unincorporated County lands into the City is separately addressed herein.

4.1.5.1 Compatibility Analysis

Land-use compatibility relates to the physical relationship and inter-relationship between specific land uses and the potential impacts produced by the associated operational characteristics of those uses. Since similar land uses can be assumed to generate like-kind effects, the introduction of similar uses adjacent to one another will seldom produce land-use compatibility conflicts. Alternatively, since different types of land uses can exhibit different operational characteristics (e.g., traffic, noise, and vibration), the placement of land uses of different type or intensity next to one another can produce potential compatibility conflicts.

The following analysis examines the exogenous impacts, defined as those that extend beyond the property boundaries, associated with existing and reasonably foreseeable uses within the general project area as well as those now planned or authorized upon the project site and evaluates whether the operational characteristics of those uses are so dissimilar as to produce significant on-site and/or off-site compatibility conflicts affecting one or the other use.

[180]/ Infrastructure availability is also addressed in other sections of this EIR, including Section 2.0 (Project Description), Section 4.4 (Hydrology and Water Quality), Section 4.6 (Transportation and Traffic), Section 4.9 (Public Services and Recreation), Section 4.10 (Utilities and Service Systems), and Section 4.14 (Energy Resources).

On-Site Land-Use Compatibility Analysis

Environmental Impact 1-1*. The project will involve a variety of residential, non-residential, commercial/institutional, and open space uses. Based on operational differences, the on-site placement of residential units adjacent to other non-residential uses could result in land-use compatibility conflicts resulting in significant air quality, noise, and traffic impacts affecting local residents.*

Preliminary Determination 1-1*. Potentially significant unless mitigation incorporated.*[181]

The physical change to the project area associated with the introduction of new land uses and/or the expansion of existing uses, in and of itself, does not inherently generate significant or potentially significant land-use impacts. Land-use conflicts would typically only manifest if the operational characteristics and performance expectation and requirements of one use were to differ substantially from the operational characteristics and performance expectations and requirements of another nearby use. For example, industrial activities typically generate truck traffic and noise that can intrude on proximal residential uses. Industrial activities can generate air pollution, often in the form of fugitive dust and diesel particulate matter, and noise and may involve the use, transport, and handling of hazardous or toxic materials.

Because Monier Lifetile (3511 North Riverside Avenue) is currently operating under a long-term lease agreement, for the purpose of impact analysis, is must be assumed that this industrial use will continue to operate until such time as the lease agreement expires or Monier Lifetile elects to terminate its current use of that 20-acre property located in Neighborhood III (PA 78). Monier Lifetile is a roofing tile manufacturer that uses raw sand and cement and molds these materials into roofing tiles. Operating under City permit requirements, Monier Lifetile's operations are characteristic of light manufacturing uses, with numerous truck trips to and from the facility.

Residential uses have been developed across Riverside Avenue from the Monier Lifetile facility. Under the proposed LCRSP, subject to the timing of closure of that facility and the development of Neighborhood III, additional residential uses (in PA 77) could be developed adjacent to a fully operational Monier Lifetile facility.

Although grading operations associated with the development of the LCRSP may transform multiple planning areas during a single development phase, the precise timing of each phase's build-out cannot be entirely known. While the phasing plan is based on market absorption studies, changing conditions may result in an acceleration or elongation of that time period. As a result, areas of development may be located adjacent to denuded areas that will remain undeveloped beyond their assumed time frame. Similarly, properties located in adjoining planning areas within separate development phases will be built-out under separate schedules, which may be years apart. Areas undergoing development could, therefore, abut areas already containing inhabited residences, occupied retail commercial space, and other land uses.

[181]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

When construction activities occur in proximity to existing uses, particularly residential and other a sensitive land use (e.g., schools, parks/playgrounds/recreational areas, churches, day-care and elderly-care facilities), construction conflicts can surface. Any significant off-site impacts generated from those construction operations can, therefore, adversely affect other proximal land uses. Typically, construction impacts, if any, are short term in duration and will cease upon the completion of construction activities. In most cases, when construction occurs adjacent to an established use, the occupants of the existing use are temporarily inconvenienced by the noise, dust, diesel exhausts, and access restrictions and utility disruptions that routinely accompany development.

Beyond temporary inconvenience, few uses are significantly impacted by construction activities. Those uses that may occur within the project area under the authorization of the LCRSP that may be significantly impacted by proximal construction include, but may not be limited to, certain medical facilities where access and service systems must be constantly maintained, day-care facilities and schools where dust and noise can disrupt classroom exercises or curtail outdoor recreation, the existing golf course (El Rancho Verde Royal Vista Golf Course) in Neighborhood II, park areas and recreational facilities where serenity is viewed as a desired condition, and religious facilities where exogenous impacts can limit or otherwise reduce opportunities for self reflection and meditation.

Although mitigated, in part, through regular watering, with the removal of existing vegetation and the introduction of construction traffic and heavy equipment, fugitive dust will be generated and transported by localized wind patterns off each active construction site and away from each denuded area or stockpile site. Although dust palliative measures will be implemented, those measures will not prevent (but will reduce) the transmittal of all particulate matter. The extent of off-site transmittal of fugitive dust will depend on the force and duration of winds, the precise location where grading is occurring, the total acreage disturbed on a daily basis, and the precise nature of the mitigation measures adopted by the Lead Agency or voluntarily adopted by the Applicant and/or the Applicant's grading contractor. Construction-term air quality impacts are addressed in Section 4.7 (Air Quality) herein.

Other exogenous impacts (e.g., sediment transport) produced by construction operations will be reduced through permit conditions established by the City and through compliance with applicable code requirements and existing permit obligations. Should construction activities be found to be disruptive to the continuing operation of other uses located in the vicinity of those operations, the City's existing nuisance abatement provisions can be utilized through the application of the City's police powers to eliminate those disruptive influences so as to allow those existing uses to continue operating relatively unimpeded. In addition to local requirements, construction activities are regulated by air and water management agencies that impose stringent performance standards governing those activities. As such, while a potential construction-term land-use compatibility impact exists, that impact can and would be effectively mitigated through compliance with those permit conditions routinely imposed by the City and through compliance with applicable code requirements and existing permit obligations.

Although proximal construction operations can be a nuisance, with the possible exception of construction adjacent to existing school sites and other sensitive receptors, no permitted on-site uses have the potential to be significantly impacted by other adjoining project-related construction activities. Mitigation measures have been identified in later sections of this EIR in order to minimize the exogenous impacts of construction-related operations.

Although the proposed LCRSP includes a land-use plan showing the proposed location and density of development anticipated with the implementation of the specific plan, the LCRSP does not expressly dictate the siting of specific land uses. In the absence of site-specific information, it is necessary to consider the operational characteristics of permitted land uses in each planning area to determine whether those uses (and their associated operational characteristics) may raise potential land-use conflicts or impose or create potential conflicts affecting proximal off-site areas. Because the proposed LCRSP contains substantial flexibility with regards to the placement and intensity of those allowable uses, at this programmatic level and absent formal development plans, it is not possible to precisely quantify the exact nature of a yet-to-be-defined future use's impacts on other yet-to-be-defined future uses. Such precision may not, however, be required in order to ensure that any significant operational impacts are avoided or reduced to a less-than-significant level. By considering the operational characteristics of each of the permitted uses allowable within the specific plan area, potential environmental issues can be identified. Through their program-level identification, agency staffs and the project's decision makers can then be apprised of the specific environmental issues that might warrant future consideration once final development plans are submitted.

Once developed, the project site will consist primarily of residential and supportive commercial uses, with interspersed open-space areas. Since land-use activities conducted within and associated with open-space areas typically generate minimal impacts (e.g., noise and light intrusion if illuminated sports facilities are provided) extending beyond the boundaries of those areas, open-space lands and the activities conducted thereupon will have minimal effects on adjoining residential and non-residential areas and upon other retained or improved open-space areas abutting those lands.

With the exception of indirect impacts on biological resources, separately addressed in Section 4.5 (Biological Resources) herein, residential and commercial uses do not typically generate significant exogenous impacts affecting adjacent and proximal open-space areas. Conversely, based on the availability of water and food sources, urban areas abutting and proximal to open space areas may experience or have an increased potential for foraging by wildlife, some of which may present a safety hazards to humans and their pets. As areawide development further encroaches onto lands that previously served as wildlife habitats and/or foraging areas, interactions between humans and wildlife increase. With the exception of upper tier predators (e.g., mountain lions and coyotes), intrusion by wildlife into urban areas does not present conditions that would significantly affect land-use opportunities adjacent to retained open space.

Certain open-space areas are so designated based on an identified hazard (e.g., flooding). Such designations are typically not a prohibition on use but serve as an acknowledgement that identifiable environmental hazards are present and restrictions exist or have been imposed on the nature of allowable uses. Although these same hazards may not be confined to the areas so designated, areas located beyond the confines of such designations may be subjected to lesser hazard levels and bear fewer restrictions regarding the nature of authorized land uses. For example, flood control facilities and channelization of floodplains can effectively eliminate or confine flood hazards, thereby expanding future land-use opportunities for those areas benefiting from those improvements. Modern building codes ensure that residential and non-residential uses are designed to reduce the continuing presence of many hazards to less-than-significant levels (e.g., elevating habitable areas above flood levels).

Similarly, as addressed in Section 4.9 (Public Services and Recreation), based on the availability of combustible fuel, certain open space areas may be highly susceptible to wildfires.

Owners of vacant land adjacent to urban areas are often required to perform routine weed abatement activities to reduce fuel loading. Areas designated for conservation purposes, however, may be exempt from those requirements. Brush clearance and other fuel reduction actions adjacent to retained open space areas, in combination with design and development plans (that acknowledge and address the presence of those hazards) and compliance with applicable building codes, can effectively reduce wildfire hazards to a less-than-significant level.

As proposed, residential development (e.g., higher density residential) and commercial (e.g., retail commercial, office, and light industrial uses) development opportunities will exist throughout the project site. Internally, areas where "Village Center Commercial (VC)" development standards would apply are, however, generally separated from residential areas by either existing roadways (Neighborhoods I and IV), proposed local streets (Neighborhood II), or open space/recreation areas (Neighborhoods II and III). Externally, the only planning area (PA 91) where "Village Center Commercial (VC)" development would be authorized directly adjacent to existing single-family residential uses (Country Club Estates) is in the northern part of Neighborhood II. As a result, with the possible exception of PA 91 in Neighborhood II, no external land-use conflicts have been identified. Existing single-family uses located adjacent to PA 91 could, however, be subject to potential impacts associated with operational noise and commercial traffic. Noise impacts are addressed in Section 4.8 (Noise) and traffic impacts are addressed in Section 4.6 (Transportation and Traffic) herein.

Proposed "Village Center Commercial (VC)" areas located in Neighborhood II (PA 92) may be located adjacent to proposed "Single-Family Residential 2 (SFR-2) (5-8 du/ac)" (PA 93). Similarly, proposed "Village Center Commercial (VC)" area located in Neighborhood III (PAs 39-40) may be located adjacent to proposed "Single-Family Residential 2 (SFR-2) (5-8 du/ac)" (PA 46) and "Multi-Family Residential (MFR) (14-28 du/ac)" (PA 44). In certain areas within Neighborhood II (PA 92) and Neighborhood III (PA 78), the proposed LCRSP illustrates the presence of a new local street (46-foot right-of-way) separating "Village Center Commercial (VC)" designated area from adjacent "Single-Family Residential 3 (SFR-3) (8-14 du/ac)" (PAs 77 and 93). However, in Neighborhood II, although a future internal roadway may be constructed, the proposed LCRSP does not explicitly identify a new local street between a "Village Center Commercial (VC)" area (PAs 90-91) and adjacent ""High Density Residential (HDR) (25-35 du/ac)" areas (PA 92). Similarly, in Neighborhood III, based on the proposed VC Overlay, future "Village Center Commercial (VC)" uses (PAs 35-36, 39-41) could be developed directly adjacent to "Single-Family Residential 2 (SFR-2) (5-8 du/ac)" and "Multi-Family Residential (MRF)" uses (PAs 92-93). As a result, "Village Center Commercial (VC)" authorized uses could be located, constructed, and operational directly adjacent to on-site residential uses.

Based on the generalized nature of each of the permitted and conditionally permitted land uses authorized under the proposed LCRSP, presented in Table 4.1-4 (General Land-Use Compatibility Matrix) is a matrix depicting the type of issues that may need to be considered at the project-level based on the typical operational characteristics (e.g., operational hours) and potential environmental impacts of those uses and the associated performance expectations of other proximal land uses that may exist within the LCRSP boundaries in the future. With the possible exception of Monier Lifetile (PA 78), this operational impact assessment is primarily germane to the consideration of future uses within and adjacent to individual planning areas where a residential or another sensitive (e.g., institutional) land use abuts certain types of non-sensitive uses (e.g., general and specialty commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar uses). This analysis

examines those potential land-use conflicts that could potentially occur with regards to the adjacency of those uses within and adjacent to individual planning areas.[182]

By their inclusion therein, the Lead Agency is neither suggesting nor concluding that those potential land-use conflicts, as identified in Table 4.1-4 (General Land-Use Compatibility Matrix), which might be attributable to the placement of different land uses in adjacent planning areas will, in fact, occur relative to any particular use or location, only that compatibility issues could manifest as a result of that placement and may need to be considered at the site-specific and use-specific level once actual development applications have been submitted to the City.

Those uses that are known to exist off the project site but in the general project area which are not specifically addressed in the above table that also might have the potential to introduce land-use conflicts include "freeways and other busy traffic corridors,"[183] quarries, and cement manufacturers. Because those uses constitute elements of the existing environmental setting, potential impacts associated with those uses are separately addressed under the associated topical issues of this EIR.

To the extent that a particular existing and/or proposed land use cannot appropriately fit into any of the land-use categories presented in Table 4.1-4 (General Land-Use Compatibility Matrix), the City's Development Services Director (Director), at the Director's sole discretion, shall determine what, if any, environmental issues may be germane to that use and shall specify the nature of any environmental analyses which shall accompany the project-specific development proposal, define the scope of those studies, and determine their adequacy for the purpose of assessing land-use compatibility.

As illustrated, most of the permitted and conditionally permitted land uses within the proposed LCRSP area can coexist with only minimal potential for land-use compatibility conflicts. Most conflict potential relates to those instances where residential uses (or other sensitive receptors) may be located adjacent to a non-residential land use or constructed as part of a mixed-use development which includes non-residential land uses, other than open space, in close horizontal or vertical proximity to housing. In recognition of the potential land-use compatibility impacts associated with both the placement of certain permitted uses adjacent to other existing uses within and adjoining the specific plan area and, specifically, where a non-residential use may abut a residential or other sensitive land use, a mitigation measure (Mitigation Measure 1-1) is recommended which, when implemented, will reduce potential land-use compatibility conflicts to a less-than-significant level.

> ***Environmental Impact 1-2****. The project site presently contains a number of natural gas and liquid fuel transmission pipelines. Damage to those transmission pipelines and/or the release of their contents, whether through natural events or other circumstances, could cause or contribute to public health and safety hazards and thereby create land-use compatibility conflicts with proximal land uses and near-site receptors.*

[182]/ Adjacency is not assumed to exist when individual planning areas are separated by a dedicated public roadway or retained open space buffer with a minimum right-of-way width of not less than 94 feet, representing the minimum width of a "collector street" internal to the proposed LCRSP.

[183]/ Senate Bill 352, Chapter 668, Statutes of 2003, expands the requirements school districts must follow in identifying and reviewing the impacts of hazardous air emitters and hazardous material handlers within 1/4 mile of a new school site and imposes requirements if the site is within 500 feet of a busy freeway or traffic corridor, defined in as averaging more than 50,000 vehicles per day in rural areas and 100,000 vehicles per day in urban areas. If a proposed site boundary is within 500 feet of such roadway, the school district must determine if air quality at the site poses a significant health risk.

Table 4.1-4
GENERAL LAND-USE COMPATIBILITY MATRIX[1,2]

Proposed Land Use[3]	Existing Land Use[3]									
	General / Specialty Commercial	Restaurant / Food Service	Open Space / Recreational	Single-Family Residential	Multi-Family Residential	Institutional	Office / Business Park	Light Industrial / Manufacturing	Warehousing / Distribution Center / Heavy Commercial[5]	Entertainment Venues
General / Specialty Commercial	-	-	-	Traffic / Noise		-	-	-	Traffic / Air Quality	-
Restaurant / Food Service	-	-	-			-	-	-	-	-
Open Space / Recreation	-	-	-	-	-	-	-	-	Air Quality[6]	-
Single-Family Residential	Traffic / Noise		-	-	-	Traffic Air Quality Noise	-	Traffic / Air Quality[6] Noise / Hazards		Traffic Noise
Multi-Family Residential			-	-	-		-			
Institutional[4]	-	-	-	Traffic / Air Quality Noise		-	-			
Office / Business Park	-	-	-	-	-	-	-	-	Traffic / Air Quality	-
Light Industrial and Manufacturing	-	-	-	Traffic / Air Quality[6] Noise / Hazards			-	-	-	-
Warehousing / Distribution Center / Heavy Commercial[5]	Traffic Air Quality	-	Air Quality[6]				Traffic Air Quality	-	-	Traffic Noise
Entertainment Venues	-	-	-	Traffic / Noise			-	-	Traffic / Noise	-

Notes:
1. For those situations where issues are expressly identified, once development plans are submitted, unless otherwise waived by the City's Development Services Director (Director), the referenced studies need to be performed to the Director's satisfaction ascertaining whether possible use-related conflicts will materialize. Any design features or other measures identified in those studies proposed for the purpose of reducing or eliminating use-specific conflicts shall be imposed by the Lead Agency as conditions of approval for the proposed land use. These requirements would only apply when a new use is being proposed adjacent to an existing land use and not merely to an adjacent vacant property. For the purpose of environmental compliance, "adjacent" shall be defined as directly abutting and shall not include uses separated by a public street or designated open space area.
2. Based on the site-specific and/or use-specific characteristics of any existing or proposed land use, the Director retains the discretion to specify the scope of any environmental analysis, identify other environmental issues not listed herein, and/or to eliminate any of the listed issues or a case-by-case basis.
3. Those land uses depicted herein constitute general categorization and, unless otherwise noted, are not intended to directly equate to those land-use designated presented in the proposed LCRSP. Upon receipt of a development application, for the purpose of environmental review, the Director, at the Director's sole discretion, shall determine the appropriate categorization of both the proposed use and that of other adjacent existing uses.
4. In the absence of a definitive definition or limitations established in the LCRSP, this category is intended to be inclusive of a full array of institutional uses.
5. Including, but not limited to, those uses authorized under and similar to those permitted and conditionally permits uses within the "General Warehousing Overlay."
6. As determined by the Director, associated air quality studies may include the preparation of a health risk assessments.

Source: Environmental Impact Sciences

***Preliminary Determination 1-2**. Potentially significant unless mitigation incorporated.*[184]

As with the case of pipelines,[185] underground utilities, and mineral resources, land uses do not necessarily all reside above the earth's surface but can also occur below ground. Water distribution lines and sewer collection lines, as well as underground electrical conduits, are common features in most residential areas and typically do not raise issues regarding land-use compatibility. As such, distribution-level water and sanitary sewer lines and underground electrical, natural gas, and telecommunication conduits are not further addressed herein. Additionally, since no subsurface mining operations are known to exist in the general project area (other than aggregate), no further discussion of undergrounding minerals is presented.

As illustrated in Figure 4.1-30 (National Pipeline Mapping System),[186] the KMEP's Calnev Interstate Pipeline and the Southern California Gas Company's (SoCalGas) natural gas transmission pipeline both transport fuel and traverse portions of the City, the County, and surrounding jurisdictions, including portions of the project site. The KMEP's 14-inch diameter liquid fuel pipeline, which transports gasoline, jet fuel, and No. 2 diesel fuel, is located to the east of the Cemex USA's Lytle Creek quarry. Separate environmental analysis is presently being conducted by the BLM[187] and the County[188] with regards to the proposed expansion of this facility, including the installation of a new 16-inch diameter pipeline within the same right-of-way (ROW). SoCalGas' two 36-inch diameter transmission pipelines (Lines 4000 and 4002), which transport natural gas, cross the project site in generally a northeast-southwest direction.

Liquid fuels and natural gas are potentially flammable, explosive, and/or toxic. An unplanned release of those materials could, therefore, affect the safety of individuals and structures located in close proximity to any uncontrolled release.[189] As a result, the presence of underground liquid or gaseous fuel transmission pipelines could introduce land-use conflicts if public safety factors are not adequately considered.

Following an investigation in 1983 of a pipeline accident, the National Transportation Safety Board recommended that the Transportation Research Board (TRB) of the National Research Council undertake a study to assess the adequacy of existing public policy for surface and subsurface use of land adjacent to pipelines that transport hazardous commodities to provide

[184]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an adverse environmental effect; (2) locate a new public school within 1,500 feet from an existing or proposed above-ground or underground pipeline that would, as a result of the contents, design, or characteristics of that pipeline, pose a substantial safety hazard to the school or its occupants thereupon; and (3) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

[185]/ As defined in 49 CFR 192.3: "Pipeline means all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assembles. Pipeline facility means new and existing pipelines, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation."

[186]/ United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, National Pipeline Mapping System (http://www.npms.phmsa.dot.gov/).

[187]/ Federal Register, Vol. 73, No. 50, March 13, 2008, pp. 13558-13560.

[188]/ County of San Bernardino, Notice of Preparation of a Draft Environmental Impact Statement and a Draft Environmental Impact Report, Calnev Pipeline Expansion Project, March 17, 2008.

[189]/ Hazardous liquid pipeline ruptures can cause injuries and deaths away from the site of the rupture. For example, flammable liquids can flow down a stream to affect more peripheral victims. Locations downhill from a point of rupture may, therefore, be at higher risk than uphill locations.

reasonable public safety, and based on the findings of the assessment, develop a recommended policy to correct identified deficiencies in current policy. A TRB committee was formed for this purpose and addressed the following key issues: (1) the nature and extent of existing and potential problems caused by development on land adjacent to liquids and gas transmission pipelines; (2) the jurisdictional authority and ability of the federal government and state and local governments to address these problems; (3) the strengths and weaknesses of existing governmental and industry policies and practices that encourage the use of land development procedures, damage prevention measures, and emergency response programs to enhance public safety near transmission pipelines; and (4) the transferability of these approaches to different governmental and developmental contexts. The TRB's "Pipeline and Public Safety – Damage Prevention, Land Use, and Emergency Preparedness, Special Report 219" (Transportation Research Board, 1988) contains the results of that investigation.

The TRB noted that local government is the primary governmental unit with authority to regulate land use. Through comprehensive plans and zoning, local governments may designate appropriate land uses for parcels located near pipelines and specify the configuration of lots and setbacks from pipeline ROWs.[190] Land-use measures can be implemented to prevent or reduce the encroachment of development on transmission pipelines, including: (1) the enactment of legislation prohibiting construction of structures on pipeline rights-of-way and ensuring that access to pipelines is not obstructed; (2) the establishment of procedures that require pipeline operators to review proposed land-use changes by examining subdivision plans, site plans, and variances for all properties that have a pipeline easement; (3) modernization land records systems to ensure that the types, boundaries, and holders of easements are identified by parcel and can be accessed readily by local governments; (4) in consultation with pipeline operators and developers, the preparation of planning guidelines for safely integrating pipelines into development projects and protecting the lines during construction; and (5) the adoption of those guidelines into comprehensive plans, zoning ordinances, and building codes.[191]

Despite those recommendations, the TRB notes that transmission pipelines generally are not subject to any local land-use regulations. In most instances, the width, configuration, and control of pipeline rights-of-way are established without local input.[192] As such, since local agencies may have limited input with regards to either the creation of ROWs for transmission pipelines or their construction, maintenance, and improvement, local controls may be limited to land-use authorizations adjacent to those easements, the imposition of reasonable setback requirements,[193] and/or the establishment of control areas.[194]

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[190]/ Transportation Research Board, Pipeline and Public Safety – Damage Prevention, Land Use, and Emergency Preparedness, Special Report 219, 1988, p. 3.

[191]/ *Ibid*., p. 5.

[192]/ Transportation Research Board, Transmission Pipeline and Land Use – A Risk-Informed Approach, Committee for Pipeline and Public Safety: Scoping Study on the Feasibility of Developing Risk-Informed Land Use Guidance near Existing and Future Transmission Pipelines, Special Report 281, 2004, p. 70.

[193]/ Setbacks are areas beyond the defined pipeline easement or right-of-way boundary in which buildings or particular uses are limited or prohibited. Setbacks, however, should not be mistakenly perceived as a buffer or safety distance beyond a pipeline right-of-way. There are no broad empirical studies that provide a sufficient basis for quantifying the risk of various land uses or building types within specified distances of transmission pipelines.

[194]/ Control activity areas are specified distances on either side of a pipeline in which anyone who proposes to conduct ground disturbance, subject to specified exceptions, must ascertain the location of the pipeline, notify the pipeline company of the nature and schedule of the ground disturbance, and conduct the ground disturbance in a manner acceptable to both the pipeline operator and the local government.

Gas Transmission Pipelines
Hazardous Liquid Pipelines
Cities
Other Places, 1..2.500
Small Towns, 2.500..10.000
Towns, 10.000..30.000
Small Cities, 30.000..100.000
Cities, 100.000..300.000
State Largest Cities, 100.000..300.000
Big Cities, 300.000..1.000.000
Major Cities > 1.000.000
Major Roads
Major Highways
Highways
Major Roads
Streets
Ramps
Ferry Crossing
Railroads
Major Railroads
Minor Rivers, Creeks
Lakes, Major Rivers
Big Rivers or Streams
Big Lakes or Ponds
Medium Lakes or Ponds
Small Lakes or Ponds
Small Rivers or Streams
Reservoirs
Bays, Gulfs
Glasiers
Canals, Aquaducts
Parks
National Parks and Forests
State Parks and Forests
Local Parks
Zip5
States
City Limits
Major Cities > 1.000.000
Big Cities, 300.000..1.000.000
State Largest Cities, 100.000..300.000
Cities, 100.000..300.000
Small Cities, 30.000..100.000
Towns, 10.000..30.000
Small Towns, 2.500..10.000
Other Places, 1..2.500
Counties
Surrounding Countries
Oceans

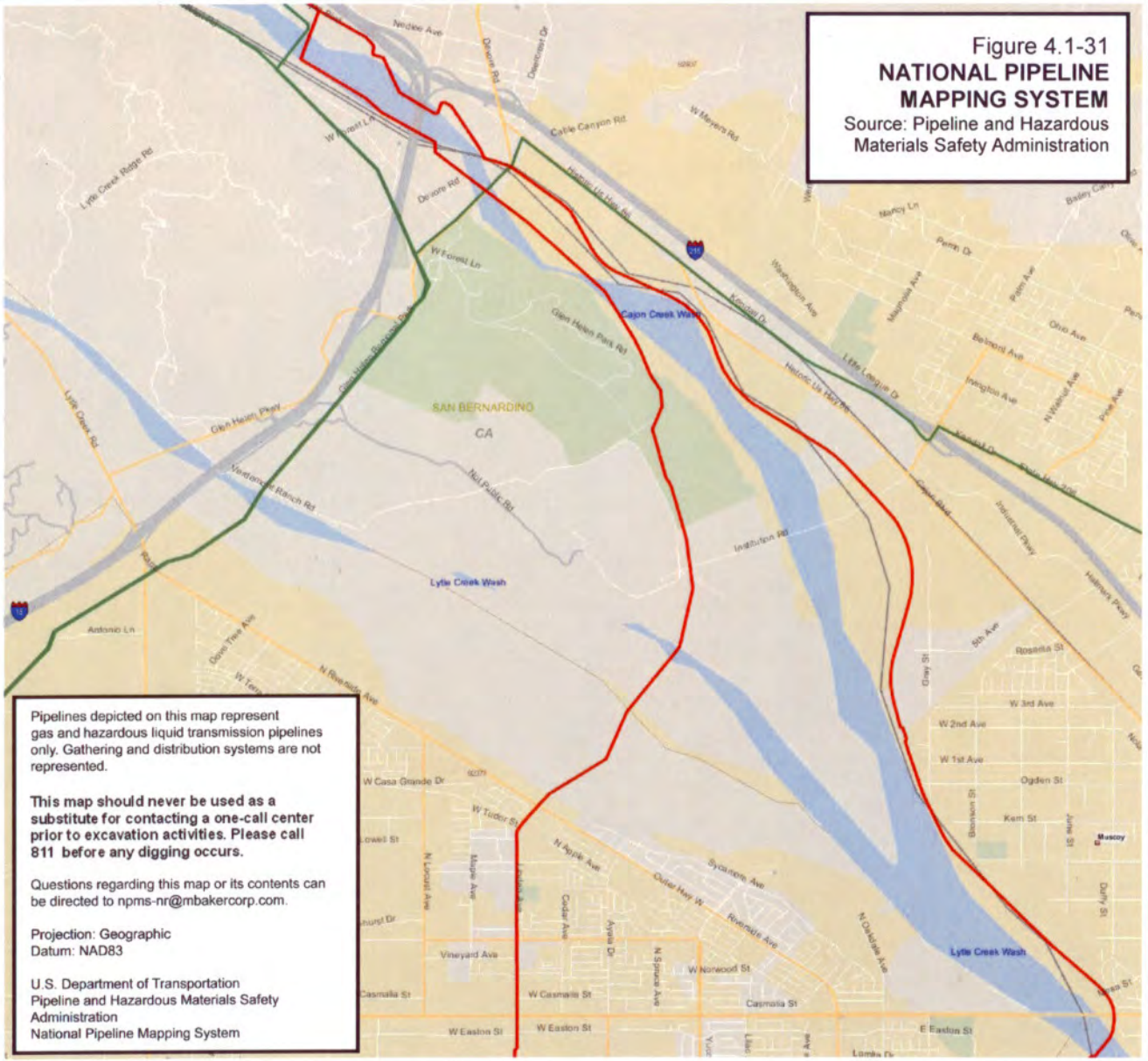

Figure 4.1-31
NATIONAL PIPELINE MAPPING SYSTEM
Source: Pipeline and Hazardous Materials Safety Administration

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In recognition of potential land-use conflicts that could, but would not necessarily, occur based on the presence of underground natural gas and liquid fuel transmission pipelines (i.e., covered pipeline segments[195]), a number of mitigation measures (Mitigation Measure 1-2 through Mitigation Measure 1-4) have been formulated to ensure that the siting of specific land uses occurs in recognition of the presence of those existing facilities.

The CDE has developed guidance procedures for evaluating safety hazards associated with natural gas and liquid fuel releases from underground and above ground pipelines. It is the CDE policy that "any pipeline that has a maximum operating capacity of at least 80 pounds per square inch, including but not limited to those that carry natural gas, liquid petroleum, fuels or hazardous chemicals, shall be included in a pipeline survey, regardless if the pipeline is classified as a transmission or distribution line. Pipelines located within a railroad or other easement or those pipelines serving gas and oil well sites and fields shall also be included."[196] The CDE imposes additional school siting evaluation,[197] including the consideration of alternative sites, when an above ground or underground pipeline that can pose a safety hazard is located within 1,500 feet of the proposed school site.

The decision-making process involves three sequential steps: (1) screening analysis of candidate sites to determine whether additional analysis is needed (Stage 1); (2) detailed estimation of the individual risk (IR) from the pipeline to a person at the boundary of a proposed site (Stage 2); and (3) more detailed analysis needed only to address factors such as diverse materials in the pipeline, the presence of multiple pipelines, or physical features that may change the nature of the risk such as the presence of storm drains (Stage 3).

Based on CDE policy, a mitigation measure (Mitigation Measure 1-5) has been formulated to ensure that, if a new school site is proposed within 1,500 feet of an underground natural gas and/or liquid petroleum pipeline, a "school site pipeline risk analysis" is conducted in accordance with CDE requirements and methodologies. As noted by the CDE, the presence of an underground natural gas and/or liquid petroleum pipeline within a 1,500-foot radius of a school site does not necessarily preclude the site's development for that use. The CDE has identified a broad array of measures that could be enacted to mitigate any potential hazards that may be identified, including the following risk control or reduction measures: (1) consider alternative locations; (2) design the site layout to minimize impacts and provide for sheltered areas for the various scenarios that might occur; (3) manage the occupancy patterns and times for site populations; (4) consider small shelter locations against fire radiation at various sites in the areas of school property away from the buildings; (5) design buildings to minimize glass toward the pipeline right of way, and design buildings for high structural integrity; (6) avoid the use of wooden buildings; (7) develop and install emergency alarm systems and integrate into emergency planning and drills; (8) maintain close communications with the pipeline operator and monitor activity near the pipeline; (9) be prepared to notify the operator immediately of any

[195]/ As defined in 49 CFR 192.903: "Covered segment or covered pipeline segment means a segment of gas transmission pipeline located in a high consequence area.

[196]/ California Department of Education, Hazardous Pipeline Survey, Rev. 9/04, October 2004, p. 2.

[197]/ Local educational agencies (LEA) desiring the CDE's approval of a new school site or additional land to an existing school site should contact its county-assigned field representative from the School Facilities Planning Division (SFPD). The field representative will view the site and provide the LEA with a written evaluation on SFPD 4.0 (Initial School Site Evaluation). Prior to the site visit, the boundaries map must be submitted by the LEA. The field representative will also provide to the LEA, upon request, the following forms and instructions, as required for CDE final school site approval: SFPD 4.1 (School Site Approval Procedures), SFPD 4.02 (School Site Report), and SFPD 4.03 (School Site Certification) (Title 5, Sections 14010 *et seq*., California Code of Regulations; Sections 17070.50 and 17251[a], California Education Code). In addition, in accordance with Sections 17210 and 17213.1 of the California Education Code, LEAs are required to prepare a Phase I environmental site assessment.

excavation or drilling activity near the pipeline; (10) ask to be notified by the operator about any excavation or maintenance activities near or on the pipeline; ask to be informed of any one-call system notifications on the segment of line within the 1,500-foot zone; (11) provide mini-shelters in vulnerable areas of the property; (12) provide for immediate shut-off of ventilation from outside air in the event of a pipeline incident; and (13) provide berms or walls to prevent liquid from moving onto the site or to protect against heat and flame (provided that such design is properly analyzed for secondary hazard effects).[198]

Additional analysis of natural gas and liquid petroleum pipeline hazards is presented in Section 4.11 (Hazards and Hazardous Materials) herein.

Off-Site Land-Use Compatibility Analysis

Environmental Impact 1-3*. Project implementation could impact the continuing operation of existing proximal land uses and/or impede the ability of the Cities of Fontana and Rialto and/or the County of San Bernardino to proceed with, if public, or to approve, if private, future land uses through the introduction of encroaching development constraints that do not presently exist in the area of those facilities or, if evident, do no exist at levels that presently constrain the development or continuing operation of those uses. Similarly, based on their operational characteristics, existing off-site uses, now operating within the general project area could impact planned or permitted land uses that may occur on the project site.*

Preliminary Determination 1-3*. Potentially significant unless mitigation incorporated.*[199]

A project will normally be deemed to produce a significant environmental effect if it were to conflict with any applicable land-use plans. Although annexation of the LCRSP project site to the City will change the assessment of compliance from the County to the City with regards to the annexed area, the adjacency between the project site and unincorporated County areas will remain. The proposed project thus does not exist in isolation but adjoins other existing and reasonably foreseeable uses located beyond the specific plan boundaries, including a variety of land uses within the Cities of Fontana and Rialto, within County unincorporated areas, and on federal lands located within the SBNF. Those existing and reasonably foreseeable land uses exhibit or would be projected to exhibit operational characteristics that may differ from those produced by and associated with the planned and permitted development activities likely to occur on the LCRSP project site. In addition, the proposed on-site uses could exhibit operational characteristics that may differ from those that now occur and which are likely to occur on other abutting properties absent the proposed LCRSP. In recognition of those differences, identified adjoining land use and the potential land-use compatibility conflicts associated therewith or resulting therefrom are separately addressed below.

The analysis of land-use compatibility with respect to existing land uses located in reasonable proximity of the LCRSP project site are each separately addressed below. Excluding those

[198]/ California Department of Education (URS Corporation), Guidance Protocol for School Site Pipeline Risk Analysis, Volume I – User's Manual, February 2007, p. 5-5.

[199]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

uses that have limited potential to affect or be affected by adjoining development (e.g., rural residential and freeway-oriented commercial uses, Lytle Creek Hydroelectric Project, El Rancho Verde Royal Golf Course), the following analysis seeks to be inclusive of all uses now existing in close proximity to the project site.

- **San Bernardino County Sheriff's and Probation Departments Facilities**. Located to the southeast of Neighborhood I (but not contiguous to the project site), across Lytle Creek Wash, is the County's Glen Helen Regional Rehabilitation Center - North Facility (North Facility). Also located to the southeast and across Lytle Creek Wash from Neighborhoods II and III are the Glen Helen Rehabilitation Center (GHRC) and the Glen Helen Regional Training Center (GHTC).

  In siting the North Facility, the GHRC, and the GHTC at their existing locations, it is assumed that one of the County initial siting criteria was the then existing physical isolation of those properties and, with that isolation, both the reduced potential for those facilities' operation to adversely affect nearby properties and the reduced potential for off-site development to exert pressures on the County to curtail or otherwise limit the use of those sites for their intended use.

  The intent of that isolation is evident by the following County General Plan policy and programs: "Ensure the security needs of prisons and similar detention facilities are provided for by the facilities' operator(s) when reviewing development activities. Locate new facilities in areas that minimize land use conflicts. (1) Work closely with state and local officials responsible for administering these facilities when considering land use proposals on adjacent lands. (2) Discourage residential uses on adjacent or nearby parcels in proximity to high security detention facilities" (Policy/Programs LU 11.8).[200]

  The isolation of the North Facility, GHRC, and GHTC was previously impacted by the County's previous approval of the LCNPD and Rosena Ranch. To the extent that physical separation from sensitive land uses remains a critical component to those facilities' continuing operation and expansion, that isolation would be further reduced with the implementation of the LCRSP. Although separated by Lytle Creek, the LCRSP project could indirectly affect the unimpeded use of those existing County facilities by introducing new residents and businesses into the general project area. Each of those facilities, as operated by the San Bernardino County Sheriff's Department and the San Bernardino County Probation Department, are separately discussed below.

  - ◊ **Glen Helen Rehabilitation Center – North Facility**. Of the institutional uses that now exist upon that property, the North Facility is located in closest proximity to the planned development, specifically, Neighborhood I. Although this facility encompasses approximately 100 acres, more than one-half of the North Facility site is presently undeveloped or underutilized.

    The North Facility houses minimum-security offenders in a campus-like setting absent perimeter fencing and other security systems designed to confine the facility's occupants to a defined area. Individuals accommodated at that facility have been convicted of criminal offenses; however, based on the nature of the offense, those individuals are or may be incarcerated only during certain days of

[200]/ *Op. Cit*., County of San Bernardino 2007 General Plan, Policy/Programs LU 11.8, p. II-40.

the week. Since no security fences are provided, individuals at that facility are there on an "honor system." The County's assignment of individuals to facility must, therefore, include deliberate consideration of whether these individuals pose a threat to personnel, other offenders, and individuals residing or working in proximity to the North Facility.

Occupants of the North Facility are assigned to "work details" that may involve either activities conducted within the correctional facility or which may include other community-based services. Individuals assigned to this facility are not considered to be "high risk" relative to their potential flight from the facility. Since individuals assigned to North Facility are not considered a flight risk and since no operational activities occur as part of this facility's operation that may manifest as physical off-site impacts, neither the existing use nor its possible future expansion should generate land-use conflicts significantly impacting the project site. When effectively operated and sufficient setbacks are provided, the North Facility's uses and operations are not inherently incompatible with any of the proposed or permitted land uses within the LCRSP area.

Moreover, the North Facility is a minimum security facility. The County General Plan policy (Policy LU 11.8) primarily addresses "high-security detention facilities." As such, there does not appear to be an inherent incompatibility between the LCRSP and that County policy with regards to the project's proximity to the North Facility.

Independent of the LCRSP project, subject to the County's independent determination of need and availability of funding, the North Facility could expand, increase its existing capacity, and diminish the existing separation distance between those activities and the LCRSP project boundaries. Although there may not exist environmental factors that would preclude the physical expansion (and any resulting decrease in the separation distance between the North Facility and Neighborhood I) and/or increase in resident population of that facility site, resident concerns could make such expansion more difficult in the future. The more vocal opposition, if any, to any such action would likely be from those abutting residential areas located within the County-approved LCNPD (Rosena Ranch). The presence of the intervening Lytle Creek Wash would suggest that the potential impacts upon the possible current and future use and operation of the North Facility from the proposed LCRSP would be less that significant.

In accordance with the disclosure requirements established by the California Department of Real Estate (DRE),[201] prospective purchasers within the proposed

[201]/ In addition to those disclosure requirements specified by DRE and required under State law, pursuant to the provisions of the "declaration of covenants, conditions, and restrictions" executed between Sunbelt Acquisitions, Inc., The Pharris Group, and Lytle Creek Land and Resources, additional disclosure obligations have been specified. In part, that disclosure obligation stipulates that the "purchaser or lessee of any property used for residential purposes and uses incidental thereto which lies within 500 feet of any portion of the Mining Property (i) shall generally waive and release any 'Claims' (as defined in the Declaration) of every nature and kind, known, suspected or unsuspected, whether arising now or in the future, arising out of or relating to any Mining Operation on or about the Mining Property, whether now existing or hereafter lawfully conducted or commenced, including, without limitation, all Claims based upon nuisance, trespass, or property damage resulting from, directly or indirectly, any impacts; (ii) shall expressly waive all rights under Section 1542 of the California Civil Code, which reads as follows: 'A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the

LCRSP property will receive notification regarding the presence of these nearby County-operated facilities, including the potential for their future expansion. So notified, perspective buyers can make an informed decision concerning the level of risk, if any, that they are prepared to accept associated with those existing and possible future uses.

Although the County could potentially change the nature of this land use and change any existing standards that may be applied to eligibility for incarceration, any assumptions concerning future changes would be speculative and outside the scope of this environmental analysis.

◊ **Glen Helen Regional Training Center**. The GHTC is located south of the North Facility, further south of Neighborhood I and east of Neighborhood III (across Lytle Creek Wash). The GHTC contains a firing range, situational training area, and explosive detonation area, including a "live-fire house." Activities include both live and simulated fire, all in a controlled environment with adequate safety features designed to protect facility personnel and others located upon and adjacent to the GHTC facility. Facilities include three combat ranges and one rifle range within an area of approximately 1,500 feet by 1,000 feet. The rifle range is bordered by two berms that are about 12 feet high and 900 feet in length. In addition, two 300-foot long berms separate the three combat ranges.[202]

Since expansion plans for the GHTC have already been developed by the County Sheriff's Department, future improvements to that facility are reasonably foreseeable and, therefore, need to be considered as part of this project review. One proposed aspect of those expansion plans includes the development and/or enlargement of the situational village. Once operational, that use could involve either live or simulated discharge of firearms and other use of other explosives. With new adjoining and other proximal residential land uses (such as the proposed LCRSP project), those expansion plans could potentially necessitate a modification to those plans, necessitate changes in current or proposed facility operations, and/or necessitate the incorporation of costly mitigation measures by the County in the future.

Although existing uses now associated with the GHTC are substantially set back from that facility's boundaries, new or expanded uses could be positioned in closer proximity to those boundaries and, therefore, closer to the project site. However, based on the County's approval of other adjoining sensitive receptors, including the LCNPD (Rosena Ranch), the County may be prevented from increasing the type and intensity of impacts that are generated upon its property and may, in fact, find itself in the position of responding to noise and other complaints once other development projects in the general area are completed and occupied.

release, which if known by him must have materially affected his settlement with the debtor; and (iii) shall generally agree not to interfere with Sunbelt's sale, lease, license or financing of all or any part of the Mining Property, nor shall it interfere with the use of the 'Permits' (as defined in the Declaration), nor shall it be entitled to injunctive relief to abate, prevent, hinder, limit or control such Mining Operations or the use of the permits for such Mining Operation" (Instrument No. 92-314964, recorded on July 29, 2002).

[202]/ United States Army Corps of Engineers, Final Environmental Assessment for the Joint Task Force Six Mission (JT 30-94/JT 31-94), San Bernardino County Sheriff's Academy, San Bernardino County, California, September 1993, p. 2.

Based on the presence of noise-generating activities and explosive materials at the GHTC, although categorized as an institutional use, the nature of the facility's operations may be similar to those that occur at an industrial property (where machinery noise would replace the noise associated with the discharge of firearms and hazardous materials would replace the explosive materials periodically detonated thereupon).

Since the GHTC is not classified as an industrial use, neither the use nor the activities conducted thereupon are subject to the performance standards outlined in Section 83.01 (General Performance Standards) of the County Development Code.[203] As such, activities conducted on the GHTC site are unregulated and not subject to specific performance criteria. As such, those uses and those activities can and do exert impacts that presently extend beyond the project site. Since many of the activities conducted thereupon are designed to promote public safety, those same conditions and constraints imposed on industrial or other related uses may not be applicable to the GHTC.

In the absence of definitive performance standards and existing nearby receptors that, where they to exist, might have lodged a complaint, the County's use of that site may already be generating impacts adversely affecting, either directly or indirectly, nearby properties. Proximal properties include sites that are now proposed for development (e.g., proposed LCRSP) and sites that are presently being developed (e.g., Rosena Ranch) for residential use.

Even if no change were to occur to those GHTC uses and the activities being conducted thereupon, the detonation of explosives and the discharge of firearms can be expected to generate possible nuisance complaints from future area residents. In response thereto, the County Sheriff's Department may be required to curtail or otherwise modify the precise nature of existing on-site uses and training activities in response to the near-term presence of sensitive receptors.

Many of the activities which are conducted at the GHTC are inherently hazardous (e.g., discharge of firearms, denotation of explosives). While the unsafe discharge of a firearm or other explosive device could generate significant impacts, in conducting any environmental analysis, it must be assumed that all permitted uses, activities, equipment, and machinery are operated and performed in a legally compliant and safe manner, that all safety procedures are followed, that all devices are operated in accordance with manufacturers' specifications and under the supervision of qualified personnel, and that all existing permit conditions are strictly adhered too.

Based on the County's approval of other adjoining sensitive receptors, including LCNPD (Rosena Ranch), the County may already be prevented from increasing the type and intensity of activities performed on the GHTC and the impacts

[203]/ As specified in Section 83.01.010 (Purpose) therein: "The purpose of this Chapter is to establish uniform performance standards for development within the County that promotes compatibility with surrounding areas and land uses. Performance standards are designed to mitigate the environmental impacts of existing and proposed land uses within a community. Environmental impacts include air quality, glare, heat, noise, runoff control, and waste disposal. These general performance standards are intended to protect the health and safety of businesses, nearby residents, and workers and to prevent damaging effects to surrounding properties."

generated from those activities. The presence of the proposed LCRSP, as an additional potential near-site sensitive receptor, would not be expected to substantially intensify, create, or introduce new potential significant adverse impacts associated with the provision of new or physically altered government facilities or result in the need for new or physically altered government facilities. The project's impacts upon the GHTC are, therefore, less than significant.

In recognition of the existence and proposed expansion of the GHTC, prospective purchases of property within the LCRSP property would be provided with DRE disclosure documents indicating the presence of the GHTC and the activities conducted thereupon. Buyers can, therefore, make an informed independent determination concerning the potential hazards, if any, associated with their proximity to this institutional use and elect to purchase or not purchase property based on their own assessment of any accompanying risk. Disclosure documentation would disclose the nature of those activities, including the continuing occurrence of noise-generating land-use activities which may be perceptible to off-site receptors.

It can be reasonably assumed that any expansion plans that may be formulated with regards to the GHTC would be subject to CEQA compliance. Accompanying studies performed as part of any expansion planning may demonstrate that any anticipated or potential impacts associated with either the GHTC's future operations could be effectively mitigated through physical or procedural modifications to the facility and its operations. It is also possible that there would be public opposition to any such expansion plans once adjoining residential areas are inhabited. Since any assumptions concerning future changes would be speculative, conjecture as to nature of any GHTC expansion and the impacts resulting from that expansion are outside the scope of this environmental analysis.

◊ **Glen Helen Rehabilitation Center**. Further to the south is the Glen Helen Rehabilitation Center (GHRC). The GHRC accommodates medium-to-maximum security inmates and other "weekend" inmates. The rehabilitation center has a programmed capacity of 1,244 males and 270 females. The approximately 103,230 square foot facility includes dormitories, an administration building, kitchen/dining area, laundry, garage, vocational training (Regional Occupational Program) buildings, and a maintenance office. The County Sheriff's Department has formulated expansion plans for that use to expand the GHRC to accommodate a larger number of individuals.

With the possible exception of the added introduction of maximum security inmates, the impacts of the GHRC would not be expected to be substantially different from those associated with the North Facility. Because Lytle Creek Wash, Cemex USA's Lytle Creek Plant, and the LCNPD (Rosena Ranch) separate the GHRC from Neighborhoods II and III, the physical separation between existing County facilities and the proposed on-site land uses would not appear to introduce additional land-use conflicts unique to this facility. Because of that separation distance and intervening land uses, any expansion of the existing County facility would not be expected to introduce new or substantially increase the severity of existing impacts upon the project site. Similarly, the

adoption and implementation of the proposed LCRSP would not substantially impede or otherwise restrict any future County plans for the expansion of the existing GHRC.

Under DRE disclosure requirements, in recognition of the existence and proposed expansion of the GHRC, prospective purchases of property within the LCRSP property would be provided with DRE disclosure documents indicating the presence of the GHRC and the activities conducted thereupon.

- **Cemex USA's Lytle Creek Plant**. Cemex USA's adopted mineral extraction plan for the Lytle Creek Plant is effective for a period of 25 years (with a two-year revegetation monitoring period), expiring on April 29, 2028. Cemex USA is a vested operation and is operating under an approved reclamation plan. As such, its continuing operation, in accordance with that plan and other applicable requirements, must be assumed.

  As planned, the proposed LCRSP will be developed in four phases (Neighborhoods I-IV), with build-out anticipated to occur by 2030 (or as otherwise specified in an approved development agreement). It is anticipated that construction will begin in Neighborhood I, followed by development in Neighborhoods II, III, and IV. The northern part of Neighborhood II and the southern portion of Neighborhood III abut the area of Cemex USA's Lytle Creek Plant. As a result, based on this schedule and phasing plan, mining operations may be occurring concurrently with the construction, occupancy, use, and habitation of residential and other uses on the proposed LCRSP site.

  Adjoining land uses are "incompatible" when the operational characteristics of one use extends beyond the property boundaries and substantially impacts an abutting or other near-site property and when the requisite performance standards inherent in each use and/or the reasonable expectations of individual property owners cannot be feasibly satisfied through the introduction of design features, operational changes, or other actions (e.g., imposition of operating restrictions).

  As defined in Section 18.76.020(D) in Chapter 18.76 (Surface Mining and Land Reclamation) of the City Municipal Code, "compatible land uses" mean "land uses inherently compatible with mining and/or that require a minimum public or private investment in structures, land improvements, and which may allow mining because of the relative economic value of the land and its improvements. Examples of such uses may include, but shall not be limited to, very low density residential, geographically extensive but low impact industrial, recreational, agricultural, grazing and open space." As further defined therein, the term "incompatible land uses" means "land uses inherently incompatible with mining and/or that require public or private investment in structures, land improvements, and landscaping and that may prevent mining because of the greater economic value of the land and its improvements. Examples of such uses may include, but shall not be limited to, high density residential, low density residential with high unit value, public facilities, geographically limited but impact intensive industrial, and commercial."

  Conversely, as indicated in Section 82.17.040 of the County Development Code, "incompatible land uses shall be buffered from mining activity. Appropriate transition measures shall be taken in order to insure compatibility between mining activity and

surrounding land uses."[204] As further indicated in Section 88.03.010(a) of the County Development Code, "The County recognizes that the extraction of minerals is essential to the continued economic wellbeing of the County and its residents and to societal needs and that the reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety."[205]

The County General Plan and County Development Code incorporates design, development, and performance standards that collectively seek to eliminate or minimize potential environmental impacts of permitted land uses on other existing and proposed uses. Those standards are intended to protect the public health and safety (including that of workers, nearby residents and businesses) and prevent damaging or deleterious effects to surrounding properties. Although Cemex USA is has an established "vested right"[206] to operate, the facility must, at all times operate in accordance with the requirements imposed by the State and the County.

By definition, if all established development standards can be satisfied and in the absence of any public policy declaration or environmental constraints to the contrary, adjoining activities that meet or exceed their respective performance criteria would be deemed compatible, although not necessarily complementary, land uses. Pursuant to the County Development Code, performance standards to which Cemex USA's Lytle Creek Plant are bound include, but may not be limited to, the following.

◊ **Noise Standards**. Referencing Section 83.01.080(b) of the County Development Code, County areas "shall be designated as 'noise impacted' if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in subsections (2) and (3) below. New development of residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to these standards. Noise sensitive land uses include residential uses, schools, hospitals, nursing homes, churches and libraries and similar uses."

Pursuant to Section 83.01.080(c) of the County Development Code, the noise standards for emanations from any stationary noise source, affecting adjoining properties, shall not exceed 55 dBA Leq between 7:00 AM and 10:00 PM and 45 dBA Leq between 10:00 PM and 7:00 AM. No person shall operate or cause to

[204]/ The above excerpt from the County Development Code is extracted from Chapter 82.17 (Mineral Resources [MR] Overlay). Although a portion of the project site contains regionally significant mineral resources (i.e., MRZ-2), the site is not located within a formally designated "mineral resources overlay district." As a result, the accompanying provisions of the County Development Code are not directly applicable to the proposed project but have been referenced herein for informational purposes only.

[205] / *Op. Cit.*, County of San Bernardino 2007 Development Code, Chapter 88.03 (Surface Mining and Land Reclamation).

[206]/ As indicated under Section 88.03.050 (Vested Rights) of the County Development Code: "A Conditional Use Permit shall not be required for any person who has obtained a vested right to conduct surface mining operations before January 1, 1976, as long as the vested right continues and as long as no substantial changes have been made in the operation except in compliance with SMARA [Surface Mining and Reclamation Act], State regulations, and this Chapter. Where a person with vesting rights has continued surface mining in the same area subsequent to January 1, 1976, the person shall obtain County approval of a Reclamation Plan covering the mined lands disturbed by the subsequent surface mining. In those cases where an overlap exists between pre-SMARA and post-SMARA mining, the Reclamation Plan shall require reclamation proportional to that distribution caused by the mining after January 1, 1976."

be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level, when measured on any other property, to exceed the noise standard for that receiving land use for: (1) a cumulative period of more than thirty minutes in any hour; (2) the noise standard plus 5 dBA for a cumulative period of more than fifteen minutes in any hour; (3) the noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour; (4) the noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or (5) the noise standard plus 20 dBA for any period of time.

◊ **Vibration Standards**. As indicated in Section 83.01.090(a) of the County Development Code, "[n]o ground vibration shall be allowed which can be felt without the aid of instruments at or beyond the lot line, nor will any vibration be permitted which produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot line." Exempt activities include: (1) motor vehicles not under the control of the subject use; and (2) temporary construction, maintenance or demolition activities performed between 7:00 AM and 7:00 PM, except Sundays and Federal holidays.

◊ **Air Quality Standards**. Referencing Section 83.01.040(a) of the County Development Code: "Required permits shall be obtained from either the Mojave Air Quality Pollution District or the South Coast Air Quality Management District depending on the location of the subject property for equipment that may cause air pollution. Before the equipment may be constructed, plans and specifications must be submitted to the appropriate District for approval."

The Cemex USA's Lytle Creek Plant is required to operate in a manner which conforms to the above described standards. The referenced standards have been promulgated to ensure that mining operations do not result in the environmental effects that would adversely affect any areas located beyond the plant's boundaries.

With regards to noise, vibration, and air quality, the City's Municipal Code follows County criteria. Should the City allow the proposed LCRSP project to proceed adjacent to the Cemex USA's Lytle Creek Plant while that facility is still operating, the new residents within any abutting or proximal residential uses and the students within any nearby school zone could be potentially subject to noise, vibration, air quality, and traffic-related impacts. Under that scenario, LCRSP-related traffic would occur along with mining haul truck activities along Riverside and Sierra Avenues. Noise and air quality (including toxic air contaminants) from the mining operation could impact proximal planning areas. Perceptible odors may also emanate from the settling ponds. Additional details on these impacts are provided in Section 4.6 (Transportation and Traffic), Section 4.7 (Air Quality), and Section 4.8 (Noise) herein.

In recognition of the likely presence of these impacts and the potential for the creation of compatibility conflicts affecting adjoining and other proximal land uses, significant land-use impacts could occur if LCRSP development were to advance prior to the cessation of mining activities, notwithstanding Cemex USA's best efforts to operate with all established environmental performance standards. Conversely, if development activities in proximity to the Cemex USA Lytle Creek Plant were to occur following the cessation of

mining operations, potential impacts upon those areas attributable to quarry operations would be eliminated or substantially reduced.

In addition, subject to the timing and location of development, the LCRSP could adversely impact the continuing operation of Cemex USA's Lytle Creek Plant. Should the proposed project be approved or conditionally approved, it is reasonable to assume the County's and the City's receipt of future nuisance complaints, lodged by LCRSP residents, would increase whether or not Cemex USA's operation complies or were to exceed adopted standards. Increased monitoring and enforcement of those standards would be the logical consequence of those complaints, potentially predicating public efforts by new area residents to effectuate either pre-closure adjustments in current mining activities and operations or the early closure of that facility.

Under the terms of its permit, Cemex USA must comply with those performance standards imposed on that land use as well as such other environmental-based standards and conditions as may be imposed by those resource agencies with jurisdiction over the mine's operation, including those established by the State Mining and Geology Board (SMGB) and those implementing the Surface Mining and Reclamation Act of 1975 (SMARA).[207] As specified therein, under SMARA, an agency's

[207]/ Mineral lands are "classified" based on geological factors. By statute, land use is not considered in the classification process. The classification information submitted to the SMGB is used in the "designation" of lands as containing aggregate resources of regional or Statewide significance in accordance with SMARA. In contract to classification, designation identifies those deposits that are potentially available from a land-use perspective and are of prime importance in meeting future needs of the P-C Region. Upon formal adoption by the SMGB, the areas designated as being of regional significance are codified into Title 14, Division 2 of the CCR. Once the designation has been completed, SMARA requires that local lead agencies establish mineral resource management policies in their general plans that: (1) recognize the mineral information provided by the classification process; (2) assist in the management of land use that affects areas of statewide and regional significance, and (3) emphasize the conservation and development of the identified mineral deposits (Section 2762[a], PRC). Lead agencies are required to submit mineral resource management policies to the SMGB for review and comment prior to adopting policies. Subsequent amendments to mineral resource management policies require SMGB review and comment.

In addition to summarizing or incorporating by reference the State classification and/or designation reports and maps and adopting statements of policy in accordance with the SMARA, the lead agency's mineral resource management policies are required to include implementation procedures for recognizing and protecting mineral resources. These implementation procedures must include the following measures: (1) reference in the general plan of the location of identified mineral deposits and a discussion of those areas targeted for conservation and possible future extraction by the lead agency; and (2) use of overlay maps or inclusion of information on any appropriate planning maps to clearly delineate identified mineral deposits and those areas targeted by the lead agency for conservation and possible future extraction. Pursuant to Section 3676 of the CCR, implementation shall also include at least one of the following: (1) use of special-purpose overlay zones, mineral resource/open space zoning, or any other appropriate zoning that identifies the presence of identified mineral deposits and restricts the encroachment of incompatible land uses in those areas that are to be conserved; (2) record, on property titles in the affected mineral resource areas, a notice identifying the presence of identified mineral deposits; and/or (3) impose conditions upon incompatible land uses in and surrounding areas containing identified mineral deposits for the purpose of mitigating the significant land-use conflicts prior to approving a use that would otherwise be incompatible with mineral extraction.

The SMGB has developed land-use categories to guide local governments in establishing land uses on or adjacent to lands that have been designated as regionally significant. These land-use categories are as follows: (1) Incompatible – Land uses that are inherently incompatible with mining and/or that require high public or private investment in structures, land improvements, and landscaping and that would prevent mining because of the higher elevated value of the land and its improvements; examples of such uses included high-density residential, low-density residential with high unit value, public facilities, intensive industrial, and commercial; (2) Compatible – Land uses inherently compatible with mining and/or that require a low public or private investment in structures, land improvements, and landscaping and that would allow mining because of the low economic value of the land and its improvements; examples of such uses include very low-density residential, extensive industrial, public/commercial recreation, agricultural, silvicultural, grazing, and open space; (3) Interim – Land uses that require structures, land

land-use decisions are required to be in accordance with its mineral resource management policies. Each agency must balance mineral value against alternative land uses and consider the importance of the designated resources to their market as a whole and not merely the agency's own jurisdictional area.

With the exception of the "Sycamore Creek East" (Sycamore Flat) and "Sycamore Creek West" (Sycamore Canyon) areas, which are State-designated "MRZ-3," the project site is located within a State-designated "MRZ-2" zone.[208] Similarly, the area where the Cemex USA's Lytle Creek Plant is located within a State-designated "MRZ-2" zone.

As indicated by the California Department of Conservation, specific land uses may be "generally incompatible" with mining and are excluded from State-designated Aggregate Resource Areas (ARAs). ARAs are areas classified as "MRZ-2a"[209] or "MRZ-2b"[210] for construction aggregate that have current land uses which are similar to those areas which have been mined in the past. The purpose of determining ARAs is to provide a semi-quantified estimate of construction aggregate resources which are likely to be available to satisfy society's needs during the 50-year period following the classification of an area. The establishment of ARAs "in no way infringes on the authority of the local governments to make land-use decisions."[211]

To organize the volume calculations of the aggregate resources and to inform the public about the resources within specific land-use areas, the State Geologist has utilized the concept of "sectors" to identify those "MRZ-2" areas that meet the SMGB's guidelines as eligible to be considered for designation as having regional or Statewide significance. Each sector is a part of the non-urbanized "MRZ-2" land wherein the geometrical configuration and material content of the deposit are fairly uniform, so that tonnages of the aggregate resource present can be estimated with some reliability. Some sectors that have been subdivided by highways and other intervening developments have been given sub-sector numbers for ease of identifying individual areas.[212] As indicated in the City General Plan, excluding the Sycamore Flat and Sycamore Canyon areas, a substantial portion of the project site located to the south of the I-15 Freeway is designated "Sector B-5."[213]

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improvements, and landscaping of a limited useful life and, from an economic and political standpoint, can be converted to mining at the end of that limited life (Source: California Department of Conservation, Division of Mines and Geology, Designation of Regionally Significant Construction Aggregate Resource Areas in the Claremont-Upland and San Bernardino Production-Consumption Regions, SMARA Designation Report No. 5, January 1987, p. 6).

[208]/ California Department of Conservation, Division of Mines and Geology, Mineral Land Classification of the Greater Los Angeles Area, Special Report 142, Part VII, 1987, Plate 7-2.

[209]/ Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. "MRZ-2" is divided on the basis of both degree of knowledge and economic factors. Areas classified "MRZ-2a" contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the "MRZ-2a" category is of prime importance because it contains known economic mineral deposits.

[210]/ Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified "MRZ-2b" contain discovered mineral deposits that are significant inferred resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration work could result in upgrading areas classified "MRZ-2b" to "MRZ-2a."

[211]/ *Op. Cit*. Guidelines for Classification and Designation of Mineral Lands, p. 6.

[212]/ California Department of Conservation, Division of Mines and Geology, Mineral Land Classification of the Greater Los Angeles Area, Special Report 143, Part VII, 1987, pp. 22-2.

[213]/ *Op. Cit.*, City of Rialto General Plan, Chapter X (Conservation), Figure X-2.

As indicated by the California Department of Conservation: "The following specific land uses are considered to be generally incompatible with mining and will be excluded from sectors. Mineral resource areas containing land uses not specifically listed will be considered for sectorization. The criteria are to be applied only to lands classified as MRZ-2. There are two general categories of exclusion: (I) Economic Exclusions, and (II) Social Exclusions. These exclusions will be applied to land uses that exist at the time the classification report is being prepared. The exclusions will not be applied to proposed or planned land uses. (I) Economic Exclusions – Specific excluded land uses are: (1) Residential areas; (2) Commercial areas with land improvements (buildings); (3) Industrial areas (buildings and adjacent needed storage and parking facilities); (4) Major public or private engineering projects, including: (a) canals, (b) freeways, (c) bridges, (d) airports and associated developments such as parking lots, (e) dams, (f) railroads, (g) major pipelines, (h) major power transmission lines. (II) Social Exclusions – Specific excluded land use are: (1) Cemeteries; (2) Geologic Scientific Zones; (3) Public parks, developed historic sites and structures, and public recreation area of all types; (4) Public or private schools, institutions, hospitals, and prisons, including adjacent grounds and related structures; (5) Military bases and reservations."[214]

As indicated in the City General Plan, it is the adopted goal of the City to "[e]liminate all negative impacts of mining activities on the citizens of Rialto while complying with the provisions of the California Mining and Reclamation Act of 1975."[215] It is further the policy of the City to "[c]ompile and maintain maps and descriptions of potential mineral resources as a basis for land use policy and regulation and compatibility with State designated mineral resource sectors" and "[e]stablish buffer zones of compatible uses adjacent to mineral extraction areas, such uses may include industry.[216]

Although not directly applicable to the proposed LCRSP, a landscape buffer zone was established as part of the permitting of residential uses on the LCNPD property. In recognition of potential conflicts inherent in these adjoining land uses, the LCNPD design included specific design features formulated to minimize those conflicts to the maximum extent feasible. A 40-foot wide landscaped earthen berm was constructed both upon the LCNPD site and extending onto the Cemex USA property. Those residential lots backing onto the existing surface mine were provided with additional depth so as to accommodate a segment of that berm within each individual lot's boundaries. A 6-foot high block wall was then to be constructed along or directly adjacent to the property boundaries, thus effectively increasing the physical barrier between these two uses to a combined height of twenty feet (i.e., 14-foot high berm and 6-foot high wall).

Within the Cemex USA property, an 84-foot landscaped buffer zone was established within which a multi-purpose trail would be provided and maintained by Cemex USA. At the southern edge of this buffer zone, an additional 8-foot tall fence was provided. The nearest edge of mining operations (i.e., the bluff below which mining operations occur) extends an additional 20 feet beyond the fence line. The total separation distance between useable (level) rear yard area for the nearest residential dwelling units to the

[214]/ *Op. Cit*., Mineral Land Classification of the Greater Los Angeles Area, Special Report 143, Part VII, Appendix, pp. 49-50; State Mining and Geology Board, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication No. 117, March 13, 1997, p. 7.

[215]/ *Op. Cit*., City of Rialto General Plan, Chapter X: Conservation, Goal 4.1, p. X-5.

[216]/ *Ibid*., Policies 4.1.2 and 4.1.6, pp. X-5 and X-7.

active mine face is about 149 feet. An existing agreement is in place regarding the construction and maintenance of that LCNPD buffer zone. This agreement does not currently apply to the proposed LCRSP.

Independent of any regional and/or County goals, the City does not have any adopted goals or policies promoting the development of new mineral extraction activities within the community. Similarly, the City General Plan does not preclude development in areas proximal to existing and/or former mineral resource sites. It is the policy of the City to "[a]llow the phasing of other planned land uses on large mineral resource sites on that part of the site on which mining is not anticipated, or on that part of the site which mining is completed and reclamation has been established."[217] It is further the policy of the City to "[p]ermit plant nurseries, recreational open space and other temporary uses in State designated mineral resource sectors prior to and pending their development for mineral extraction."[218]

The City General Plan MEIR notes that "[m]ineral operations may not be compatible with certain land use types (primarily residential)."[219] Pending the cessation of mining operations on properties abutting the project site, in recognition of the potential short-term land-use conflicts that could occur should new proximal residential development in Neighborhoods II and III occur concurrently with the continued operation of existing mining operations, the proposed LCRSP permits residential walls up to ten feet in height in areas abutting mining operations or other light industrial uses. Although the proposed LCRSP does not provide, it does not exclude the construction of a landscaped berm in addition to the placement of a wall to provide additional separation between proposed on-site residential uses and Cemex USA's operations.

A recommended mitigation measure (Mitigation Measure 1-6) has been formulated to ensure that appropriate separation between these uses is provided in connection with approval of any "B" level tentative subdivision maps for residential uses adjoining active mining areas. With the implementation of that measure and the project design features outlined in the LCRSP, potential land-use compatibility impacts would be reduced to a less-than-significant level by ensuring that adequate buffers between the two uses will be maintained.

- **Cemex USA Mitigation Area**. Cemex USA has set aside three areas on its Lytle Creek Plant property, totaling approximately 154 acres, to provide biological mitigation for the impacts associated with its permitted mining operations. Cemex USA's obligations with regards to these three areas differ and are briefly described below.

  - ◊ **Mitigation Area 1** (37 acres). In order to help preserve RAFSS habitat and conserve sensitive species (such as the SBKR and Los Angeles pocket mouse, San Diego horned lizard, and the coastal western whiptail) Cemex USA executed a permanent conservation easement over Area 1 in favor of the California Department of Fish and Game (CDFG). Cemex USA maintains a fence around Area 1 to protect its conservation value.

[217]/ *Ibid*., Chapter II: Land Use, Policy 4.1.2.2, p. II-24 and II-25.
[218]/ *Ibid*., Chapter X: Conservation, Policy 4.1.3, p. X-5.
[219]/ *Op. Cit*., Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, p. 4.4-32.

◊ **Mitigation Area 2** (5 acres). Area 2 is located adjacent to the northern boundary of Area 1 and provides additional habitat for SBKR. So as to avoid any "take" of the SBKR in this area, Cemex USA has agreed to avoid mining impacts to this area under its April 19, 2001 reclamation plan. There is no conservation easement granted or recorded in Area 2.

◊ **Mitigation Area 3** (112 acres). Area 3, which is located in Lytle Creek Wash primarily in the area of the active channel, is subject to a temporary conservation easement in favor of the County which expires at such time as the reclamation of the mining area has been completed. The southeast boundary of Area 3 abuts the southwest boundary of Area 1, forming a contiguous open space area. The purpose of this conservation easement is to temporarily retain the property in a natural condition, subject to existing easements of record and existing rights of third parties in the property (such as prior easements for flood control purposes and water recharge). Cemex USA is obligated to take reasonable actions to prevent unlawful entry and trespass by persons who may harm or degrade the conservation values of Area 3.

- **Vulcan Materials Cajon Creek Habitat Conservation Management Area**. As noted by the USFWS: "The Western Division of the Vulcan Materials Company established the Cajon Creek Conservation Bank (also known as the CalMat conservation bank) in 1996 and 1997 to help conserve populations of 24 species associated with alluvial fan sage scrub habitat, including the kangaroo rat."[220] The Cajon Creek Habitat Conservation Management Area (HCMA) includes 1,378 acres to offset approximately 2,270 acres of sand and gravel mining proposed within and adjacent to Cajon Creek. "Of the 1,378 acres covered by the Cajon Creek HCMA, approximately 610 acres make up the Cajon Creek Conservation Bank established to conserve populations of 24 species associated with the alluvial fan scrub ecosystem including the SBKR. The remaining 768 acres have been set aside as permanent conservation lands. These conservation lands will be managed in perpetuity for alluvial fan scrub habitat and associated listed species (including the SBKR) pursuant to the Habitat Enhancement and Management Plan (HEMP) and associated Memorandum of Understanding and Implementation Agreement for the Cajon Creek Habitat Management Area."[221]

- **Glen Helen Regional Park**. East of the LCRSP (Neighborhood I) area and the I-15 Freeway is the area of Glen Helen Regional Park (GHRP). Areas of active recreational use within GHRP are located predominately in the northeastern portion of that County-owned and operated facility. Active and passive recreational areas are located within the park boundaries, directly east of the Neighborhood I. Although residential development proposed adjacent to the park may diminish a user's perception of isolation, the project will neither encroach into the GHRP (other than as required for the construction of the roadways accessing Neighborhood I) nor necessitate further restriction on the type or intensity of uses now authorized therein. Proximal residential development would logically increase park use and increase demand on park services.

[220]/ United States Fish and Wildlife Service (Industrial Economics, Incorporated), Draft Economic Analysis of Critical Habitat Designation for the San Bernardino Kangaroo Rat, July 2001, pp. 54-55.

[221]/ United States Fish and Wildlife Service (Berkeley Economic Consulting), Draft Economic Analysis of Critical Habitat Designation for San Bernardino Kangaroo Rat, San Bernardino and Riverside Counties, California, February 6, 2008, p. A-2.

Associated impacts on the County are separately addressed in Section 4.9 (Public Services and Recreation) herein.

GHRP is neither intended to serve as nor is being operated as an open-space preserve or wildlife habitat. GHRP is operated as a facility assessable to County residents and others for active and passive recreational pursuits. Since GHRP has been designed and is intended for public use, contiguous residential development is not incompatible with adjacent parklands. Since park agencies provide facilities in response to declarations of public need, interest, and demand, even if not explicitly stated, increased park use is the goal of park managers.

The Hyundai Pavilion at Glen Helen (formerly the Glen Helen Blockbuster Pavilion) is located to the south and east of Neighborhood I. That outdoor entertainment venue contains evening concerts with amplified music. Similarly, other outdoor events and activities are regularly scheduled within the park area. Those activities are subject to permit conditions designed to eliminate or substantially limit the creation and conveyance of adverse environmental effects extending beyond the park's boundaries. Future uses authorized within the park will, therefore, not be expected to increase existing or introduce new impacts that would create a compatibility conflict with the proposed residential development. An open-space buffer is proposed along the northern portion of this eastern part of Neighborhood I, providing physical separation between the project's proposed residential uses and the Hyundai Pavilion at Glen Helen.

Since the impacts resulting from the project's approval must be examined both in light of existing and those future uses that may occur adjacent and proximal to the site, reasonable estimates must be made concerning the potential character of those future uses. Both the Sycamore Flat property and the northern portion of Lytle Creek North were included within the planning area addressed in the GHRP master plan[222] as areas to be acquired in the future for park expansion. Since that time the "Glen Helen Specific Plan" and the LCNPD were adopted by the County, substantially limiting future opportunities for County acquisition and incorporation into the park's acreage.

Since the proposed LCRSP's Neighborhood I would be within the jurisdiction of the City, should the County subsequently consider the expansion of GHRP acreage to include a portion of the LCRSP property, unless undertaken through the County's eminent domain authority, an agreement between the City, the County, and the Applicant would be required in order to effectuate that action.

South of the I-15 Freeway, a substantial portion of Neighborhood I is planned either as "Open Space (OS)" (approximately 176 acres) or as "Open Space/Recreation (OS/R)" (approximately 11 acres). Those uses, specifically the approximately 44-acre area comprising PA 7, separates the planned low-density residential development areas within PA 8 (designated "Single-Family Residential 1 [SFR-1]") from the area of GHRP. Clearly, open space use is compatible with other open space areas, including park use.

- **Lytle Creek North Planned Development** (Tract No. 15900). Located to the south and west of Neighborhood IV (south of the I-15-Freeway), east of Neighborhood III (east of

[222]/ San Bernardino County, Glen Helen Regional Park Master Plan and Final Environmental Impact Report, SCH No. 8601603, June 1986; San Bernardino County, Addendum to the Final Environmental Impact Report (SCH No. 8601603) for Glen Helen Regional Park Master Plan, October 1993.

Lytle Creek Wash), and north of Neighborhood II is the County-approved LCNPD (Rosena Ranch). As illustrated in Figure 4.1-14 (Lytle Creek North Planned Development Project Master Plan), the Lytle Creek North property is being developed in accordance with an approved master plan. A total of 2,081 dwelling units, including associated infrastructure and public facilities, are presently being developed within that portion of the LCNPD located to the south of the I-15 Freeway.

Both the County-approved LCNPD and the proposed LCRSP are primarily residential in character (although the existing land-use designation for that portion of the LCNPD that is now part of the LCRSP is primarily commercial). Authorized residential densities within the proposed LCNPD range from 2 to 35 dwelling units per acre. As proposed, residential densities in Neighborhood I range from "Single-Family Residential 1 (SFR-1) (2-5 du/ac)" to "Single-Family Residential 3 (SFR-3) (8-14 du/ac)." Those areas proposed for SFR-3 designation would be separated from the County-approved LCNPD (Rosena Ranch) by the I-15 Freeway, such that the higher density residential areas included in the proposed LCRSP are not contiguous with the LCNPD project area.

Within Neighborhood I, those residentially-designated areas located to the north of the I-15 Freeway also have a GW Overlay designation. Those residential areas located to the south of the I-15 Freeway do not possess the GW Overlay designation. As a result, should the general warehousing overlay be applied, those land uses would be separated from the LCNPD (Rosena Ranch) by the existing freeway. The freeway right-of-way offers substantial separation distances between residential land uses within the LCNPD and potential general warehousing activities within the area of Neighborhood I.

Based on the existence of the I-15 Freeway and Lytle Creek Wash, the two projects share only a relatively short common boundary. In the "Sycamore Creek West" (Sycamore Canyon) area, a LCRSP-proposed "Open Space/Recreation (OS/R)" area will adjoin a LCNPD-adopted "Open Space (OS)" area, thus linking the conservation areas located within the two development project. Additionally, a LCNPD-adopted "Single Family Residential (SF-7) (7,200 sq. ft. min.)" area will be removed from the LCNSP boundaries, annexed into the City, and expanded into a larger "Single-Family Residential 1 (SFR-1) (2-5 du/ac)" residential development. Based, in part, on the compatibility of the land-use types and densities within the LCNPD and LCRSP areas, the two projects and the permitted and planned development therein appear inherently compatible.

- **Las Colinas**. The Las Colinas area will remain separated from the LCRSP area by the Riverside Avenue right-of-way. Within that neighborhood, no residential uses currently front along Riverside Avenue. An existing masonry block wall and landscaped parkway separate the existing residential uses from Riverside Avenue.

  Proposed land uses to the east of the Las Colinas neighborhood are primarily lower density residential, including "Single-Family Residential 1 (SRF-1) (2-5 du/ac)" and "Single-Family Residential 2 (SFR-2) (5-8 du/ac)." Other proposed land uses include "Elementary School (ES)," "Elementary School/Middle School (ES/MS)," and "Open Space/Joint Use (OS/JU)." Along Riverside Avenue, north of Redwood Avenue, the proposed LCRSP includes a VC Overlay (PAs 35 and 42), indicating that commercial uses may be developed in lieu of residential uses within those planning areas.

In addition, further to the south, south of Las Colinas, a number of additional "Village Center Commercial (VC)" districts would be established. Land uses authorized within the "Village Center Commercial (VC)" zone are inherently compatible with those uses found within the Las Colinas neighborhood. The "Village Center Commercial (VC)" zone will be separated from those existing residential uses located to the west of Riverside Avenue by that road's right-of-way, as enhanced through the parkway improvements now proposed along Riverside Avenue.

- **County Club Estates**. As proposed, with the exception of those properties that abut PA 91 (proposed "Village Center Commercial [VC]"), all existing residential land-uses located within County Club Estates that now abutting the El Rancho Verde Royal Vista Golf Course or other open space areas will continue to abut either the reconfigured golf course or one of the following adjoining residential land uses: "Singl-Family Residential 1 (SFR-1) (2-5 du/ac)," "Single-Family Residential 3 (SFR 3) (8-14 du/ac)", or "High Density Residential (HDR) (25-35 du/ac)." As proposed, the "High Density Residential (HDR)" area located in Neighborhood II (PA 92) also has a VC Overlay designation. As such, with the possible exception of those few properties where an existing residential use may abut a future commercial use, post-project land uses will remain compatible with existing residential land use within the County Club Estates area.

  In recognition of the potential land-use compatibility impacts associated with both the placement of certain permitted land uses adjacent to other existing uses within the proposed LCRSP area and, specifically, with regards to those future commercial uses that may be located adjacent to existing residential uses, a mitigation measure (Mitigation Measure 1-1) is recommended which, when implemented, will reduce potential land-use compatibility conflicts associated with the contiguous placement of such uses to a less-than-significant level.

- **San Bernardino County Sheriff's Department Woollystar Preserve**. This approximately 150-acre area was set aside as a biological mitigation area as part of the master plan for the County Sheriff's Department facility at Glen Helen. The area is zoned "Open Space/Habitat Preserve" under the County-adopted GHSP. The property contains habitat which capable of supporting woollystars and other species associated with RAFSS habitat. Currently, there is no on-going biological management of this property for woollystar or for any other species.

  The southwesterly boundary of this conservation area is adjacent to the proposed conservation area in Neighborhood II. As such, the proposed LCRSP is proposing compatible land uses adjacent to the County Sheriff's Department woolystar preserve.

- **San Bernardino County Flood Control Conservation Area**. The GHSP identifies 475-acres in Cajon Creek, owned by the San Bernardino County Flood Control District (SBCFCD), that are expected to be able to contribute to biological conservation while continuing to serve the flood control needs of the County and the SBCFCD. Currently, there are no conservation easements or deed restrictions for biological conservation purposes recorded on these lands. These lands may, however, have existing easements for flood control and water recharge purposes.

  It is envisioned by the GHSP that the SBCFCD could manage or allow for the management of these 475 acres for biological resource values, provided that the

SBCFCD would be allowed to continue to conduct activities on the property necessary to address flood control and water recharge needs. The SBCFCD, however, is not currently monitoring or managing the property for sensitive biological resources and, at present, the SBCFCD is not under any known obligation to do so.

The proposed conservation open space within Neighborhood II is in the vicinity of these SBCFCD lands but separated from them by the Vulcan Materials Company's Cajon Creek Habitat Conservation Management Area. The LCRSP is not seen as proposing land uses that are inconsistent with the uses expected for these SBCFCD lands.

- **Fontana Water District Infiltration Ponds**. Four ground water infiltration ponds, used by the Fontana Water District, are located in Neighborhood II (PAs 82, 91, and 92). The areas in which these infiltration ponds are located are proposed for "Single-Family Residential 3 (SFR-3) (8-14 du/ac)," "High Density Residential (HDR) (25-35 du/ac)," and "Village Center Commercial (VC)" development and, upon implementation of the proposed project, will no longer be used for ground water infiltration. As proposed, these ponds will be relocated into the golf course redesign in Neighborhood II.

San Bernardino National Forest

Although a portion of Neighborhood I extends into the Congressional boundaries of the San Bernardino National Forest, because the proposed development area is privately owned, no portion of the proposed LCRSP is subject to Forest Service jurisdiction.

Abutting a substantial portion of Neighborhoods I and IV is the National Forest boundary. Although various resource management opportunities may exist and may be authorized under Forest Service policies, with regards to Neighborhood I, based on the "Partial Retention" designation of adjoining NFS lands, no or only minimal future development can be anticipated within that portion of the SBNF located proximate to the LCRSP project site. The Forest Service's plans to retain the rural character of adjoining forest lands is reflected by the USFS' integrated management direction to "[r]etain the wilderness quality of the area during the planning period."[223] In recognition of this policy declaration, any further intensification of existing uses within the Forest and/or introduction of new proximal uses would be speculative and, therefore, beyond the scope of CEQA. As a result, those National Forest areas that adjoin or are located proximate to the Neighborhood I are assumed to generally remain in their present form and no intensive development or other substantial intensification of existing National Forest uses and/or activities is assumed thereupon.

That portion of the SBNF abutting Neighborhood IV has been designated "Developed Area Interface (DAI)" by the Forest Service. Because it provides a transitional buffer, abutting "Open Space (OS)" areas in Neighborhood IV would be deemed compatible with the Forest Service's "Developed Area Interface (DAI)" designation.

With the exception of project-related and cumulative traffic along Glen Helen Parkway, Lytle Creek Road, and Sierra Avenue, the proposed LCRSP's inclusion of residential and non-residential development located adjacent to the National Forest will not impose any substantial operational impacts affecting existing forest uses or foreclose future options affecting near-site federal lands. Similarly, with the exception of minimal noise and light intrusion, increased traffic

[223]/ *Op. Cit*., San Bernardino Forest Land and Resource Management Plan, p. 4-28.

along those public roadways located adjacent to the National Forest will not further encroach into or upon federal lands, restrict access to public lands, or limit further opportunities available to the USFS concerning the use of those federal lands.

As proposed, "Single-Family Residential 1 (SFR-1) (2-5 du/ac)" and "Single-Family Residential 3 (SFR-3) (8-14 du/ac)," with a GW Overlay, are proposed in the northern portions of Neighborhood I. Similarly, "Medium Density Residential (MDR) (14-28 du/ac)," "Village Center Commercial (VC)," and a GW Overlay, are proposed along Sierra Avenue and Lytle Creek Road. The introduction of new residential, commercial, and general warehousing uses proximate to the National Forest may increase the level of both authorized and unauthorized park use, as well as introduce other exogenous impacts, including increased night lighting, noise, and predation by household pets and feral cats.[224] Within Neighborhood IV, abutting lands within the proposed LCRSP are designed "Open Space (OS)."

Adjacent to the LCRSP property is an existing USFS fire station (Lytle Creek Ranger Station). While the station is located within the National Forest's boundaries, vehicular access to that facility is obtained from Glen Helen Parkway through an easement located upon the project site. "Open Space (OS) is now proposed on lands located directly adjacent to that easement (within PA 14). Sine no residential or non-residential development is proposed adjacent to that easement, implementation of the proposed LCRSP would not inhibit or otherwise restrict access to that facility.

In order to document existing easements and avoid encroachment of private activities onto National Forest lands, it is the policy of the USFS to require developers to incorporate land-line surveys and greenbelt concepts for projects proposed adjacent to National Forest System (NFS) lands. Compliance with those policies will ensure that physical access to National Forest lands is maintained at all times and private development activities do not physically encroach onto federal lands.

A project will normally be considered to produce a significant or potentially significant land-use impact if the project were to conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. Although the USFS may have no discretionary authority over the project site, as an adjoining property owner that may be adversely impacted by any encroachment onto NFS lands, uses and activities conducted on the project site could potentially impact the forest plan's implementation. For example, the City of Rialto's approval of the project adjacent to the National Forest may result in a potentially significant impact due to an incompatibility of adjacent land uses and inherently contradictory land-use policy issues. Although the proposed development will not physically intrude upon federal lands (excluding lands designated "Open Space [OS]"), the intensity of LCRSP-authorized development ("Single-Family Residential 3" and GW Overlay) would appear to contrast with the Forest Service's goal of "Partial Retention" within the SBNF.

Private lands located adjacent to National Forest lands are considered part of the "wildland urban interface" (WUI) of "communities in the vicinity of federal lands at risk from wildfire."[225] The Forest Service defines "wildland urban interface zones" as "those areas of resident population at imminent risk from wildfire, and human developments having special significance,

[224]/ Any consideration of unauthorized use of National Forest lands would, however, be speculative since it would assume an illegal activity or a violation of USFS rules and regulations.
[225]/ 66 FR 751 (January 4, 2001) and 66 FR 43384 (August 17, 2001).

including critical communication sites, municipal watersheds, high voltage transmission lines, observatories, church camps, research facilities, and other structures that if destroyed by fire, would result in hardships to communities. These areas encompass not only the sites themselves, but also the continuous slopes and fuels that lead directly to the sites, regardless of the distance involved."[226] WUIs are separately addressed in Section 4.9 (Public Services and Recreation) herein.

As stipulated under Section 82.13.060(b)(7)(C) (Setback Requirements – National Forest Boundary) in Chapter 82.13 (Fire Safety Overlay) of the County Development Code), each structure located on a lot that was created after April 12, 2007 and abuts a boundary of the National Forest shall be set back at least 100 feet from the boundary. However, for the area within the County-approved LCNPD, as indicated in the Lytle Creek North FEIR, the following land-use provision was adopted: "Prior to the approval of any site development plans for any future uses proposed in Planning Areas 1, 2, and 3, the Applicant shall submit to the United States Forest Service a land line survey precisely delineating the boundaries of the San Bernardino National Forest. A landscaped setback of not less than 25 feet shall be established and maintained along the Forest boundaries. The landscape palette shall seek to maximize the use of native, drought-tolerant, and fire-resistant plants."[227] "Planning Areas 1, 2, and 3," as identified in the County-approved LCNPD, are identified as PAs 14-15 in the proposed LCRSP. Under the proposed project, PA 14 would be designated "Open Space (OS)" and, therefore, setback provisions would not specifically apply.[228]

In order to reduce impacts on NFS lands and potential conflicts between development activities conducted outside the National Forest and the USFS' resource management plans, a number of mitigation measures has been formulated requiring both a land-line survey which would allow for a precise delineation of the boundaries of the SBNF relative to the project boundaries (Mitigation Measure 1-7) and specifying a development setback from NFS lands consistent with the provisions and intent of the County Development Code and the LCNPD (Mitigation Measure 1-8). Implementation of those mitigation measures would reduce any potential land-use conflicts to a less-than-significant level.

Other Resource Management Plans

The project's compatibility and consistency with other resource management plans that, in the Lead Agency's judgment, may be applicable to the proposed project and/or to the project site are addressed under the corresponding topical issues most germane to an understanding of those plans and are not again repeated herein.

Infrastructure Availability

Environmental Impact 1-4*. Proposed development activities upon the LCRSP property will be phased with project build-out estimated to occur by 2030 or as required by an*

[226]/ United States Forest Service, Forest Service Manual 5140, R3 Supplement No. 5100-2000-2.

[227]/ County of San Bernardino (L.D. King, Inc.), Final Environmental Impact Report – Lytle Creek North Planned Development Project, SCH No. 99051015, certified December 18, 2001, Mitigation Measure 4.1.2.

[228]/ In assessing the potential environmental impacts associated with the proposed LCRSP, the Lead Agency considered the mitigation measures adopted by the County and contained in the County-certified Lytle Creek North FEIR. Unless otherwise noted herein, those mitigation measures adopted by the County for the LCNPD (Tract 15900) are neither incorporated herein nor made a condition of project approval for those portions of the LCNPD which have been included in the proposed LCRSP.

approved development agreement. It is estimated that construction will begin in Neighborhood I, followed by development in Neighborhoods II, III, and IV. Unless requisite infrastructure systems are sized to accommodate overall demand and operational prior to the commencement of each phase, infrastructure constraints and/or other unplanned environmental consequences may arise.

***Preliminary Determination 1-4**. Potentially significant unless mitigation incorporated.*[229]

As proposed, subject to the approval of a site plan by the Director and the City Engineer, the proposed LCRSP authorizes modifications to the proposed project allowing the Applicant to modify and adjust land uses and transfer residential units and non-residential square footage[230] internally within the project boundaries subject to specific criteria and conditions (e.g., the number of daily trips do not exceed approved maximums).

Any subsequent site plan submitted pursuant to that authorization must depict the location of all land uses and the relationships of uses to one another. In evaluating each such site plan, all of the following conditions must be met: (1) the maximum total number of units within the proposed LCRSP shall not exceed the cap of 8,407 dwelling units after the density transfer; (2) dwelling units may be transferred within and between the residential land-use categories (SFR-1, SFR-2, SFR-3, MFD, and HDR); (3) the total amount of undisturbed (natural) open space shall be approximately equal to that originally approved by the City; (4) the total amount of land devoted to parks, trails, greenbelts, and recreation areas shall not be less than three acres per 1,000 persons; (5) the circulation plan network shall remain essentially the same, except for minor variations; and (6) the public health, safety, and welfare shall not be jeopardized by the proposed modifications.

In recognition of the potential seismic and wildland fire hazards that may exist on and near the project site, the proposed sequencing of land uses and infrastructure improvements may represent a potentially significant environmental effect. Requisite infrastructure must predate the uses for which those services and systems are provided. When development precedes the availability of adequate support services and systems, service levels may either diminish or public health and safety risks may increase to unacceptable levels.

Although the timing of certain components of the LCRSP project cannot be precisely defined because they may be subject to the above conditions and to market variables, no development activities can proceed pending the provision of adequate access and requisite services and

[229]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) potentially degrade the quality of the environment; (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly; and (3) substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect.

[230]/ Under the Applicant's proposed "transfer of development units between planning areas" concept, dwelling units and non-residential square footage could be transferred within and between any PA in Neighborhoods II, and III, except for those designated "Open Space," provided that the total number of projected AM and PM daily vehicle trips for Neighborhoods II and III do not exceed 12,483 projected vehicle trips. Any "transfer of development units" between neighborhoods and PAs would need to conform to the following additional standards: (1) grading and landform alteration would substantially comply with that previously approved for the LCRSP; and (2) no new significant environmental impacts, not previously assessed in the EIR would, result from the transfer. Transfer of dwelling units or mixed-use square footage within or between neighborhoods and PAs, when conducted in accordance to the provisions of the LCRSP, would not constitute or require a LCRSP amendment.

systems. Except as otherwise noted, the project's "backbone" system will be constructed in phases. The phasing of each of the project's major systems is discussed below.

- **Street improvements**. With the exception of those local and collector streets in Neighborhood II which will be owned and maintained by the master homeowners' association governing that neighborhood and those roadways subject to the jurisdiction of the California Department of Transportation (Caltrans), all streets will be owned, operated, and maintained by City or the County based on the jurisdiction in which those roadways are located.

  - ◊ **Neighborhood I**. Major street (e.g., Clearwater Parkway and Glen Helen Parkway) infrastructure is currently constructed and operational. Local streets will be constructed concurrent with the development of individual planning areas.

    Unless a different payment schedule is specified by the City, applicable transportation-related mitigation fees will be paid at the time when certificates of occupancy are given for each of the respective residential units and non-residential buildings subject to the payment of those fees. Specified street and intersection improvements will be constructed as dictated by the conditions of approval of each underlying "B" level tentative subdivision map.

  - ◊ **Neighborhoods II, III, and IV**. Riverside Avenue will be widened and local streets will be constructed in phases, concurrent with the individual planning areas as they are developed.

    Unless a different payment schedule is specified by the City, applicable transportation-related mitigation fees will be paid at the time when certificates of occupancy is given for each of the respective residential units and non-residential buildings subject to the payment of those fees. Specified street and intersection improvements will be constructed as dictated by the conditions of approval of each underlying "B" level tentative subdivision map.

- **Water delivery system improvements**. The backbone water facilities and infrastructure shall be owned, operated, and maintained by the WVWD. Additional infrastructure will be constructed in phases to match the needs of the various project phases. Connections (tie-ins) to the existing infrastructure will be constructed concurrent with the development of individual planning areas.

  - ◊ **Neighborhood I**. Major backbone water infrastructure is currently constructed and operational. An additional 6.5 million gallon (MG) potable water reservoir and other water delivery system improvements, as needed to meet identified fire flow requirements, will be constructed by the WVWD prior to issuance of certificates of occupancy. This 6.5-MG reservoir constitutes a County-imposed obligation on the LCNPD (Rosena Ranch) and is scheduled to be constructed prior to the 1,900th certificate of occupancy being issued in the LCNPD. This reservoir is neither an infrastructure improvement to be provided by the Applicant nor currently an obligation upon the proposed LCRSP.

    Due to the proximity of the proposed LCRSP to the Lytle Creek Groundwater Basin, the use of reclaimed or grey water has been determined to not be a

feasible alternative by the SARWQCB. With the exception of Neighborhood II, since the City has no existing facilities within the project limits to provide reclaimed water, the Applicant does not anticipate distribution of and internal use of reclaimed water in Neighborhood I in the near term. No infrastructure improvement plans are currently presented in the proposed LCRSP to accommodate any future availability of reclaimed water in Neighborhood I.

When the subsequent underlying "B" level tentative subdivision maps are approved and developed, requisite improvements will be made to the master water system as dictated in the conditions of approval and as determined by the City and WVWD in order to adequately supply water and fire protection for each underlying tentative subdivision maps.

◊ **Neighborhoods II, III, and IV**. Some major backbone water infrastructure (along Riverside Avenue) is currently constructed and is presently operational. Additional infrastructure will be constructed in phases to match the needs of the various phases of construction. Additional water reservoirs, booster stations, and other infrastructure, as required to meet identified fire flow requirements, will be constructed by the WVWD prior to issuance of certificates of occupancy.

To ensure service availability, at the time the underlying "B" level tentative subdivision maps are approved and developed, prior to the issuance of any associated grading permits, required facility fees shall be paid by the Applicant to the WVWD to allow the construction of requisite facilities in a timely manner.

Currently, the need for reclaimed water within Neighborhood II is offset through an agreement with the WVWD who supplies the existing El Rancho Verde Royal Vista Golf Course with surplus reuse water from its back wash operations at the Oliver P. Roemer WTP, located south of the intersection of Linden and Riverside Avenues. The use of this water falls within the guidelines established by the SARWQCB for spreading within the Lytle Creek watershed.

Due to the proximity of the LCRSP to the Lytle Creek Groundwater Basin, the use of reclaimed or grey water has been determined to not be a feasible alternative by the SARWQCB. The City is, however, considering several alternatives to using reuse water from the Oliver P. Roemer WTP for golf course irrigation. One alternative being examined by the City would be to use reclaimed water that may be available from a City-identified alternate scalping plant within the southernmost section of Neighborhood II which would replace the surplus reuse water from the WVWD and would be contained within the limits of the proposed golf course itself. If this alternative is implemented, then reuse water from the Oliver P. Roemer WTP would be used for ground water recharge within the LCRSP site. Another alternative identified by the City would be to convey all sewer effluent to the downstream wastewater treatment plant for treatment and distribution within the southern section of the City where existing facilities are in place. Under this alternative, irrigation and/or recharge water would be provided by the City from an existing well and pipeline adjacent to Neighborhood II to offset the loss of reclaimed water now being provided to the golf course.

With the exception of Neighborhood II, since the City has no existing facilities within the project limits to provide reclaimed water, the Applicant does not anticipate distribution of and internal use of reclaimed water in Neighborhoods III and IV in the near term. No infrastructure improvement plans are currently presented in the proposed LCRSP to accommodate any future availability of reclaimed water in Neighborhoods III and IV.

When the subsequent underlying "B" level tentative subdivision maps are approved and developed, requisite improvements will be made to the master water system as dictated in the conditions of approval and as determined by the City and WVWD in order to adequately supply water and fire protection for each underlying tentative subdivision maps.

- **Sewer collection and treatment system improvements**. The backbone sewer facilities and infrastructure will be owned and operated by the City. The Lytle Creek North Wastewater Recycling Plant (18101 Institution Road, San Bernardino), constructed as part of the LCNPD, is expected to handle some of the waste from this proposed project. Additional infrastructure will be constructed in phases to match the needs of the various project phases. Connections (tie-ins) to the existing infrastructure will be constructed at the time of development of individual planning areas.

  - ◊ **Neighborhoods I and IV**. Major backbone sewer infrastructure is currently constructed and operational. Existing connection points have been provided with the development of the LCNPD and are currently in place within Clearwater Parkway, at the intersection of Clearwater Parkway and Glen Helen Parkway, near the southerly ROW of the I-15 Freeway (within "Lot D" of Tract 15900, as illustrated in Figure 4.1-14 [Lytle Creek North Planned Development – Master Plan]), and at the intersection of Pioneer Way and Sycamore Creek Drive (within Tract 15900).

  - ◊ **Neighborhoods II and III**. Some major backbone sewer infrastructure (at the Riverside Avenue/Locust Avenue intersection) is currently constructed and operational. Additional capacity will be added to the existing City of Rialto Wastewater Treatment Plant (501 E. Santa Ana Avenue, Rialto) by the City of Rialto Public Works Department to accommodate the sewage demands prior to issuance of certificates of occupancy.[231]

  Necessary off-site infrastructure improvements required to service the phasing of the proposed development will be completed prior to the City's issuance of occupancy permits for specific development projects.

- **Storm water system improvements**. The local storm drain system shall be funded and constructed by the Applicant. The regional storm drain system and flood control improvements associated with Lytle Creek will be funded and constructed by a community facilities district (CFD) or other similar mechanism. Local storm water

[231]/ Current upgrades underway at this time at the City of Rialto WTP include current technology upgrades to filtration systems that will provide for expected project flows within the near term. Long-term capacity upgrades are identified within the City's "Sewer System Master Plan." Capacity upgrades to the City's facility system will be undertaken by the City and funded through the City's impact fee program. The necessary service agreement will be provided by the City through a will-serve agreement to the project.

infrastructure will be constructed concurrent with the development of the individual planning areas.

◊ **Neighborhood I**. The master drainage improvements for Neighborhood I were constructed in 2006 as part of the LCNPD (Rosena Ranch). When the subsequent underlying "B" level tentative subdivision maps and associated localized drainage improvement plans are approved for individual planning areas, the localized drainage improvements will tie into these existing systems.

◊ **Neighborhoods II, III, and IV**. The master drainage plans for Neighborhoods II, III, and IV will be constructed as development of the underlying "B" level tentative subdivision maps and the associated drainage plans are approved and subsequently developed. Construction of storm drain improvements in Neighborhood IV will also require the removal and replacement of existing storm drain facilities located along Lytle Creek Road.

Development is initially planned to occur in Neighborhood I. There are no levee improvements to be constructed in Neighborhood I. The levee in Neighborhood II will be constructed with the approval and subsequent development of "B" level tentative subdivision maps for Neighborhood II by the City and the approval of levee improvement plans by the County. Levee improvements to be built as part of Neighborhood II include an approximately 2,000-linear foot extension of the off-site levee that will connect to the existing Cemex USA levee. Similarly, the respective levee construction for both Neighborhoods III and IV will be constructed with the approval and subsequent development of "B" level tentative subdivision maps and levee improvement plans for those neighborhoods.

- **School facilities**. The project site is located within the boundaries of three separate school districts, including the Rialto Unified School District (RUSD), Fontana Unified School District (FUSD), and San Bernardino City Unified School District (SBCUSD). Any school facility sites and/or school facilities dedicated by the Applicant will be owned, operated, and maintained by the benefiting school district.

◊ **Neighborhoods I, II, and IV**. No new school facilities are proposed within the project boundaries. For those development activities proposed in Neighborhoods I, II, and IV, the Applicant will pay applicable school impact fees and is not proposing to dedicate real property and/or construct new school facilities.

◊ **Neighborhood III**. The LCRSP has included two proposed school sites within the land plan, including an elementary school and a combined elementary and middle school. The timing and potential use of these sites will be determined by the Rialto Unified School District (RUSD).

As proposed, the project intends to satisfy its school mitigation requirements through the payment of statutory school impact fees. If the RUSD subsequently elects to acquire one or both of these school sites (or other alternative sites) for new school facilities, the RUSD will independently conduct a siting analysis and will work with the Applicant to purchase real property.

In order to allow for the creation of more useable recreational facilities for the local community, joint-use facilities are proposed in conjunction with each identified school site. Implementation would require the execution of a joint-use agreement between the Applicant, the RUSD, and the City allowing for the usage of those facilities during non-school hours. The timing of these facilities is likely dependent upon the timing of the construction of the adjoining school sites.

- **Park and open space system**. In lieu of fee credits, the Applicant is proposing to construct those parks and open space areas identified in the proposed LCRSP. It is anticipated that the terms of these fee credits will be determined in a future development agreement to be executed between the Applicant and the City.

  - ◊ **Neighborhoods I, II, III, and IV**. The parks and open space located throughout Lytle Creek Ranch, in combination with any biological mitigation, will be phased and constructed according to the development of the community.

When services and systems are provided prior to the identified need for those improvements, additional unplanned effects can surface. Should infrastructure improvements occur in a manner disconnected with the imminent demand for those services (e.g., create surplus capacity unrelated to existing or reasonably foreseeable future demand), the availability of those facilities may serve to stimulate development beyond that which would otherwise occur in the absence of available capacity. In this latter case, the resulting infrastructure improvements may induce rather than respond to anticipated areawide growth.

Since a project will normally be deemed to produce a significant impact if the project will induce substantial population growth in an area, either directly or indirectly, the provision of infrastructure facilities prior to the identification of an actual demand for those facilities would be deemed growth inducing and would constitute a significant environmental affect. Those impacts are addressed in detail in Section 5.0 (Growth Inducement) herein.

It is the policy of the County to: (1) "[P]rovide adequate transportation infrastructure to serve the needs of existing and future development" (Policy CI 4.7); (2) "Control the timing and intensity of future development and ensure that future development is contingent on the provision of infrastructure facilities and public services" (Policy CI 9.1); (3) "Monitor future development to ensure that sufficient local water supply or alternative imported water supplies can be provided" (Policy/Program CI 11.12[7]); and (4) "Cooperate with local wastewater/sewering authorities to monitor future development to ensure that development will proceed only when sufficient capacity or approved alternative wastewater treatment systems can be provided" (Policy CI 12.12.). Since the purpose of those policies is to avoid or mitigate potential environmental effects that might exist in the absence of those facilities, the failure to ensure the timing of infrastructure improvements in a manner and timeframe consistent with areawide demands would constitute a significant environmental effect. In addition, the City General Plan includes a policy that requires a project to "[e]nsure that all developed areas of the City are adequately served with essential public services and infrastructure including, but not limited to, streets, water, surface drainage, sanitary sewers, law enforcement, fire protection and public schools."

In recognition of those potential impacts and public policies, since the proposed LCRSP does not explicitly delineate the timing of certain infrastructure improvements, a mitigation measure (Mitigation Measure 1-9) has been formulated to ensure that the sequencing of authorized land uses occurs in a manner and in a time period integrally linked to those infrastructure

improvements and municipal serves required to adequately support the proposed land uses. Implementation of that measure would reduce potential infrastructure-based compatibility impacts to a less-than-significant level.

4.1.5.2 Consistency Analysis

From a local land-use planning perspective, the LCRSP serves as a regulatory tool designed to facilitate the systematic implementation of the City General Plan for that approximately 2,447.3-acre area addressed therein. The proposed specific plan area includes lands and uses now located within the corporate boundaries of the City and lands and uses contained within unincorporated County areas and located within the City's adopted SOI.

As indicated in Section 18.78.010 (Authority for Specific Plans) of the City Municipal Code, the City Council is authorized to prepare, adopt, and implement specific plans for areas within the incorporated boundaries of the City and within the City's adopted SOI. Since those portions of the project site which are not already within the City's corporate boundaries are located within the City's adopted SOI, the Applicant is processing concurrent annexation requests with the City, the County, and LAFCO in order to allow for the incorporation of those areas and to modify the service area boundaries and/or designations of one or more existing special districts.

This EIR provide the environmental basis for the approval of all City General Plan, County General Plan, GHSP, and ERVSP text and map amendments, all text and map revisions to the City Municipal Code and to the County Development Code, and other actions as may be required for the adoption and subsequent implementation of the LCRSP, including the annexation of County unincorporated lands into the corporate boundaries of the City. Since the project site will be annexed into the City and since City plans and policies will subsequently govern the site's use, development, conservation, operation, and maintenance, this environmental analysis focuses primarily on City rather than on County policies. County policies are, however, briefly discussed where potentially applicable to this environmental analysis and when such discussion provides potentially relevant information concerning the project site and/or the existing environmental setting. In addition, since certain lands adjoining the project site will continue to exist in County unincorporated areas following the project's implementation, where applicable, existing County plans and policies provide general information germane to the governance of land and the existing and potential future land uses located thereupon.

Because of the number of broad-ranging policies contained in any public agency's long-range planning documents, it should be assumed that few projects would be deemed consistent with every policy outlined therein. The criteria for assessing a project's consistency must, therefore, be based on whether the proposed action furthers the attainment of broad-based policy directives and whether the action generally satisfies a preponderance of rather than the totality of each of the policies presented in those documents.

Local Land-Use Plans

Environmental Impact 1-5*. To the extent that land-use policies have been promulgated in response to the environmental effects of pre-existing uses and/or recognized environmental constraints and hazards, revisions to those policies that neglect and/or fail to appropriately respond to the existence of those effects, constraints, and hazards could place persons and property at substantial risk.*

***Preliminary Determination 1-5**. Potentially significant unless mitigation incorporated.*[232]

Presented in Figure 4.1-5 (City of Rialto Sphere of Influence Land-Use Districts Comparison) is a graphic comparison of and between the land-use policies presented in the County General Plan and City General Plan with regards to those lands contained in the City's adopted SOI. With the exception of the El Rancho Verde Royal Vista Golf Course, the project site is predominately vacant and undeveloped. A comparison of the land-use designations for each of the proposed neighborhood areas is presented in Table 4.1-5 (Comparison of Proposed Project Existing City and County Land-Use Designations).

Table 4.1-5
COMPARISON OF PROPOSED PROJECT
EXISTING CITY AND COUNTY LAND-USE DESIGNATIONS

Neighborhood	City General Plan	County General Plan
I	Special Study Area	Planned Development (PD)[2] Specific Plan (SP)[3] Specific Development - Residential (SD-RES)
II	Special Study Area Specific Plan[1]	Floodway (FW) Single Residential (RS)
III	Special Study Area	Floodway (FW) Single Residential (RS) Specific Development - Residential (SD-RES)
IV	Special Study Area	FW, Floodway (FW) Rural Living (RL)

Notes:
1. Under the "El Rancho Verde Specific Plan," the City General Plan designates a portion of this area as "Medium Density Residential/ Recreation-Golf Course."
2. As specified in the "Lytle Creek North Planned Development Project."
3. As specified in the "Glen Helen Specific Plan" (GHSP), the area is designated "Golf Course Community (GCC)" and "Commercial/Travel Services (CTS)."

Source: City of Rialto

The proposed project includes, but is not limited to, both a general plan amendment (GPA) and a zone change (ZC). Text and map amendments to the City General Plan, County General Plan, GHSP, LCNPD, and ERVSP, and text and map revisions to the City Municipal Code and County Development Code, in combination with other actions, are required for the adoption and subsequent implementation of the LCRSP. Through those actions, where applicable, the jurisdictional authority responsible for the issuance of land-use decisions and the land-use designations governing the use of the subject property will change. Those actions will result in changes to: (a) the type, range, and intensity of land uses authorized on the project site, (b) the governmental entity responsible for the independent assessment of the project's consistency, and (c) those adopted public policies against which the project's consistency shall be examined.

[232]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Examined at the project-level, presented in Table 4.1-6 (Preliminary Consistency Assessment - City General Plan Goals and Policies) is the Lead Agency's initial assessment of the project's consistency (or inconsistency) with those City General Plan policies which the Lead Agency deems to be most applicable to the proposed project. The goals and policies presented therein are not intended to be inclusive of all public policies of the City but are inclusive of those goals and policies deemed to be most applicable to the proposed LCRSP. Although a preliminary conclusion is presented herein, a final determination of consistency (or inconsistency) rests exclusively with the decision-making body of the City. As a result, the determination of the decision-making body may vary from that presented herein, either with regards to a specific public policy or with regards to the general assessment of the project's compliance (or lack of compliance) with the existing land-use plans of the City.

Examined at the neighborhood-level, presented below is a discussion of the project's consistency (or inconsistency) with the policies of the City General Plan.

- **Neighborhood I**. The geographic area comprising Neighborhood I is currently located within the area now subject to the "County of San Bernardino 2007 General Plan" and, depending on location, also subject to the provisions of the County-approved "Lytle Creek North Planned Development Project," and the "Glen Helen Specific Plan." The approximately 417.2-acre area comprising Neighborhood I, identified herein as on-site acreage, is located in unincorporated County area but is also located within the City's adopted SOI. An additional off-site area, totaling approximately 3.6 acres and consisting of the existing SoCalGas easement, is located in unincorporated County area but also within the City's adopted SOI.

  As depicted in Figure 4.1-12 (County of San Bernardino - Glen Helen Specific Plan Land-Use Plan), as specified in the GHSP, the Sycamore Flat and Sycamore Canyon areas contain the following County land-use designations: "Commercial/Travel Services (CTS)" and "Golf Course Community (GCC)." Upon annexation, those areas would no longer be subject to County land-use authority and the provisions of the GHSP would no longer be applicable to the development of those project areas.

  In Neighborhood I, those portions of "Sycamore Creek East" (Sycamore Flat) and "Sycamore Creek West (Sycamore Canyon) presently designated "Golf Course Community (GCC)" under the County-approved GHSP would be redesignated "Open Space/Recreation (OS/R)", "Open Space (OS)," and "Single-Family Residential 1 (SFR-1) (2-5 du/ac)," with a GW Overlay covering a portion of that area (PA 3), under the proposed LCRSP That portion of Neighborhood I presently designated "Commercial/ Travel Services (CTS)" under the County's GHSP would be redesignated "High Density Residential (HDR)" under the proposed LCRSP. Other than those activities that are associated with the provision of street and other infrastructure improvements, no development activities have yet to commence within those areas.

  The County's "Commercial/Travel Services (CTS)" district authorizes uses serving the traveling public, including restaurants, convenience services, service stations, lodging, retail goods, and commercial recreational uses. In contrast, as authorized under the proposed LCRSP, areas designated "High Density Residential (HDR)" can be developed at residential densities ranging between 25 and 35 dwelling units per acre.

Table 4.1-6
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Land Use	
4.1.1	Encourage annexations which will demonstrate net benefit to the City before being considered for approval.	Consistent. Independent of the CEQA process, the project's fiscal impact analysis (FIA) indicates a positive financial contribution to the City. In addition, the project will provide a minimum of 908.0 acres of open space and an additional 828.8 acres of other recreational amenities, including the golf course, parks, and trails.
4.1.1.1	All large annexations to Rialto should be required to have an approved specific plan prior to annexation.	Consistent. If adopted, the LCRSP will fulfill this policy.
4.1.1.2	The City shall encourage, where appropriate, the preparation of specific plans on large annexations, to include a fiscal impact statement to insure that the City enjoys financial benefits from annexation of the subject land.	Consistent. The FIA indicates a positive financial contribution to the City. If adopted, the LCRSP will fulfill this policy.
4.1.1.3	Based on the approved specific plan for large annexation, impact fees will be charged on new development sufficient to assure timely construction of public facilities and provision of expanded City services. Impact fees shall provide full mitigation of financial costs to the City, and protect its existing levels of service from deterioration.	Consistent. The project will pay its negotiated fair share of impact fees. Impact fees provide for the mitigation of financial costs to the City and protect existing City levels of service.
4.1.1.4	Specific plans for large annexations shall demonstrate compatibility of land uses both within and adjacent to the planned area.	Consistent. The LCRSP, as mitigated, will not result in the introduction or creation of incompatible land uses.
4.1.1.5	Specific plans for large annexations shall demonstrate protection of all resources valued by the citizens of Rialto including, but not limited to: views, trees and other landscaping features, aquifers, surface water courses, historic buildings, etc.	Consistent. The project includes preservation of at least 829.2 acres of natural (undisturbed) open space. There are no significant trees or historic buildings on the site. Over 50 percent of the LCRSP is devoted to open space and recreational uses.
4.1.1.6	Specific plans for large annexations shall set aside land for community parks and other public facilities as appropriate to maintain the City's quality of life.	Consistent. Under the LCRSP, 908.0 acres of open space and an additional 328.8 acres of recreational uses will be created. The project will provide 829.2 acres of natural (undisturbed) open space, including 612.5 acres within and adjacent to Lytle Creek, SBNF, and GHRP, and provide mitigation acreage for sensitive species (52.2 acres has already been set aside in conjunction with the LCNPD project, 160.5 acres previously dedicated in connection with SBKR mitigating, and 4.0 acres dedicated for the completed WVWD Reservoirs 7-3 and 7-4 along Lytle Creek Road).
4.1.3	Enhance Riverside Avenue to be the signature street of the City of Rialto.	Consistent. The project will provide a gateway for the northern portion of the City and will improve access to and enhance the visual quality of Riverside Avenue.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Land Use (Continued)	
4.1.4	Encourage the annexation of all County islands located within the boundaries of the City of Rialto.	Consistent. Although not a County island, the site is located in the City's sphere of influence.
4.1.4.1	Work with the [Regional] Water Quality Control Board to require sewering of all new development within County islands.	Consistent. All new development within the LCRSP will be connected to sewers.
4.1.4.3	Work with County of San Bernardino to require that City of Rialto building and development standards are met in all new development within County islands.	Consistent. All new development within the LCRSP will be built to the standards required by the City of Rialto.
4.1.5.1	Develop, protect and enhance high-quality residential and industrial uses in Rialto.	Consistent. The LCRSP will result in a high-quality residential and commercial neighborhood.
4.1.7	Ensure that all developed areas of the City are adequately served with essential public services and infrastructure including, but not limited to, streets, water, surface drainage, sanitary sewers, law enforcement, fire protection and public schools.	Consistent. Consistent with the needs of the proposed project, new and expanded public services and facilities will be provided.
4.1.7.1	The City will coordinate all development proposals with other affected public entities to ensure the provisions of adequate public facilities.	Consistent. Coordination has and will continue to occur with all affected public agencies. The LCRSP provides adequate public facilities to serve the planned development.
4.1.7.2	Proposals for new residential development will be referred to the affected school district(s) for advice and comment.	Consistent. The Rialto Unified School District, Fontana Unified School District, and San Bernardino Unified School District all serve the project site. In addition to the consultation that already occurred, the CEQA process provides an additional mechanism for each district to review and comment on the proposed project.
4.1.7.3	When reviewing proposals for residential development, the City will work closely with the affected school district(s) in order to plan coordinated mitigation of any negative impacts upon the schools.	Consistent. The project will pay its fair share of school impact fees and/or the master developer shall enter into a mitigation agreement with each affected district. The project identifies potential elementary K-8 school sites in Neighborhood III.
4.2.2	Meet adopted City standards for the provision of parklands and open space.	Consistent. The LCRSP will exceed existing City standards for parkland and open space.
4.2.2.3	The City shall acquire additional land for parks and open space.	Consistent. The LCRSP provides a minimum of 908.0 acres of open space and about 328.8 acres of park, recreation, and golf course uses.
4.2.2.5	Require developers of the Lytle Creek Special Study Area to provide a community park within the project area.	Consistent. The LCRSP provides about 328.8 acres of park, recreation, and golf course uses.
4.2.2.10	Encourage proponents of development projects to provide parklands for residents and visitors.	Consistent. The LCRSP provides about 328.8 acres of park, recreation, and golf course uses.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Land Use (Continued)	
4.2.5	Ensure that all developed areas of the City are adequately served with essential public services and infrastructure, including, but not limited to, streets, water, surface drainage, sanitary sewers, law enforcement, fire protection and public schools.	Consistent. The LCRSP will either directly provide the necessary infrastructure facilities and public services or will pay its negotiated fair share toward the cost for those facilities and services.
	Economic Development	
1.1	Promote an economic base and positive business climate providing primary commercial serves to the resident population.	Consistent. The LCRSP's "Village Center Commercial (VC)" district allowing for the development of up to almost 849,420 square feet of retail and other commercial uses.
1.2	Provide a broader base of employment opportunities for Rialto and the west San Bernardino Valley.	Consistent. Although providing a jobs-housing ratio of only 0.4, with a projected 20-year build-out horizon, the LCRSP nonetheless provides both long-term construction jobs and other employment opportunities within the "Village Center Commercial (VC)" district.
1.6	Utilize the specific plan process for planning in established area of Rialto which may undergo land use transformation.	Consistent. If adopted, the LCRSP will fulfill this policy.
1.6.1	Establish criteria for comprehensiveness in such specific plans to address critical issues relative to the area in question.	Consistent. If adopted, the LCRSP will fulfill this policy.
1.6.2	Encourage master planning and, where appropriate, mixed use character at major in-fill sites.	Consistent. The LCRSP creates a master plan governing a 2,447.3-acre area, providing for both residential and non-residential development.
	Circulation Element	
3.2.1	Cooperate and coordinate with Caltrans and the San Bernardino Association of Governments (SANBAG) to accommodate growing volumes of east-west traffic.	Consistent. The TIA is being jointly processed through SANBAG. In addition to the consultation that already occurred, the CEQA process provides an additional mechanism for agencies to review and comment on the proposed project.
3.2.2	Confine trucking to designated, efficient and convenient routes within and through the City.	Consistent. The LCRSP does not alter existing truck routes through the City.
3.2.3	Maintain Level of Service D or better on all Rialto arterial roadways.	Consistent. All arterial roadways within the City affected by the project can be mitigated to LOS "D" or better.
3.2.3.2	New streets and improvement to existing streets made necessary by new development shall be provided concurrent with the new development.	Consistent. New streets and improvements to existing streets will be constructed concurrently with new construction within Lytle Creek Ranch.
3.2.3.4	Alternative modes of travel such as commuter rail, park and ride facilities, bus transit and bicycle trails shall continue to receive cooperation and support from the City.	Consistent. The LCRSP provides multi-use trails and bus stops are conveniently located along Riverside Avenue. As a recommended mitigation measure, a park-and-ride facility is proposed near the intersection of Sierra Avenue and Riverside Avenue.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Circulation Element (Continued)	
3.2.4	Residential neighborhoods in Rialto shall be protected from noise, pollution and danger of excessive vehicular traffic.	Consistent. Residential areas bordering Glen Helen Parkway, Clearwater Parkway, Lytle Creek Road/Sierra Avenue, and Riverside Avenue will be protected from noise, pollution, and danger of excessive vehicular traffic by buffer walls, as necessary and appropriate.
3.2.4.2	Non-local vehicular traffic shall be discouraged from using neighborhood streets by use of appropriate street design, street configuration, stop signs and the like. If required, traffic barriers will be constructed for the protection of imperiled neighborhoods.	Consistent. Streets patterns are designed to minimize non-local traffic on neighborhood streets. Neighborhoods II and III incorporate traffic roundabouts that will serve to calm traffic and discourage through-traffic.
3.2.4.3	Residential areas bordering arterials shall be protected from traffic noise, pollution and danger by buffer walls bordering the arterial.	Consistent. Residential areas bordering Glen Helen Parkway, Clearwater Parkway, Lytle Creek Road/Sierra Avenue, and Riverside Avenue will be protected by buffer walls, as necessary and appropriate.
7.1.1	Provide improved bicycle trail design and construction.	Consistent. The LCRSP provides for a network of bicycle trails built to meet or exceed City standards.
7.1.1.3	Improve existing and new Class I bicycle trails with landscaping, rest stops and other amenities to add to the aesthetic values of adjoining neighborhoods, as well as the comfort and pleasure of cyclists using the trails.	Consistent. Class I bicycle trails will include landscaping and other amenities.
7.1.1.5	School facilities, parks and other activity nodes within residential districts shall be linked with Class II bicycle trails on neighborhood streets. Bicycle trails will be located on only one side of local streets, leaving the other side free for residential parking.	Consistent. The schools and parks within Neighborhood III will be linked via Class I and Class II bicycle trails on the central collector street.
7.1.2	Provide safe pedestrian access throughout Rialto.	Consistent. The LCRSP includes provisions for pedestrian uses (trails, bike lanes, and paseos).
7.1.2.1	Require sidewalks on at least one side of all streets in newly developed areas.	Consistent. The LCRSP is designed with sidewalks on at least one side of all streets.
7.1.2.2	Complete the system of sidewalks beside all arterials bordering commercial zones in the City.	Consistent. All arterials bordering “Village Cener Commercial (VC)” districts will include sidewalks.
	Housing Element	
2.0	Provide adequate residential sites through appropriate land use, zoning, and specific plan designations.	Consistent. The LCRSP provides for up to 8,407 homes in a range of product types and densities in four distinct residential neighborhoods.
2.4	Promote the phased and orderly development of new neighborhoods consistent with the provision of infrastructure improvements.	Consistent. The LCRSP provides for orderly development of the planning area and concurrent construction of necessary infrastructure.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Noise	
3.0	To protect public health and welfare by eliminating existing noise problems and by preventing significant degradation of the future acoustic environment.	Consistent. Residential areas bordering Glen Helen Parkway, Clearwater Parkway, Lytle Creek Road/Sierra Avenue, and Riverside Avenue will be protected from ambient noise by buffer walls or other sound attenuation measures.
1a	Establish acceptable limits of noise for various land uses throughout the community. The City adopts the noise standards presented in Exhibit 16 which identify interior and exterior noise standards in relation to specific land uses; particularly residential areas, schools, hospitals, open space preserves, and parks. The standards would specify the maximum noise levels allowable for new development and impacted by transportation noise sources operating on public or quasi-public property.	Consistent. Development within the LCRSP area will comply with applicable City noise standards.
1b	The City shall require an environmental and noise impact evaluation for all projects as part of the design review process to determine if unacceptable noise levels will be created or experienced. Should noise abatement be necessary, the City shall require the implementation of mitigation measures based on a detailed technical study prepared by a qualified acoustical engineer.	Consistent. Development within the LCRSP area will comply with applicable City noise standards.
1c	The City shall not approve projects that do not comply with the adopted standards.	Consistent. Development within the LCRSP area will comply with applicable City noise standards.
1e	The City shall minimize potential transportation noise through proper design of street circulation, coordination of routing, and other traffic control measures.	Consistent. Streets patterns are designed to minimize non-local traffic on neighborhood streets.
2a	The City shall require the construction of barriers to mitigate sound emissions where necessary or where feasible.	Consistent. Residential areas bordering Glen Helen Parkway, Clearwater Parkway, Lytle Creek Road/Sierra Avenue, and Riverside Avenue will be protected from ambient noise by buffer walls or other sound attenuation measures.
2b	The City shall require the inclusion of noise mitigation measures in the design of new roadway projects in Rialto.	Consistent. Residential areas bordering Glen Helen Parkway, Clearwater Parkway, Lytle Creek Road/Sierra Avenue, and Riverside Avenue will be protected from ambient noise by buffer walls or other sound attenuation measures.
3b	Evaluate noise generated by construction activities, and subject them to the requirements of the Noise Ordinance.	Consistent. Development within the LCRSP area will comply with applicable City noise standards.
	Open Space and Recreation Element	
4.1	Maximize the public's benefits in the reclamation of mineral extraction areas.	Consistent. The LCRSP would not preclude the continuance of existing mining operations at permitted quarries.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Open Space and Recreation Element	
6.1	Optimize use of the floodplain, Alquist-Priolo Zone and Rialto Airport Safety Zone II.	Consistent. A portion of the site is located within an Alquist-Priolo zone. Numerous site-specific studies have been performed that more accurately defined that zone. Areas within and adjacent to Lytle Creek are generally retained as "Open Space." The project site is not located within the "Rialto Airport Safety Zone II."
7.1	Meet adopted City standards for the provision of park lands and open space.	Consistent. The LCRSP will exceed existing City standards for parkland and open space.
7.1.2	The City shall investigate all means by which additional parklands can be funded or otherwise acquired.	Consistent. The LCRSP provides about 328.8 acres of park, recreation, and golf course uses.
7.1.4	The City shall apply, by ordinance, the provisions of the Quimby Act to insure that adequate park and recreational facilities are available within or accessible to new residential developments.	Consistent. The LCRSP provides about 328.8 acres of park, recreation, and golf course uses.
8.1	Attract desirable commercial recreation enterprises to Rialto.	Consistent. Project implementation will result in a reconfiguration of the El Rancho Verde Golf Course and improve the recreational amenities associated with that facility.
8.1.3	Protect residential and other sensitive areas from any external impacts of commercial recreation by separation of incompatible land uses, and buffering or screening, as necessary.	Consistent. The LCRSP provides for the separation of incompatible uses and incorporates buffers and screening to minimize the impacts of commercial recreation uses on residential areas.
8.1.5	Require review and approval of the City's Development Review Committee for any commercial recreation enterprise seeking location within Rialto.	Consistent. The LCRSP allows commercial recreation uses in accordance with Chapter 5.0 (Development Standards) of the LCRSP.
9.1	Completion, maintenance and successful operation of a safe, attractive and effective network of recreational/circulation trails within the City.	Consistent. The project includes the provision of a recreational trail system within the project boundary and interconnects the proposed trail system other regional trails.
9.1.7	Encourage the inclusion of internal walkways or greenways in residential subdivisions and PRD zones.	Consistent. The LCRSP makes extensive use of internal walkways and greenways in residential areas. Neighborhood III contains a greenbelt paseo that runs the length of the neighborhood.
	Safety	
1.1	Minimize hazards to public health, safety, and welfare resulting from natural and man-made hazards.	Consistent. A portion of the site is located within an Alquist-Priolo zone. Numerous site-specific studies have been performed that more accurately defined that zone. Appropriate setbacks will be utilized from any residential development. Areas within and adjacent to Lytle Creek are generally retained as "Open Space." The project site is not located within the "Rialto Airport Safety Zone II."

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Safety	
2.1	Minimize hazards to public health, safety, and welfare resulting from geotechnical hazards.	Consistent. A portion of the site is located within the Alquist-Priolo zone. Numerous site-specific studies have been performed that more accurately defined that zone. Appropriate setbacks will be utilized from any residential development.
2.1.1	The City shall require geotechnical investigations by a certified engineering geologist and registered civil engineer for all grading and construction proposed within any area which may be subject to severe seismic hazards.	Consistent. Geotechnical investigations have been conducted and mitigation is provided to minimize potential seismic hazards.
2.1.3	The City shall require construction to be in conformance with the Uniform Building Code, specifically Chapter 23 as it provides for earthquake-resistant design, and Chapter 70 as it provides for grading and excavation.	Consistent. The project will be constructed in conformance with applicable UBC code standards.
2.2	Encourage urbanization only in those areas without significant risk to life and property.	Consistent. A portion of the site is located within the Alquist-Priolo zone. Numerous site-specific studies have been performed that more accurately defined that zone. Appropriate setbacks will be utilized from any residential development.
2.2.1	Development within Alquist-Priolo Special Studies Zones will be subject to the restrictions and requirements of the Special Studies Zones Act.	Consistent. Portions of Neighborhoods III and IV are located within designated special study zones. Setbacks from the fault line are required for new structures.
3.1	Minimize risk and damage from flood hazards within the City and its Sphere of Influence.	Consistent. The LCRSP includes improvements to the levee system along portions of Lytle Creek designed to minimize potential risks and damage associated with flooding.
3.1.2	The City shall require the submittal of information prepared by a qualified civil or hydrological engineer which certifies compliance with development standards established for 100-year flood zones.	Consistent. Proposed levee improvements will modify floodplain boundaries and require that the processing of a conditional letter of map revision or conditional letter of map amendment.
3.2	Minimize the adverse effects of urbanization upon drainage and flood control facilities.	Consistent. Proposed levee improvements will modify floodplain boundaries and require that the processing of a conditional letter of map revision or conditional letter of map amendment.
3.2.1	The City shall require the implementation of adequate erosion control measures for development projects to minimize sedimentation damage to drainage facilities.	Consistent. The LCRSP incorporates BMPs and erosion control measures to minimize sedimentation damage to drainage facilities.
3.2.2	The City shall maintain its open space and shall require developers to provide adequate open space pursuant to the standards established in the Parks and Recreation Element of the General Plan and the City's zoning ordinance as a measure to minimize impermeable surfaces throughout the City.	Consistent. The project provides an open space buffer along Lytle Creek that will allow for permeability of flows within the wash. In addition, substation portion of the project site has been retained as open space.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Safety (Continued)	
3.2.4	The City shall require water retention devices in new development in order to minimize peak flows to the surface drainage system.	Consistent. Water retention devices will be constructed concurrently with new development to minimize peak flows to the surface drainage system.
3.4	Correct flooding problems within the City.	Consistent. Proposed levee improvements will modify floodplain boundaries and require that the processing of a conditional letter of map revision or conditional letter of map amendment.
4.1	Eliminate all negative impacts of mining activities on the citizens of Rialto while complying with the provisions of the California Mining and Reclamation Act of 1975.	Consistent. The project does not propose any on-site mining activities and, therefore, will not result in negative impacts of active mining operations on citizens of Rialto.
4.1.2	The City shall ensure that development is phased in relation to the City's ability to provide an adequate level of fire protection.	Consistent. The LCRSP will be developed in phases concurrently with required infrastructure and the expansion of public services.
4.1.3	Permit plant nurseries, recreational open space and other temporary uses in State designated mineral resource sectors prior to and pending their development for mineral extraction.	Consistent. While acknowledging the presence of mineral resources, the City General Plan does not mandate the extraction of those resources as a precursor to the site's development.
4.1.4	Require that all site plans, subdivision plans, and building plans, and building plans be reviewed by the Fire Department to ensure compliance with appropriate fire regulations.	Consistent. All site, subdivision, and building plans will be reviewed by the City's Fire Department to ensure compliance with appropriate fire regulations.
4.1.6	Establish buffer zones of compatible uses adjacent to mineral extraction areas, such uses may include industry.	Consistent. Where abutting mining and industrial areas, the LCRSP permits residential walls and fences to extend up to ten feet in height.
4.1.10	Require planting or other visual buffers to screen mining machines, stock piles, vehicles and other mining related facilities from visible residential areas.	Consistent. Landscaping and/or walls will screen mining machines, stockpiles, vehicles, and other mining related facilities from ground level views.
4.2	Increase the City's fire protection capabilities.	Consistent. Rialto Fire Department and San Bernardino County Fire Department performance standards can be satisfied.
4.3	Provide emergency medical service to the citizens of Rialto.	Consistent. Although the project will not directly provide emergency medical services, the project will increase property and sales tax revenues to the City which can be used to offset municipal costs for those services. In addition, the LCRSP includes lands available containing land-use designations suitable for medical and dental clinics and other health facilities.
5.4	Ensure that all businesses in the City of Rialto that use hazardous materials and generate hazardous waste properly manage these substances.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Safety (Continued)	
5.4.5	Require new or modified businesses to complete a business plan, waste minimization plan, and if applicable, a risk management and prevention program prior to final approval of a land use permit for a new business or modification of an existing business. The requirements specified in AB 3777 (Chapter 1260, Stat. of 1986) and AB 3205 (Chapter 15, Stat. of 1988) regarding the applicability of the RMPP shall be identified in the amendment.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes.
5.6	Minimize the generation of hazardous waste in Rialto.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes.
5.6.1	The City shall encourage and promote practices that will, in order of priority: (1) reduce the use of hazardous materials and the generation of hazardous waste at their source; (2) recycle the remaining hazardous wastes for reuse; and (3) treat those wastes which cannot be reduced at the source or recycled. Only residuals from waste recycling and treatment shall be land disposed.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes.
5.7	Reduce the risks associated with the storage of hazardous materials and their threats of contamination of ground water.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes.
5.7.4	The City shall prohibit businesses from storing hazardous materials for commercial use in residential areas.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes.
5.8	Reduce the threat of hazardous materials and wastes to residential areas.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes.
5.10	Ensure the safe transportation of hazardous materials and waste in and through the City of Rialto.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes
5.10.1	Specified hazardous materials and wastes shall be transported on routes that can safely accommodate additional truck traffic, do not pass through residential areas, and use interstate or State divided highways as major routes.	Consistent. The LCRSP does not alter or otherwise modify existing statutes concerning the use, generation, or disposal of hazardous wastes.
7.1	To provide a safe and secure environment for the City's residents, workers and visitors.	Consistent. As mitigated, potential seismic and hydrologic hazards can be reduced to a less-than-significant level.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Safety (Continued)	
7.1.1	The City shall require new development and improvements to employ defensible space concepts into site design and building specifications (i.e., appropriate setbacks, adequate lighting of sidewalks and parking areas, residential surveillance sight lines, and the use of burglary resistant hardware and fixtures in buildings).	Consistent. Defensible space concepts have been integrated into the LCRSP.
7.2	The City shall provide a minimum of one full-time police officer for every 650 to 750 residents.	Consistent. Although the project will not directly provide additional police personnel, the project will increase property and sales tax revenues to the City which can be used to offset municipal costs for those services.
7.2.1	Utilize development impact fees to ensure that development of police facilities corresponds with development within the City.	Consistent. The project will pay its negotiated fair share of impact fees. Impact fees provide for the mitigation of financial costs to the City and protect existing City levels of service.
7.2.3	Open the Police Departments northwest neighborhood police center. Increase the beat patrol in the northwest area to full time coverage.	Consistent. Payment of applicable impact fees will allow expansion of Rialto Fire Department services and facilities consistent with project demands.
	Conservation	
1.1	Conserve, protect and enhance the natural resources in Rialto to ensure their optimal use and support to the benefit of all present and future citizens of Rialto.	Consistent. The project includes preservation of at least 829.2 acres of natural open space, including Lytle Creek.
2.1	Protect and enhance Rialto's surface waters and ground water basins.	Consistent. The LCRSP incorporates a system of bioswales and utilizes BMPs to protect and enhance the area's surface waters and ground water basins.
2.1.4	Prohibit encroachment on water recharge areas, keeping them free of impervious surfaces.	Consistent. The project will create water recharge basins in coordination with the local water jurisdictions.
2.1.7	Monitor land uses potentially affecting Lytle Creek as a water source.	Consistent. All development in the LCRSP area will employ BMPs and comply with applicable regulations governing run-off and water quality.
2.1.8	Provide flood control channels with permeable bottoms to help restore aquifers.	Consistent. The project provides an open space buffer along Lytle Creek that will allow for permeability of flows within the wash.
3.1.2	Require operators of all grading, mining and construction sites to cover or moisten soils, or use soil binders, so that wind driven soil erosion is minimal. An erosion control plan shall be submitted and approved prior to the commencement of grading and construction of all new development.	Consistent. An erosion control plan shall be approved by the City prior to the commencement of grading and construction activities.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Conservation (Continued)	
4.1	Eliminate all negative impacts of mining activities on the citizens of Rialto while complying with the provisions of the California Mining and Reclamation Act of 1975.	Consistent. The project does not propose any on-site mining activities. The potential environmental effects of proximal mining operations on the LCRSP have been fully considered.
4.1.2	Compile and maintain maps and descriptions of potential mineral resources as a basis for land use policy and regulation and compatibility with State designated mineral resource sectors.	Consistent. No on-site mining activities are proposed. While acknowledging the presence of mineral resources, the City General Plan does not mandate the extraction of those resources as a precursor to the site's development.
4.1.3	Permit plant nurseries, recreational open space and other temporary uses in State designated mineral resource sectors prior to and pending their development for mineral extraction.	Consistent. No on-site mining activities are proposed. While acknowledging the presence of mineral resources, the City General Plan does not mandate the extraction of those resources as a precursor to the site's development.
4.1.6	Establish buffer zones of compatible uses adjacent to mineral extraction areas, such uses may include industry.	Consistent. Where abutting mining and industrial areas, the LCRSP permits residential walls and fences to extend up to ten feet in height.
4.1.10	Require planting or other visual buffers to screen mining machines, stock piles, vehicles and other mining related facilities from visible residential areas.	Consistent. Landscaping and/or walls will screen mining machines, stockpiles, vehicles, and other mining related facilities from ground level views.
5.1	To achieve conformance with the AQMP by adopting a comprehensive plan for implementation, so that all general development projects approved are consistent with the AQMP.	**Not Inconsistent**. Localized modeling shows that site construction would result in a substantial increase in certain criteria pollutants ($\geq$10.4 $\mu g/m^3$ of PM_{10} and $PM_{2.5}$ averaged over a 24-hour period). In accordance with SCAQMD's "Final Localized Significance Threshold Methodology" (June 2003), emission levels attributable to the project's construction would not appear to comply with the AQMP. The LCRSP will, however, employ a number of strategies to achieve conformance with the AQMP, including compliance with City-imposed transportation control measures (TCMs) and the use of transportation demand management (TDM) programs.
5.1.1	Require that all developments within the City with more than 100 employees develop a rideshare program.	All employers with 100 or more employees within the LCRSP area will be required to institute a ridesharing program.
5.1.2	Require all developments to comply with the AQMP, particularly regarding transportation demand management (TDM) programs. A TDM plan for new development shall be limited to design considerations to encourage ridesharing, transit use, park and ride facilities, as well as bicycle and pedestrian circulation.	Consistent. The LCRSP will employ a number of strategies to achieve conformance with the AQMP, including compliance with City-imposed TCMs and the use of TDM programs.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Conservation (Continued)	
5.1.3	Incorporate phasing policies and requirements in development plans to achieve concurrent provision of infrastructure, particularly transportation facilities, to serve development.	Consistent. The LCRSP will provide infrastructure concurrently with development. Roadways will be constructed to ensure adequate safety and comply with City circulation requirements.
5.1.4	Locate and design new development in a manner that will minimize direct and indirect emission of air contaminants. To this end, participate with SANBAG in jointly formulating appropriate standards for regulating the location and protection of sensitive receptors from excessive and hazardous emissions.	Consistent. As mitigated, the LCRSP will ensure the placement of sensitive users sufficient distance from sources of toxic air contaminants.
5.2	Improve the balance between jobs and housing in order to create a more efficient urban form and/or reduce the vehicle miles traveled (VMT).	Consistent. At build-out, the LCRSP will provide both new housing and employment opportunities. This would help to create an efficient urban form and support the goal of reducing overall VMT. Moreover, from a Citywide perspective, substantial evidence exists to support a determination that, because jobs-housing balance is a community-based planning consideration, it does not need to be applied to individual development activities. As a result, those City General Plan policies promoting the attainment of a jobs-housing balance may not be deemed applicable to the assessment of individual projects but must be examined from a broader regional perspective.
5.2.6	Improve the jobs-housing balance through new development and redevelopment project review and actions.	Consistent. At build-out, the LCRSP will provide both new housing and employment opportunities. This would help to create an efficient urban form and support the goal of reducing overall VMT. Moreover, from a Citywide perspective, substantial evidence exists to support a determination by the City's decision-making body that, because jobs-housing balance is a community-based planning consideration, it does not need to be applied to individual development activities. As a result, those City General Plan policies promoting the attainment of a jobs-housing balance may not be deemed applicable to the assessment of individual development project but must be examined from a broader regional perspective.
6.1	Conserve and enhance Rialto's biological resources, facilitating development in a manner which reflects the characteristics, sensitivities and constraints of these resources.	Consistent. A comprehensive biological resources assessment and focused studies undertaken to identify potential impacts to rare, threatened, or endangered species. As a result of these studies, a minimum of 829.2 acres will be preserved as natural (undisturbed) open space.
6.1.1	Designate those areas along Lytle Creek which may contain rare or endangered species as "Biological Resource Management Areas."	Consistent. As proposed, a minimum 829.2 acres of natural (undisturbed) open space will be preserved on the site, including a substantial part of Lytle Creek.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Conservation (Continued)	
6.1.2	Require that all proposed development in these "Biological Resource Management Areas" be subject to a biological study, to be prepared by a qualified professional, to determine whether there will be any impact to rare, threatened or endangered species, and identify mitigation measures where appropriate.	Consistent. A comprehensive biological resources assessment and focused studies was undertaken to identify potential impacts to rare, threatened, or endangered species. As a result of these studies, a minimum of 829.2 acres will be preserved as natural (undisturbed) open space.
6.1.5	Pursue voluntary open space, wildlife corridors, or conservation easements to protect sensitive species or their habitats.	Consistent. A minimum of 829.2 acres will be preserved as natural (undisturbed) open space.
7.1	Conserve scare energy resources.	Consistent. Energy conservation measures have been incorporated into the LCRSP.
7.1.1	Require the incorporation of energy conservation features in the design of all new construction and site development as required by State law.	Consistent. Energy conservation measures have been incorporated into the LCRSP.
1.1	Protect and enhance the City's existing positive attributes.	Consistent. The LCRSP will result in a high-quality residential and commercial neighborhood.
1.1.3	The City shall protect, to the extent feasible, the natural character of the areas bordering, or in close proximity to, the National Forest to the north and northwest of the City, and the view of those areas seen from the northern portion of the City.	Consistent. The LCRSP preserves a minimum of 908.0 acres, including open space areas adjacent to the SBNF and GHRP.
1.1.4	The City shall protect, to the extent feasible, the natural character of the areas bordering, or in close proximity to, the Santa Ana River.	Consistent. A minimum 829.2 acres of natural (undisturbed) open space will be preserved on the site, including a substantial part of Lytle Creek.
1.2	Protect Rialto's rural, small town character.	Consistent. Although the LCRSP establishes few physical linkages with the downtown area and introduces new commercial nodes that foster decentralization and neighborhood isolation, the project includes numerous design features which promote a neighborhood-based pedestrian scale.
	Community Design Element	
1.2.1	All new development and renovations, adjacent to older residential neighborhoods, shall respect the scale, massing, and landscape of older residential neighborhoods. This includes: development of landscape plans which complement neighboring lots, buffer adjoining land uses, and soften variations in size, setback, or architectural character of buildings on nearby parcels; the relationship between size and bulk of building parts; placement of windows and doors, setbacks, colors, materials and detailing compatible with the existing neighborhood; and adopt demolition and infill ordinances, applying demolition and infill standards in all future specific plans within developed areas.	Consistent. Through the placement of compatible adjacent development, the LCRSP will respect the scale, massing, and landscape of nearby older residential areas, while establishing its own unique community identity.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Community Design Element (Continued)	
1.4	Improve the architectural quality of development within Rialto to achieve harmony without monotony in the built environment.	Consistent. The LCRSP includes architectural standards promoting design variations.
1.4.4	The following neighborhoods shall be addressed separately by specific policies and/or documents as identified below. . .Sycamore Flats (Sycamore Flats Specific Plan) [and] Lytle Creek Area (Lytle Creek Specific Plan. . .In these areas, design shall conform to the separate design standards found in their respective specific plan documents. The City shall encourage the timely completion of these design components within these areas.	Consistent. The Sycamore Flat (Neighborhood I) and Lytle Creek areas (Neighborhoods II, III, and IV) has been incorporated into the LCRSP. Separate architectural standards have been formulated for those areas.
3.1	Promote commercial and/or industrial development which is well designed, people-oriented, sensitive to the needs of the visitor or resident, and functionally efficient for its purpose.	Consistent. Architectural standards have been formulated for commercial and industrial uses.
3.3	Minimize the visual impact of vehicles on the landscape and community design of parking lots.	Consistent. The LCRSP complies with City requirements for screening of parking lots.
3.4	Special design consideration shall be given to such uses as service stations, car washes, convenience markets, and fast food drive through businesses.	Consistent. The LCRSP stipulates that service stations, car washes, convenience markets (<15,000 S.F.), and drive-through businesses obtain a conditional development permit.
4.1	Promote historic preservation efforts within the City of Rialto.	Consistent. Detailed archaeological investigations have been conducted and appropriate historic preservation measures have been formulated.
4.1.1	The City shall incorporate historically and architecturally significant buildings into new projects, whenever feasible. Developers will be encouraged to: renovate or restore historically significant structures; protect and enhance design features associated with historic Rialto, including street trees, gardens, and river rock walls; and develop new structures and renovate existing buildings within historic districts which use only those materials, architectural details and design techniques compatible with the City's architectural heritage.	Consistent. As mitigated, preservation efforts will allow for the retention of identified on-site cultural resources. In the event that in-situ preservation is determined to be infeasible, documentation, in the form of Historic American Landscape Survey (HALS) recordation, Level II analysis, will be prepared and recorded prior to any ground disturbing activities.
5.1	Promote the "greening" of Rialto.	Consistent. The LCRSP will comply with the State's Green Building Code standards (24 CCR Part 11).
7.2	Ensure the protection of new development from watercourses, flood control channels and other waterways, while retaining an aesthetic appearance	Consistent. No development is proposed within areas which will be subject to flood hazards.

Table 4.1-6 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT
CITY GENERAL PLAN GOALS AND POLICIES

No.	General Plan Policies	Consistency Assessment
	Cultural and Historic Resources Element	
2.1	All significant archaeological resources in Rialto shall be surveyed, recorded and, where feasible, protected.	Consistent. A detailed survey of potential archaeological resources has been conducted.
2.1.1	The City shall consult the Archaeological Information Center at the San Bernardino County Museum to document the findings from archaeological surveys previously conducted on undeveloped land in Rialto.	Consistent. The Archaeological Information Center was consulted during the assessment of on-site cultural resources.
2.1.2	Prior to development, archaeological surveys will be required for all sites in archaeologically sensitive areas where no previous surveys are recorded. Findings of these new surveys will be added to the City's survey documentation, and reported to the Archaeological Information Center at the San Bernardino County Museum.	Consistent. A detailed survey of potential archaeological resources has been conducted.
2.1.3	Subsequent to surveys conducted in archaeological sensitive areas, any archaeological finds will be recorded and evaluated. Where appropriate, measures to mitigate adverse impacts on findings will be taken in accordance with the CEQA, the National Environmental Quality Act, and/or the National Historic Preservation Act.	Consistent. A detailed survey of potential archaeological resources has been conducted and mitigation measures have been formulated, where required, to reduce impacts to a less-than- significant.
2.1.4	All recovered specimens from archaeological sites shall be permanently curated at a qualified repository recommended by Archaeological Information Center at the San Bernardino County Museum.	Consistent. Proper care of recovered specimens is discussed as a mitigation measure in the EIR.
3.1	All significant historical resources within Rialto shall be surveyed, recorded and, where feasible, protected.	Consistent. A detailed survey of potential archaeological resources has been conducted.
3.1.1	All archaeological surveys conducted pursuant to the policies of the City of Rialto shall be required to include historical archaeological surveys.	Consistent. A detailed survey of potential archaeological resources has been conducted.
4.1	Preserve Rialto's significant historic resources as a source of community identity, stability, aesthetic character, and socioeconomic value.	Consistent. There are no significant historical resources located within the Lytle Creek Ranch project site.

Source: City of Rialto

South of the I-15 Freeway, portions of Neighborhood I are presently located within the boundaries of the County-approved LCNPD. Under the County General Plan, those areas are designated "Planned Development (PD)." As further illustrated in Figure 4.1-6 (San Bernardino County General Plan – Land-Use District Designations), those areas are also designated "Specific Development – Residential (SD-RES)." As shown in Figure 4.1-14 (Lytle Creek North Planned Development Master Plan), those areas also comprise portions of two LCNPD planning areas ("Lot 14" and portions of "Lots D and E" of Tract 15900) and are presently designated "Open Space (OS)" and "Single-Family Residential (SF-7) (7,200 sq. ft. min)."

In contrast to the proposed LCRSP, the land-use categories established under the County-approved LCNPD do not distinguish between retained open space and recreational open space. As such, the LCNPD's existing "Open Space (OS)" category is reasonably broad and encompasses both the LCRSP's proposed "Open Space (OS)" and "Open Space/Recreation (OS/R)" designations. Since the LCNPD's existing "Single Family Residential (SF-7) (7,200 sq. ft. min.)" designation generally equates to about 5 dwelling units per acre, that designation would be similar to the LCRSP's proposed "Single-Family Residential 1 (SRF-1) (2-5 du/ac)."

North of the I-15 Freeway, portions of Neighborhood I are also presently located within the boundaries of the LCNSP. As indicated in the County General Plan, those areas are also designated "Planned Development" (PD) and "Specific Development – Residential (SD-RES)." As specified under the County-approved LCNPD, the generally triangular-shaped property bounded on the north by the SBNF, on the south by the I-15 Freeway, and on the west by Lytle Creek Wash is presently comprised of eight LCNPD-designated planning areas (PAs 1-8). As illustrated in Figure 4.1-14 (Lytle Creek North Planned Development Master Plan), five of those planning areas are designated "Commercial (C)," two planning areas are designated "Open Space (OS)," and one planning area is designated "Landscape" (public landscaped parkway/trail). Under the proposed LCRSP, those areas would be redesignated "Single-Family Residential 3 (SFR-3) (8-14 du/ac)" and "Open Space (OS)."

Other than as associated with street and infrastructure improvements, no development activities have commenced within this area under the authority of the LCNPD. With the exception of "Lot 14" and portions of "Lots D and E" of Tract 15900, as depicted in Figure 4.1-14 (Lytle Creek North Planned Development Master Plan), the remaining portion of the LCNPD property, located to the south of the I-15 Freeway, is not part of the proposed LCRSP project. Vehicular access to that area, now known as Rosena Ranch, will be provided from Clearwater Parkway and from Glen Helen Parkway east of Lytle Creek Road and directly west of Lytle Creek Wash.

Excluding the Sycamore Canyon area, the I-15 Freeway and Lytle Creek Wash form distinctive boundaries to the LCNPD property and physically separate the proposed LCRSP from the approved LCNPD on both the south and west. Within the Sycamore Canyon area, under the proposed LCRSP, abutting land uses include "Open Space/Recreation (OP/R)" and "Single-Family Residential 1 (SFR 1) (2-5 du/ac)." Those proposed land uses are generally compatible with the residential uses now being developed with the LCNPD boundaries.

As illustrated in Figure 4.1-1 (San Bernardino National Forest Land Management Plan), that portion of the SBNF which abuts Neighborhood 1 has been designated "Developed Area Interface (DAI)" by the Forest Service. With the exception of a relatively small area located within the GHSP that is proposed as "Single-Family Residential 1 (SFR-1 (2-5 du/ac) and a second relatively small area located within LCNPD that is proposed "Single-Family Residential 3 (SFR-3) (8-14 du/ac)," all adjoining properties within the area of the LCRSP would be designated "Open Space (OS)."

Because they generally provide a transitional buffer, open space uses would be deemed compatible with the Forest Service's "Developed Area Interface (DAI)" designation.

As indicated in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), within Neighborhood I, a total of 1,278 dwelling units are now planned within the approximately 418.9-acre planning areas.

As illustrated in Figure 4.1-17 (City of Rialto General Plan - Land-Use District Designations) and Figure 4.1-18 (City of Rialto General Plan – Northern Sector Planning Sector), the City has prezoned those unincorporated County lands which are part of the proposed LCRSP as a "Special Study Area" and "Specific Plan Zone." Although so designated, neither the City General Plan nor the City General Plan MEIR identified specific development types, levels, or intensities within that area. As indicated in the City General Plan MEIR: "At this time, the nature of development proposed for these lands has not yet been made known" and "impacts cannot be planned for until the specific plans are presented to the City, and the character of the planned development is revealed."[233]

Although no specific land uses are identified, the City General Plan MEIR acknowledges that the "City's northerly and southerly Sphere's of Influence will provide additional opportunities for single-family residential development."[234] As proposed, Neighborhood I will be developed primarily as a lower density residential area, with accompanying open space and recreational areas and with supporting neighborhood commercial uses.

The proposed land-uses appear consistent with the general intent of the City General Plan's "Northern Sector – Specific Plan Zone." As outlined in Table 4.1-6 (Preliminary Consistency Assessment - City General Plan Goals and Policies), the goals and policies specific to that sector and that specific plan zone include Goal 4.1.1 and Policies 4.1.1.1 through 4.1.1.6. That goal and those policies promote the preparation of a specific plan as a precursor to the sector's and the zone's development. The LCRSP services to fulfill that planning requirement. The proposed land uses within Neighborhood I, therefore, appear to fulfill the City's long-range planning intent for that area.

The text and map amendments as may be required for the adoption and implementation of the LCRSP will ensure consistency between the LCRSP and the City General Plan.

- **Neighborhood II**. As illustrated in Figure 4.1-6 (San Bernardino County General Plan – Land-Use District Designations), an approximately 680.8-acre portion of the geographic

[233]/ *Op. Cit.*, City of Rialto General Plan, p. II-22; City of Rialto (The Keith Companies), Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, March 31, 1992, p. 4.1-24.

[234]/ *Ibid.*, Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, p. 4.8-6.

area comprising Neighborhood II is currently located within the area now subject to the County General Plan and within the City's adopted SOI. Those County unincorporated areas now proposed as part of Neighborhood II are presently designated "Floodway (FW)" and "Single Residential (20,000 sq. ft. min.) (RS-20M)" in the County General Plan. Adjoining lands located in County unincorporated areas are presently designated "Floodway (FW)" and "Single Residential (20,000 sq. ft. min.) (RS-20M)" and "Single Residential (10,000 sq. ft. min.) (RS-10M)."

An approximately 121-acre portion of Neighborhood II is already located within the City's corporate boundaries and is currently subject to both the City General Plan and to the provisions of the ERVSP. The existing land-use designations within the City are as depicted in Figure 4.1-17 (City of Rialto General Plan - Land-Use District Designations) and Figure 4.1-19 (City of Rialto – El Rancho Verde Specific Plan Conceptual Land-Use Plan).

Neighborhood II, which is planned as a gated "active adult" (age-qualified 55+) golf course community, includes and extends beyond the existing ERVSP boundaries. As specified in the ERVSP, the City General Plan land-use designation for the ERVSP area is "Medium Density Residential (3-6 du/ac)/Recreation-Golf Course," allowing for a residential density of 3-6 dwelling units per acre and providing broad flexibility on the ultimate siting of any resulting residential development. The City's approval of GPA No. 22 and SPA No. 1 increased the number of allowable single-family dwelling units that could be constructed within the specific plan boundaries from 144 units to 300 units and resulted in a relocation of the development area within that property. In addition, GPA No. 22 and SPA No. 1 authorized the rerouting of the existing golf course and construction of a 19,339 square foot clubhouse (approximately 3,878 square feet larger than the existing clubhouse) and included the widening of Peach Street, at North Riverside Avenue, to provide for dedicated northbound and southbound turning lanes.

As proposed, the El Rancho Verde Royal Vista Golf Course is retained but the golf course is reconfigured and the clubhouse and other ancillary facilities enlarged. Under the proposed LCRSP, the area of the reconfigured golf course would be designated "Open Space/Recreation (OS/R)." With those changes, the approximately 221-acre ERVSP is consolidated into the larger LCRSP and both the number of dwelling units and the associated residential densities authorized within the area increased. With the exception of the southwesterly portion of the area of the former ERVSP, which abuts existing single-family homes located in the City on the west and which will be designated "Single-Family Residential 1 (SRF-1) (2-5 du/ac)," the proposed residential designation within the remainder of the ERVSP will be "Single-Family Residential 2 (SRF-2) (5-8 du/ac)" and "Single-Family Residential 3 (SRF-3 (8-14 du/ac)."

As proposed, that portion of Neighborhood II located within Lytle Creek Wash would be designated "Open Space (OS)." With regards to that portion of Neighborhood II already located within the City (within the ERVSP boundaries), the golf course is retained but its configuration modified and its accompanying facilities enhanced. Under both current and proposed plans, residential development will continue as the primary intended land use within this planning area.

In the northern portion of Neighborhood II, "Single-Family Residential 2 (SRF-2) (5-8 du/ac)," "Single-Family Residential 3 (SRF-3) (8-14 du/ac)," "High Density Residential

(HDR) (25-35 du/ac)," and "Village Center Commercial" (VC) are proposed. As indicated in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), within Neighborhood II, a total of 2,931 dwelling units and 130,680 square feet of non-residential land use (excluding public services and facilities) are now planned within that approximately 797.8-acre neighborhood.

With regards to those areas not presently located within the City's corporate boundaries, the proposed land-uses appear consistent with the general intent of the City General Plan's "Northern Sector – Specific Plan Zone." As outlined in Table 4.1-6 (Preliminary Consistency Assessment - City General Plan Goals and Policies), the goals and policies specific to that sector and that specific plan zone include Goal 4.1.1 and Policies 4.1.1.1 through 4.1.1.6. That goal and those policies promote the preparation of a specific plan as a precursor to the sector's and the zone's development. The LCRSP serves to fulfill that planning requirement.

Although the land-use designation would change from "Floodway (FW)" to "Open Space (OS), through the annexation of Neighborhood II, development in areas subject to flood hazards would be avoided and the area potentially subject to those hazards would be predominately retained as natural open space.

While much of Neighborhood II is undeveloped, under existing County policies, including the designation of a portion of Neighborhood II as "Single Residential (RS)," lower density residential uses are now authorized under the County General Plan.

Although no specific land uses are identified, the City General Plan MEIR acknowledges that the "City's northerly and southerly Sphere's of Influence will provide additional opportunities for single-family residential development."[235] As proposed, Neighborhood II will be developed primarily as a lower density residential area, with some higher density residential use, accompanying open space and recreational areas, and with supporting commercial uses. The proposed land uses within Neighborhood II, therefore, appear to fulfill the City's long-range planning intent for that area.

The text and map amendments as may be required for the adoption and implementation of the LCRSP will ensure consistency between the LCRSP and the City General Plan.

- **Neighborhood III**. As illustrated in Figure 4.1-6 (San Bernardino County General Plan – Land-Use District Designations), an approximately 585.5-acre portion of the geographic area comprising Neighborhood III is currently located within the area now subject to the County General Plan, within the City's adopted SOI. Those County unincorporated areas now proposed as part of Neighborhood III are designated "Floodway (FW)," "Single Residential (RS)," and "Specific Development – Residential (SD-RES)" in the County General Plan.

  An approximately 383.3-acre portion of Neighborhood III is already located within the City's corporate boundaries and is currently subject to the City General Plan. As depicted in Figure 4.1-17 (City of Rialto General Plan - Land-Use District Designations) and Figure 4.1-18 (City of Rialto General Plan – Northern Sector Planning Sector), the existing land-use designations for that portion of Neighborhood III presently located

[235]/ *Ibid.*, p. 4.8-6.

within the corporate boundaries of the City are "Special Study Area" and a "Specific Plan Zone" (SPZ). The only permitted land use now operating within the Neighborhood III area is Monier Lifetile (3511 North Riverside Avenue, Rialto), a manufacturer of concrete roof tiles.

As proposed, that portion of Neighborhood III located within Lytle Creek Wash will be designated "Open Space (OS)." Other "Open Space/Recreational (OS/R)" areas abut the channel and are scattered throughout Neighborhood III. Residential use is, however, the primary land use within this neighborhood. Proposed land-use designations within Neighborhood III include "Open Space/Joint Use (OS/JU)," "Single-Family Residential 1 (SRF-1) (2-5 du/ac)," "Single-Family Residential 2 (SRF-2) (5-8 du/ac)," "Single-Family Residential 3 (SRF-3) (8-14 du/ac)," "Multi-Family Residential (MFR) (14-28 du/ac)," "High Density Residential (HDR) (25-35 du/ac)," "Village Center Commercial (VC)," "Elementary School (ES)," and "Elementary School/Middle School (ES/MS)."

As illustrated in Figure 4.1-15 (City of Fontana General Plan – Land-Use Map), under the "City of Fontana General Plan," the area west of Sierra Avenue and Riverside Avenue, is designated "Regional Mixed Use (R-MU) (0.1 – 1.0 FAR for non-residential; 12-24 du/ac for residential)," "General Commercial (C-2) (0.1 – 1.0 FAR)," and "Public Utility Corridor (P-UC)."

Fontana's "General Commercial (C-G)" designation is intended for retailing, wholesaling, and service activities, including automobile dealerships, malls, offices, and clinics. Fontana's "Regional Mixed Use (R-MU) zone is accommodate both commercial and industrial uses, including research and development facilities, general commercial uses, corporate business parks, light manufacturing, warehouse retail, entertainment centers, hotels and convention centers, service and professional business offices, day-care centers, and public open space. In addition, the R-MU category accommodates a range of housing types, including multiple-family, single-family attached, and single-family detached.

The LCRSP's "Village Center Commercial (VC)" district is also intended as a jobs center. Authorized uses include shopping centers, freestanding retail and commercial buildings, medial/dental uses, and office and business park uses. Housing is, however, precluded in the "Village Center Commercial (VC)" district.

As indicated in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), within Neighborhood III, a total of 3,329 dwelling units and 713,295 square feet of non-residential land use (excluding public services and facilities) are now planned within that approximately 961.0-acre neighborhood.

As indicated in the City General Plan, other than "Mineral Resources," no specific land use has been adopted for the City's SOI. As indicated in the City General Plan, "[t]his sector contains the highest proportion of vacant land of any of the City's sectors, this offering the greatest flexibility for future land planning unconstrained by potential nonconforming uses. Of that land which is developed, the dominant uses are residential and industrial, sometimes in close proximity."[236] The referenced "developed" area is located along Riverside Avenue, south of the channel. The City General Plan suggests

[236]/ *Op. Cit*., City of Rialto General Plan, Land Use Element, p. II-22.

that residential uses would not be incompatible with the City's planning policies for the project properties.

The City General Plan MEIR acknowledges that the "City's northerly and southerly Sphere's of Influence will provide additional opportunities for single-family residential development."[237] As proposed, Neighborhood III will be developed primarily as a lower density residential area, with some higher density residential use, accompanying open space and recreational areas, and with supporting neighborhood commercial uses. The proposed land uses within Neighborhood III, therefore, appear to fulfill the City's long-range planning intent for that area.

The text and map amendments as may be required for the adoption and implementation of the LCRSP will ensure consistency between the LCRSP and the City General Plan.

- **Neighborhood IV**. As illustrated in Figure 4.1-6 (San Bernardino County General Plan – Land-Use District Designations), east of Lytle Creek Road, under the existing County General Plan, most of Neighborhood IV is presently designated "Floodway (FW)," with a small portion located in the southwest corner designated "Rural Living (RL)." As further illustrated in Figure 4.1-6 (San Bernardino County General Plan – Land-Use District Designations), the area west of Lytle Creek Road is designated "Rural Living (RL)," "Rural Living (10,000 sq. ft. min.) (RL-10)," and "Neighborhood Commercial (CN)."

  As illustrated in Figure 4.1-15 (City of Fontana General Plan – Land-Use Map), under the "City of Fontana General Plan," the area west of Lytle Creek Road is designated "Residential Estates (R-E) (2 du/ac)," "General Commercial (C-2) (0.1-1.0 FAR)," and "Utility Corridor (U-C)."

  As proposed, in addition to the proposed "Open Space (OS)" (PAs 16-18 and 21-22) and "Open Space/Recreational (OS/R)" (PAs 19, 24, and 26) areas within and abutting Lytle Creek Wash, land uses within the approximately 259.4-acre area comprising Neighborhood IV include "Multi-Family Residential (MFR) (14-28 du/ac)" (PA 20) and "Village Center Commercial (VC)" (PAs 23, 25, and 27). A GW Overlay has been applied to PA 20.

  The proposed "Open Space (OS)" designation of the Lytle Creek Wash area promotes the retention of that area for both flood control and resource conservation purposes and would, therefore, be consistent with the County's existing "Floodway (FW)" designation. The area so designation, however, includes portions of Neighborhood IV upon which residential land uses would be developed. As specified in Table 82-5A (Agricultural and Resource Management Land Use Zoning District Development Standards – Valley Region) in the County Development Code, with regards to those areas designated "Floodway (FW)" and "Open Space (OS)," residential uses are not allowed. In areas designated for "Resource Conservation (RC)," residential densities of one unit per 40 acres are authorized.

  To the extent that flood hazards exist or remain within those areas presently designated in the County General Plan as "Floodway (FW)," project residents could be subjected to potential safety hazards. A mitigation measure (Mitigation Measure 1-10) has, therefore,

[237]/ *Op. Cit.*, Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, p. 4.8-6.

been formulated to ensure that any resulting residential development within Neighborhood IV or elsewhere within the LCRSP boundaries would not unduly expose any newly-designated residential areas to unacceptable flood hazards. That mitigation measure complements and reinforces the provisions of Section 17.16.020(B)(8) in Title 17 (Subdivisions) of the City Municipal Code which stipulates that tentative tract maps submitted to the City shall include mapping indicating the "approximate location of all areas subject to inundation or storm water overflow and the location, width, and direction of flow of each watercourse."

Based on the proposed flood control improvements, following annexation, the County's "Floodway (FW)" designation would no longer be applicable to the site. To the extent that such actions change FEMA's flood insurance rate map (FIRM) designation, the Applicant can petition FEMA for either a "conditional letter of map amendment" (CLOMA) or a "letter of map amendment" (LOMA).

Although the proposed residential densities which would be established under the proposed LCRSP would exceed those now evident to the west of Lytle Creek Road and as authorized under the County General Plan and "City of Fontana General Plan," residential uses are generally compatible and consistent with other residential uses since site occupants would be assumed to have comparable use restrictions and requirements.

Lytle Creek effectively separates the proposed development within Neighborhood IV from the SBNF. With regards to the National Forest, as illustrated in Figure 4.1-1 (San Bernardino National Forest Land Management Plan), that portion of the SBNF abutting Neighborhood IV has been designated "Developed Area Interface (DAI)" by the Forest Service. Because it provides a transitional buffer, retained open space uses would be deemed compatible with the Forest Service's "Developed Area Interface (DAI)" designation.

Existing land uses located to the west of Lytle Creek Road and north of the I-15 Freeway include both rural residential properties and freeway-oriented commercial uses, such as gasoline stations and fast-food restaurants (Nealy's Corner). Proposed commercial uses within the southwestern corner of Neighborhood IV, within areas designed "Village Center Commercial (VC)," would be compatible with those uses and consistent with the County's and the City of Fontana's land-use designations.

As indicated in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), within Neighborhood IV, a total of 869 dwelling units and 180,689 square feet of non-residential land use (excluding public services and facilities) are now planned within the approximately 259.4-acre neighborhood. All residential development within this neighborhood would be located east of Lytle Creek Road and west of Lytle Creek.

Although no specific land uses are identified, the City General Plan MEIR acknowledges that the "City's northerly and southerly Sphere's of Influence will provide additional opportunities for single-family residential development."[238] To the extent that the City General Plan MEIR promotes housing development, in order to accommodate a range of housing opportunities, different housing products and densities must be available. Taken

[238]/ *Ibid.*, p. 4.8-6.

in total, the proposed LCRSP will create primarily a residential community, supported by neighborhood-serving commercial uses. Within Neighborhood IV, in addition to retained open space, both "Multi-Family Residential (MRF) (14-28 du/ac)" and "Village Center Commercial (VC)" land-use designations, including a GW Overlay, will be created. Although not catering to a single-family detached consumer, the proposed land uses within Neighborhood IV nonetheless appear to fulfill the City's long-range planning intent for that area.

The text and map amendments as may be required for the adoption and implementation of the LCRSP will ensure consistency between the LCRSP and the City General Plan.

Since many of the City General Plan policies address a broad array of environmental factors, the project must also be examined in the context of other relevant land-use policies. Those policies deemed to be most applicable to the proposed project and/or to the project site are outlined in Table 4.1-6 (Preliminary Consistency Assessment - City General Plan Goals and Policies) and are addressed herein. Those policy statements that address issues other than land use are separately examined in later sections of this EIR.

The criteria for assessing a consistency must be based on whether the proposed action furthers the attainment of broad-based policy directives and whether the action generally satisfies a preponderance of rather than the totality of each of the policies presented in those documents. As indicated, the proposed project appears generally consistent with the City General Plan.[239,240]

Although SCAG's projections did not include the LCRSP, it is anticipated that the City will remain "balanced" with regards to a jobs-housing ratio. From a Citywide perspective, substantial evidence exists to support a determination by the City's decision-making body that, because jobs-housing balance is a community-based planning consideration, it does not need to be applied to individual development activities. As a result, those City General Plan policies promoting the attainment of a jobs-housing balance may not be deemed applicable to the proposed project.

As specified in Section 2763(a) of SMARA: "If an area is designated by the board as an area of regional significance, and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a) of Section 2762, or otherwise has not yet acted pursuant to subdivision (a) of Section 2762, then prior to permitting a use which would threaten the potential to extract minerals in that area, the lead agency shall prepare a statement specifying the reasons for permitting the proposed use, in accordance with the requirements set forth in subdivision (d) of Section 2762. Lead agency land use decisions involving areas designated as being of regional significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral value against alternative land uses, consider the importance of these minerals to their market region as a whole and not just their importance to the lead agency's area of jurisdiction."

[239]/ In Napa County for Honest Government v. Board of Supervisors, the courts states, in pertinent part,: "'The general plan has been aptly described as the "constitution for all future developments. . .[T]he propriety of virtually any local decision affecting land use and development depends upon consistency with the applicable general plan and its elements. . .The consistency doctrine has been described as 'the linchpin of California's land use and development laws; it is the principle which infuse the concept of planned growth with the force of law' [Citation]."

[240]/ It is well settled that a local agency is entitled to considerable deference in the interpretation of its own general plan (Sierra Club v. County of Napa [2004]). Likewise, this deference also applies to the agency's interpretation of its own local zoning ordinances (Sheryl Grey v. County of Madera, Fifth Appellate District [2008].

In accordance with the SMARA, codified in Chapter 18.76 (Surface Mining and Reclamation) in Title 18 (Zoning) of the City Municipal Code, the City has adopted a surface mining and land reclamation ordinance which recognizes that the extraction of minerals is essential to the continued economic well-being of the City and to the needs of society and acknowledges that the reclamation of mined land is necessary to prevent or minimize adverse environmental effects and to protect the public health and safety.

As indicated in Section 4.3 (Geology and Soils), the project site is located within the San Bernardino Production-Consumption Region. The 1,098 square mile San Bernardino P-C Region includes a total of 116 square miles of land area containing significant aggregate deposits and classified as MRZ-2. Within the San Bernardino P-C Region, there exists "nine major MRZ-2 areas," collectively covering about 64 square miles and contains a total of 10.5 billion short tons of aggregate.[241] It is estimated that, from an engineering perspective alone, approximately 300.6-acre area within Neighborhood II and/or approximately 239.5 acres in Neighborhood III are feasibly available for mining operations. Based on existing and absent additional physical, social, environmental, and/or regulatory constraints, the reasonable recovery of construction-grade aggregates within these resource sectors is estimated to total approximately 40.87 million short tons.[242]

With regards to project-related impacts on aggregate resources, the site's development will impact about 0.04 percent of those resources located within MRZ-2 designated lands in the San Bernardino P-C Region. From a land-use perspective, aggregate resource impacts will be generally limited to the project site and the project's development is not anticipated to affect either those active mining activities located in close proximity to the LCRSP area or the continuing recovery of aggregate resources from those permitted mines. From a land-use perspective, the project would, therefore, be consistent with Section 18.76.010 (Purpose and Intent) and Section 18.76.170 (Mineral Resource Protection) of the City Municipal Code.

Neither the City General Plan nor City Municipal Code identify the LCRSP area as a resource conservation site or identify "open space" (or other similar designation) as the preferred end use for the project area. Nonetheless, as indicated in the City General Plan MEIR, the City acknowledges that "[p]roviding and encouraging access to mineral resources is an important consideration for the City of Rialto, as well as the State of California and the nation as a whole"[243] and "recognizes the importance of mineral resource values within the City and proposes a number of policies designed to provide for exploration and production activities. At the same time, however, the GPU [1992 General Plan Update] acknowledges the fact that mineral operations may pose significant environmental concerns. The overall goal of policies contained with the GPU is to provide a balance which protects mineral and environmental resource values."[244]

With regards to those areas within the City and its SOI containing construction aggregates, the City General Plan MEIR notes that "[m]ost of the areas designated as mineral resource sectors

[241]/ California Department of Conservation, Division of Mines and Geology, Mineral Land Classification of the Greater Los Angeles Are, Special Report 143, Part VII, 1987, pp. xi, xii, and 21.
[242]/ Cortner, Steve C., Evaluation for Potential Loss of Mineral Resource Resulting from the Development of Lytle Creek Ranch, City of Rialto, May 2008.
[243]/ City of Rialto (The Keith Companies), Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, March 31, 1992, p. 4.4-26.
[244]/ *Ibid*., p. 4.4-28.

are currently vacant land. These areas will be the growth areas in [the] future as urbanization continues to occur in the Rialto planning area."[245]

The City General Plan refers to the project site as the "Pharris land." As indicated therein: "That portion of the Pharris land, lying north of Riverside Boulevard and within City boundaries was zoned for residential purposes. Because this land is subject to a specific plan which is currently being studied, the zoning designation was removed, and it is now shown as SPZ (Specific Plan Zone)."[246] Notwithstanding that change in land-use designation, it is evident that, at the time of the adoption of the City General Plan, the City was cognizant that future growth would be concentrated in the general area of the project site and that the demands of urbanization would soon compete with the conservation and/or extraction of the area's mineral resources.

As indicated in the City General Plan: "The mineral resources found in [Sector] B-5 are construction aggregate (sand and gravel) deposits. State law requires that local land use planning must preserve access to and extraction of these resources as long as it is feasible."[247]

CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" (14 CCR 15364). The City has been presented with a development application from a property owner with a business ancestor which itself included aggregate mining and who has independently elected to advance a mixed-use development proposal rather than a mineral resource conservation and/or extraction proposal. Even if the City were to deny the current development application or select an alternative development proposal over that presented by the Applicant, the City lacks the ability to feasibly acquire the subject property and/or mandate that mineral extraction activities proceed.

Notwithstanding the presence of the Cemex USA quarry, the policy directives of preserving access to and promoting the extraction of mineral resources are deemed to be no longer feasible with regards to the project site. While acknowledging that the proposed project would threaten the potential to extract minerals in an area classified by the State Geologist as an area containing a "regionally significant" resource, that action would not be deemed to be inconsistent with the City General Plan.[248] From strictly a land-use perspective, no significant impacts to on-site aggregate resources would result from the project's implementation.[249]

Regional Plans

Environmental Impact 1-6*. Beyond the local level, regional plans have been formulated by regional planning organizations to guide development within the larger metropolitan area. Regional plans provide, if not a broader, a higher-tiered approach to addressing those environmental issues that extend beyond and across municipal boundaries. Local projects that are inconsistent with regional plans can thwart or otherwise hinder the attainment of certain environmental goals and produce impacts extending beyond individual corporate limits.*

[245]/ *Ibid*., p. 4.4-30.
[246]/ *Op. Cit*., City of Rialto General Plan, Housing, p. VI-27.
[247]/ *Ibid*., Land Use, p. II-24.
[248]/ Determination of consistency or inconsistency primarily rest with the City Council. Prior to certification by the City Council, if so certified, statements presented herein constitute preliminary determinations and remain subject to change or other modification based on the City Council's consideration of the information presented in the project's administrative record.
[249]/ Also see the analysis of mineral resource impacts in Section 4.3 (Geology and Soils) herein.

***Preliminary Determination 1-6**. Less-than-significant impact.*[250]

As specified in Section 15125(d) of the State CEQA Guidelines, EIRs shall discuss any inconsistencies between the proposed project and applicable general and regional plans.[251] As addressed throughout this EIR, such regional plans include, but are not limited to, applicable areawide waster treatment and water quality control plans (see Section 4.4 [Hydrology and Water Quality]), regional housing allocation plans (see Section 4.2 [Population and Housing]), habitat conservation plans and natural community conservation plans (see Section 4.5 [Biological Resources]), regional transportation plans (see Section 4.6 (Transportation and Traffic]), and air quality attainment and maintenance plans (see Section 4.7 [Air Quality]).

From a strictly land-use perspective, since the project involves the annexation of those unincorporated portions of the LCRSP not presently located within the City's corporate boundaries, including a corresponding change in jurisdictional authority, the focus of this regional consistency analysis is with regards to SCAG's land-use policies and not with regards to existing County policies. SCAG is the area's regional council of governments (COG) and metropolitan planning organization (MPO) for Los Angeles, Imperial, Orange, San Bernardino, Riverside, and Ventura Counties and its policies are intended to serve as recommendations to guide the planning activities of local agencies.

Projects that are "regionally significant"[252] shall demonstrate to SCAG their consistency with a range of adopted regional plans and policies. Although the proposed project meets the State CEQA Guideline's standard[253] for categorization as a "project of Statewide, regional, or areawide significance" (as replicated in SCAG's Intergovernmental Review Criteria 1-12), the project does not appear to meet any of the additional criteria for a "regionally significant" project as outlined in SCAG's "Minimum Criteria for Classification of Projects as Regionally Significant"[254] (Intergovernmental Review Criteria 13-22). In correspondence to the City, dated

[250]/ Because SCAG lacks jurisdiction over the proposed project, the preliminary findings of the Lead Agency do not themselves elevate to a threshold standard (i.e., conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect).

[251]/ The State CEQA Guidelines identifies this requirement under its discussion of "environmental settings" (14 CCRF 15125) and not under the following sections concerning either the "consideration and discussion of environmental impacts" (14 CCR 15126) or the "consideration and discussion of significant environmental impacts" (14 CCR 15126.2). As such, CEQA neither states nor infers that the Lead Agency has an obligation to define a significant effect on the environment as a project's failure or potential failure to fully comply with the provisions of any "regional plan" prepared by any agency that lacks "jurisdiction over the project adopted for the purpose of avoiding or mitigating an adverse environmental effect" (State CEQA Guidelines, Appendix G). The following discussion is, therefore, presented for information purposes only. Although, for format reasons, this discussion has been included herein under the project's "impact analysis," the following "consistency analysis" is intended to provide additional information more germane to the discussion of the project's "environmental setting."

[252]/ As defined in 40 CFR Part 93.101: "Regionally significant project means a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the are outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guide way transit facilities that offer an alternative to regional highway travel."

[253]/ As specified in Section 15206 of the State CEQA Guidelines, "projects of Statewide, regional, or areawide significance" include, but are not limited to: (1) a proposed residential development of more than 500 dwelling units; (2) a proposed shopping center or business establishment employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space. Projects meeting those standards shall be submitted to the State Clearinghouse and to the appropriate metropolitan area council of governments for review and comment.

[254]/ Southern California Association of Governments, Minimum Criteria for Classification of Projects as Regionally Significant, November 1995.

July 20, 2009, submitted in response to the NOP, SCAG notes that "staff has reviewed this project and determined that the proposed project is regionally significant per California Environmental Quality Act Guidelines, Sections 15125 and/or 15206."[255]

SCAG has adopted a number of documents that outline regional planning policies that may be applicable to the proposed project, including the 2004 Compass Blueprint, 2008 RTP, and 2008 RCP. The 2004 Compass Blueprint constitutes SCAG's regional growth vision for the future of the Los Angeles metropolitan area through 2030. The 2008 RTP addresses the future of the Los Angeles metropolitan area through 2035. The 2008 RCP serves as a regional framework for decision making for the region's growth through 2035.

The 2008 RCP "functions as a voluntary 'toolbox' to assist local jurisdictions in making their general and specific plans, as well as individual projects more sustainable."[256] SCAG notes that the 2008 "RCP serves as an advisory document to local agencies in the Southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance."[257] Drawing from the 1996 RCPG, which proceeded the 2008 RCP, SCAG explicitly stated that the "[t]he distribution of population, housing, and employment to subregions and cities constitute a forecast that public entities are currently anticipating, and do not imply a regional growth distribution policy intervention."[258] SCAG notes that the 2008 RCP is an "advisory plan that envisions what a livable, sustainable, successful region could look like. The desired outcome is that 100% of local general plans be qualitatively consistent with Compass Blueprint principles. It is not expected that all general plans will quantitatively mirror any particular growth forecast scenario."[259]

With regards to the 2008 RTP, SCAG notes: "On March 6, 2008, the SCAG Regional Council adopted the Baseline Growth Forecast for the 2008 RTP. Additionally, the Regional Council determined that a statement of land use policies/strategies would remain in the 2008 RTP as advisory only. SCAG's adopted growth forecast is not a plan indicating where growth should occur, but rather forecasts where growth is most likely to occur. SCAG does not have the authority to undertake land use planning. . .SCAG has no project implementation authority, but works cooperatively with County Transportation Commissions, the Imperial Valley Association of Governments, and other implementing agencies. SCAG has no land use authority and cannot overturn local land use authority; land use planning is conducted at the local level. . .SCAG cannot require cities to amend their general plans to address the RTP."[260] As further indicate in the 2008 RTP: "SCAG's Compass Blueprint Program has become a model for turning regional vision into local reality. . .As a voluntary program, SCAG provides these cutting-edge tools, analyses and comprehensive planning services to cities that seek additional technical expertise or strategic planning in order to implement a plan, ordinance or program consistent with the Compass Blueprint Principles."[261]

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[255]/ Letter from Jacob Lieb, Manager, Assessment, Housing & EIR, Southern California Association of Governments to Gina M. Gibson, Senior Planner, City of Rialto, Development Services Department, July 20, 2009.

[256]/ *Op. Cit*., Your Guide to SCAG, 2008-2009, p. 23.

[257]/ Southern California Association of Governments website (http://www.scag.ca.gov/rcp/index.htm).

[258]/ Southern California Association of Governments, Regional Comprehensive Plan and Guide, Growth Management, June 1994, revised March 1996, p. 3-5.

[259]/ Southern California Association of Governments, Draft Regional Comprehensive Plan, Response to Comments (City of Irvine – Office of the City Manager) (http://www.scag.ca.gov/rcp/pdf/2008/rcp081808_5_1.pdf).

[260]/ Southern California Association of Governments, Final Program Environmental Impact Report Addendum for the 2008 Regional Transportation Plan, May 2008, pp. 3-2 and 3-5.

[261]/ *Op. Cit*., Final 2008 Regional Transportation Plan: Making the Connection, p. 91.

From those excerpts, it is clear that SCAG lacks functional jurisdiction both over the proposed project and the project site. As such, whether with regards to the 2004 Compass Blueprint, 2008 RTP, and/or 2008 RCP, SCAG's policies should be construed as advisory in nature and not a regional policy intervention with regards to local decision making. Although they are strictly advisory, presented for informational purposes only, the 2004 Compass Blueprint, 2008 RTP, and 2008 RCP are separately addressed below. Presented in Table 4.1-7 (Preliminary Consistency Assessment - Regional Plans and Policies) is the Lead Agency's preliminary assessment of the proposed project's consistency (or inconsistency) with the policies outlined in the 2004 Compass, 2008 RTP, and 2008 RCP. Although these policies may have relevancy with regards to the decision-making process, they are not intended to have any direct CEQA application.

- **Southern California Compass – Growth Vision Report** (2004). The "Compass Blueprint 2% Strategy" presents guidelines outlining how and where SCAG seeks to promote its "growth vision" for southern California's future. The "Compass Blueprint 2% Strategy" calls for modest changes to current land use and transportation trends on only two percent of the land area of the region. The strategy proposes increasing the region's mobility by encouraging transportation investments and land-use decisions that are mutually supportive, locating new housing near existing job and new jobs near existing housing, and encouraging transit-oriented development and promoting a variety of travel choices. The "Compass Blueprint 2% Strategy" essentially consists of developing pockets of "walkable" urban density connected by public transit service, especially rail.

  As indicated therein, the City is identified as a post-2010 "Compass Blueprint 2% Strategy Opportunity Area" with regards to "rail transit stops." The City is neither identified as a "priority residential in-fill area" nor as a "priority residential in-fill area."

  From this, it can be concluded that the proposed project has not been expressly considered in the formulation of applicable regional plans and that the site-specific intensification of the project in the manner envisioned in the proposed development has not been expressly included in those plans. This is not, however, to infer that the anticipated regional growth (to which the proposed project seeks to respond) has not been considered by SCAG, only that the site is not located within "a strategic opportunity area" (defined as "parts of the region for targeting growth, where projects, plans and policies consistent with the Compass Blueprint principles will best serve the mobility, livability, prosperity and sustainability goals of the growth vision") where SCAG might encourage intensification to occur.

  Under SCAG's Compass Blueprint, the regional "growth vision is driven by four key principals: (1) mobility (getting where we want to go); (2) livability (creating positive communities); (3) prosperity (long-term health of the region); and (4) sustainability (preserving natural surroundings). Clearly, planning decisions founded on those principals need not restrict development to only those areas identified by SCAG. If development activities were to be restricted to only those geographic locales depicted by SCAG: (1) local planning and land-use authority would be eliminated or delegated a subordinate role to the COG; (2) certain communities would benefit from growth directed to those communities under the regional plan while other area would not be afforded the same benefits; (3) local agencies would be unable to respond to identified needs within their jurisdictions; and (4) the rights of individual property owners would be diminished.

Table 4.1-7
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2004 Compass Blueprint		
	Growth Visioning Principals	
GV P1.1	Encourage transportation investments and land use decisions that are mutually supportive.	Consistent. Mitigation measures have been formulated to ensure that that the LCRSP will provide for appropriate transportation investments consistent with project-specific and areawide growth projections.
GV P1.2	Locate new housing near existing jobs and new jobs near existing housing.	**Not inconsistent**. From an overly narrow project-specific perspective, because the LCRSP is primarily a residential development, it will not individually and independent of other areawide development, serve to promote the attainment of an areawide jobs-housing balance. Since all projects do not include both housing and employment-generating uses, individual projects cannot be realistically held to a jobs-housing balance standard.
GV P1.3	Encourage transit-oriented development.	Consistent. As mitigated, the project includes park-and-ride/park-and-pool facilities and public transit improvements designed to enhance linkages between the project site and the existing Rialto Metrolink Station.
GV P1.4	Promote a variety of travel choices.	Consistent. The LCRSP will include both pedestrian and bicycle trails. In addition, the bus route presently operating along Riverside Avenue will continue to connect to the Metrolink Station.
GV P2.1	Promote infill development and redevelopment to revitalize existing communities.	Consistent. The LCRSP could be considered an infill project since it is generally surrounded by existing developments and/or established recreational areas, including GHRP and the SBNF. The property is one of the last large areas in the City of Rialto.
GV P2.2	Promote developments, which provide a mix of uses.	Consistent. The LCRSP contains a mix of detached and attached residences, commercial development, parks, schools, recreation areas, and permanent open space.
GV P2.3	Promote “people scaled,” walkable communities.	Consistent: The LCRSP incorporates “people scaled” and “walkable” design elements, including a “Grand Paseo.” Backbone streets will have sidewalks on a least one side. Trails will be constructed adjacent to Lytle Creek in Neighborhood II, III, and IV.
GV P2.4	Support the preservation of stable, single-family neighborhoods.	Consistent. Proposed land uses adjacent to established single-family neighborhoods will generally complement those areas.
GV P3.1	Provide, in each community, a variety of housing types to meet the housing needs of all income levels.	Consistent. The LCRSP provides a variety of housing types to meet the housing needs of diverse income levels.

Table 4.1-7 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2004 Compass Blueprint (Continued)		
	Growth Visioning Principals (Continued)	
GV P4.1	Preserve rural, agricultural, recreational, and environmentally sensitive areas.	Consistent. The LCRSP provides for approximately 328.8 acres of open space and recreation land, including 17.0 acres of open space/joint-use park land uses. In addition, 829.2 acres of natural (undisturbed) open space will be retained.
GV P4.2	Focus development in urban centers and existing cities.	Consistent. Based on existing entitlements, a total of about 2,463 dwelling units and 612,016 square feet of non-residential uses could be developed on the project site. Because the project is located adjacent to existing development and infrastructure, the site's subsequent intensification would not constitute leap-frog development.
GV P4.3	Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.	Consistent. Although the project does not further the Compass Blueprint by concentrating new development away from key opportunity areas, the project further local planning objectives, promotes higher density residential development, retains significant portions of the project site for open space and conservation purposes, and incorporates alternative transportation systems.
GV P4.4	Utilize "green" development techniques.	Consistent. The LCRSP includes sustainable design guidelines, including "green" development techniques.
2008 Regional Transportation Plan		
RTP Goal	Maximize mobility and accessibility for all people and goods in the region.	Consistent. The LCRSP will contribute to the mobility and accessibility of people and goods in the region by improving area roadways.
RTP Goal	Ensure travel safety and reliability for all people and goods in the region.	Consistent. All roads within the LCRSP will be designed and engineered to ensure travel safety and reliability for all people and goods.
RTP Goal	Preserve and ensure a sustainable regional transportation system.	Consistent. Mitigation measures have been formulated to ensure that that the LCRSP provide appropriate transportation investments consistent with project and areawide growth projections.
RTP Goal	Maximize the productivity of our transportation system.	Consistent. The LCRSP Plan maximizes the productivity of the existing transportation system by incorporating existing streets (e.g., Glen Helen and Clearwater Parkways, Lytle Creek Road, Riverside Avenue/Sierra Avenue) into the project's backbone circulation system.
RTP Goal	Protect the environment, improve air quality and promote energy efficiency.	Consistent. Primarily because of the project's size, the project will generate significant air quality impacts. The project, however, includes all reasonably available control measures to reduce air emissions to the extent feasible.

Table 4.1-7
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2008 Regional Transportation Plan (Continued)		
RTP Goal	Encourage land use and growth patterns that complement our transportation investments and improve the cost-effectiveness of expenditures.	Consistent. Although the project does not further the Compass Blueprint by concentrating new development away from key opportunity areas, the project is served by regional transportation systems, traffic impacts are fully mitigated, and alternative transportation systems have been incorporated into the project's design.
RTP Goal	Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	Consistent. Adoption of a specific plan would not limit or prevent SCAG or security agencies from maximizing the security of the region's transportation system.
RTP Policy 3	RTP land-use and growth strategies that differ from currently expected trends will require a collaborative implementation program that identifies required actions and policies by all affected agencies and subregions.	Consistent. Adoption of a specific plan would not limit or prevent the development of a collaborative implementation program that identifies required actions and policies by all affected agencies and subregions.
2008 Regional Comprehensive Plan		
	Land Use and Housing Action Plan	
LU-4	Local government should provide for new housing consistent with State Housing Element law, to accommodate their share of forecast regional growth.	Consistent. The LCRSP will allow for the development of up to 8,407 dwelling units which will facilitate Citywide planning efforts to accommodate the City's share of the forecasted regional growth forecast.
LU-6	Local governments should consider shared regional priorities, as outlined in the Compass Blueprint, Regional Transportation Plan, and this Regional Comprehensive Plan, in determining their own development goals and drafting local plans.	Consistent. In determining its own development goals and drafting local plans, the LCRSP will not impede the City from considering shared regional priorities.
LU-6.2	Developers and local governments should integrate green building measures into project design and zoning such as those identified in the U.S. Green Building Council's LEED, Energy Star Homes, Green Point Rated Homes, and the California Green Building Program.	Consistent. The LCRSP integrates green building strategies, such as those identified in the United States Green Building Council's LEED, Energy Star Homes, Green Point Rated Homes, and the California Green Building Program, into its proposed design guidelines.
	Open Space and Habitat – Natural Lands Action Plan	
OSN-12	Local governments should track and Monitor Open Space Conservation by: [1] Considering the most recent annual report on open space conservation in planning and evaluating projects and programs in areas with regionally significant open space resources. [2] Ensuring consistency with the open space conservation policies and goals of the RCP.	Consistent. The LCRSP avoids significant impacts to regionally significant open space resources or otherwise mitigates significant impacts through measures consistent with the 2008 RCP open space policies for conserving natural lands. The LCRSP will result in the conservation of approximately 612.5 acres of natural habitat in the Lytle Creek wash area and riparian-related habitat in the vicinity of the Neighborhood I riparian corridor, with an emphasis on conserving lands that help preserve ecological function and value of protected open space.

Table 4.1-7 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2008 Regional Comprehensive Plan (Continued)		
	Open Space and Habitat – Natural Lands Action Plan (Continued)	
OSN-13	Local governments should develop and implement mitigation for open space impacts by: [1] Promoting coordinated mitigation programs for regional projects and establish the basis for inter-regional conservation strategies. [2] Planning development in locations least likely to cause environmental impacts.	Consistent. The proposed open space areas have biological connectivity to other lands dedicated for conservation open space within Lytle Creek Wash and within the Lytle and Cajon Creek confluence. Development in the LCRSP promotes the preservation of a significant portion of these habitat areas.
OSN-14	Developers and local governments should implement mitigation for open space impacts through the following activities: [1] Individual projects should either avoid significant impacts to regionally significant open space resources or mitigate the significant impacts through measures consistent with regional open space policies for conserving natural lands, community open space and farmlands. All projects should demonstrate consideration of alternatives that would avoid or reduce impacts to open space. [2] Individual projects should include project design, to the maximum extent practicable, mitigation measures and recommended best practices aimed at minimizing or avoiding impacts to natural lands, including, but not limited to FHWA's Critter Crossings, and Ventura County Mitigation Guidelines. [3] Project level mitigation for RTP's significant cumulative and growth-inducing impacts on open space resources will include but not be limited to the conservation of natural lands, community open space and important farmland through existing programs in the region or through multi-party conservation compacts facilitated by SCAG. [4] Project sponsors should ensure that transportation systems proposed in the RTP avoid or mitigate significant impacts to natural lands, community open space and important farmland, including cumulative impacts and open space impacts from the growth associated with transportation projects and improvements. [5] Project sponsors should fully mitigate direct and indirect impacts to open space resulting form implementation of regionally significant projects.	Consistent. The LCRSP will avoid and preserve a contiguous corridor for wildlife movement along Lytle Creek through the project area. All new major project roads will exist within the proposed development so that traffic noise will generally be attenuated within the surrounding development. The LCRSP proposes to exclude public roads and trails within the conservation open space within Lytle Creek Wash. Light impacts will be minimized with the implementation of design features aimed at shielding light away from natural open space areas. To the extent feasible, the conserved open space within Lytle Creek Wash will be protected from intrusion from project residents and visitors through a combination of fencing and signage along the proposed levee associated with Neighborhoods II, III, and IV.
	Open Space and Habitat – Community Open Space Action Plan	
OSC-8	Local governments should encourage patterns of urban development and land use, which reduce costs on infrastructure and make better use of existing facilities.	Consistent. The LCRSP encourages patterns of urban development and land use by clustering housing adjacent to paseos, parks, schools, and golf course and by encouraging both residential and non-residential development. This design approach will help reduce infrastructure costs and make better use of existing facilities.

Table 4.1-7 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2008 Regional Comprehensive Plan (Continued)		
	Open Space and Habitat – Community Open Space Action Plan (Continued)	
OSC-9	Developers and local governments should increase the accessibility to natural areas lands for outdoor recreation.	Consistent. The LCRSP provides for approximately 328.8 acres of recreation uses, including 17.0 acres of open space/joint-use park land uses. These areas will provide both active and passive recreational land uses for use by project residents and visitors. Under the LCRSP, areas designated open space/recreation will include neighborhood parks, golf course, open space and recreation areas, and trails and paseos. Through improvements to the circulation system and the expansion of hiking trails, the LCRSP also will facilitate the public's accessibility to the SBMF and the GHRP.
OSC-10	Developers and local governments should promote infill development and redevelopment to revitalize existing communities.	Consistent. The LCRSP area consists of under-utilized properties that are located in proximity to existing development and available infrastructure systems. Development of the LCRSP will help to revitalize existing communities by providing new housing and commercial opportunities.
OSC-11	Developers should incorporate and local governments should include land use principles, such as green building, that use resources efficiently, eliminate pollution and significantly reduce waste into their projects, zoning codes and other implementation mechanisms.	Consistent. The LCRSP incorporates land use principles, such as green building strategies and the inclusion of both residential and non-residential land uses, that encourage the efficient use of resources, encourage alternative modes of transportation.
OSC-12	Developers and local governments should promote water-efficient land use and development.	Consistent. The proposed project complies with this policy by promoting water-efficient land use and development. The LCRSP requires the use of water-wise landscaping and the use of low-flow toilets, showerheads, and other fixtures.
OSC-13	Developers and local governments should encourage multiple use spaces and encourage redevelopment in areas where it will provide more opportunities for recreational uses and access to natural areas close to the urban core.	Consistent. The proposed project will provide substantial areas suitable for recreational use and also provides access to natural areas close to residential and non-residential development areas.
	Water Action Plan	
WA-9	Developers and local governments should consider potential climate change hydrology and resulting impacts on available water supplies and reliability in the process of creating or modifying systems to manage water resources for both year-round use and ecosystem health.	Consistent. The LCRSP has been designed to accommodate existing ground water infiltration ponds so that ground water aquifers can continue to be used as a source of future water supplies. In addition, the LCRSP is working with the City and local water districts to provide for efficient reuse of wastewater (whether on the project site or at off-site areas) through use of recycled water from the Oliver P. Roemer Water Filtration Plant and possible construction of a new scalping plant that may provide an additional source of reclaimed water for use either on the project site or elsewhere in the City.

Table 4.1-7 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2008 Regional Comprehensive Plan (Continued)		
	Water Action Plan (Continued)	
WA-10	Developers and local governments should include conjunctive use as a water management strategy when feasible.	Consistent. The LCRSP is working with the City and local water districts to provide for efficient reuse of wastewater (whether on the project site or at off-site areas) through use of recycled water from the Oliver P. Roemer Water Filtration Plant and possible construction of a new scalping plant that may provide an additional source of reclaimed water for use either on the project site or elsewhere in the City.
WA-11	Developers and local governments should encourage urban development and land uses to make greater use of existing and upgraded facilities prior to incurring new infrastructure costs.	Consistent. The LCRSP area consists of under-utilized properties that are located in proximity to existing development and available infrastructure systems.
WA-12	Developers and local governments should reduce exterior uses of water in public areas, and should promote reduced use in private homes and businesses, by shifting to drought-tolerant native landscape plants (xeriscaping), using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives.	Consistent. The LCRSP has been designed to accommodate existing ground water infiltration ponds so that ground water aquifers can continue to be used as a source of future water supplies. In addition, the LCRSP is working with the City and local water districts to provide for efficient reuse of wastewater (whether on the project site or at off-site areas) through use of recycled water from the Oliver P. Roemer Water Filtration Plant and possible construction of a new scalping plant that may provide an additional source of reclaimed water for use either on the project site or elsewhere in the City.
WA-13	Developers and local governments should protect and preserve vital land resources – wetlands, ground water recharge areas, woodlands, riparian corridors, and production lands. The federal government's "no net loss" wetlands policy should be applied to all of these land resources.	Consistent. The LCRSP avoids significant impacts to regionally significant open space resources or otherwise mitigates significant impacts through measures consistent with the 2008 RCP open space policies for conserving natural lands. The LCRSP will result in the conservation of approximately 612.5 acres of natural habitat in the Lytle Creek wash area and riparian-related habitat in the vicinity of the Neighborhood I riparian corridor, with an emphasis on conserving lands that help preserve ecological function and value of protected open space. Compensatory resources are proposed to off-set impacts federally-designated jurisdictional areas.
WA-15	Local governments should amend ordinances as necessary to allow municipal and private outdoor use of recycled water for all parks, golf courses, and outdoor construction needs.	Consistent. The LCRSP is working with the City and local water districts to provide for efficient reuse of wastewater (whether on the project site or at off-site areas) through use of recycled water from the Oliver P. Roemer Water Filtration Plant and possible construction of a new scalping plant that may provide an additional source of reclaimed water for use either on the project site or elsewhere in the City.

Table 4.1-7 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2008 Regional Comprehensive Plan (Continued)		
	Water Action Plan (Continued)	
WA-23	Local governments should encourage Low Impact Development and natural spaces that reduce, treat, infiltrate and manage runoff flows caused by storms and impervious surfaces.	Consistent. The LCRSP has been designed to accommodate existing ground water infiltration ponds so that ground water aquifers can continue to be used as a source of future water supplies.
WA-24	Local governments should prevent development in flood hazard areas lacking appropriate protections, especially in alluvial fan areas.	Consistent. Although development is proposed in designated flood hazard areas, improvements to the existing levee system are proposed which will eliminate flood hazards within those areas.
WA-32	Developers and local governments should pursue water management practices that avoid energy waste and create energy savings/supplies.	Consistent. The proposed project complies with this policy by promoting water-efficient land use and development. The LCRSP requires the use of water-wise landscaping and the use of low-flow toilets, showerheads, and other fixtures.
	Energy Action Plan	
EN-8	Developers should incorporate and local governments should include the following land use principles that use resources efficiently, eliminate pollution and significantly reduce waste into their projects, zoning codes and other implementation mechanisms: [1] Mixed-use residential and commercial development that is connected with public transportation and utilizes existing infrastructure; [2] Land use and planning strategies to increase biking and walking trips.	Consistent. The proposed project include residential and non-residential land uses and incorporates an extensive pedestrian and bicycle trail system.
EN-9	Local governments should include energy analyses in environmental documentation and general plans with the goal of conserving energy through the wise and efficient use of energy. For any identified energy impact, appropriate mitigation measures should be developed and monitored. SCAG recommends the use of Appendix E, Energy Conservation, of the California Environmental Quality Act.	Consistent. The project's CEQA documentation includes an analysis of energy-related impacts. In addition, the LCRSP integrates green building strategies, such as those identified in the United States Green Building Council's LEED, Energy Star Homes, Green Point Rated Homes, and the California Green Building Program, into its proposed design guidelines.
EN-10	Developers and local governments should integrate green building measures into project design and zoning such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Building Program. Energy saving measures that should be explored for new and remodeled buildings include: [1] Using energy efficient materials in building design, construction, rehabilitation, and retrofit. [2] Encouraging new development to exceed Title 24 energy efficiency requirements. [3] Developing Cool Communities measures including tree planting and light-colored roofs. These measures focus on reducing ambient heat, which reduces energy consumption related to air conditioning and other cooling equipment.	Consistent. The LCRSP integrates green building strategies, such as those identified in the United States Green Building Council's LEED, Energy Star Homes, Green Point Rated Homes, and the California Green Building Program, into its proposed design guidelines.

Table 4.1-7 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2008 Regional Comprehensive Plan (Continued)		
Energy Action Plan (Continued)		
EN-10 (Cont.)	[4] Utilizing efficient commercial/residential space and water heaters: This could include the advertisement of existing and/or development of additional incentives for energy efficient appliances purchased to reduce excess energy use and save money. Federal tax incentives are provided online. [5] Encourage landscaping that requires no addition irrigation: utilizes native, drought tolerant plants can reduce water usage up to 60 percent compared to traditional lawns. [6] Encourages combined heating and cooling (CHP), also known as cogeneration, in all buildings. [7] Encourages neighborhood energy systems, which allow communities to generate their own electricity. [8] Orienting streets and buildings for best solar access. [9] Encouraging buildings to obtain at least 20% of their electric load from renewable energy.	
EN-11	Developers and local governments should submit projected electricity and natural gas demand calculations to the local electricity or natural gas providers, for any project anticipated to require substantial utility consumption. Any infrastructure improvements necessary for project construction should be completed according to the specifications of the energy provider.	Consistent. Energy calculations have been conducted and are presented herein. "Will serve" letters have been received from the Southern California Edison Company (SCE) and the Southern California Gas Company (SoCalGas).
EN-12	Developers and local governments should encourage that new buildings are able to incorporate solar panels in roofing and tap other renewable energy sources to offset new demand on conventional power sources.	Consistent. The LCRSP integrates green building strategies, such as those identified in the United States Green Building Council's LEED, Energy Star Homes, Green Point Rated Homes, and the California Green Building Program, into its proposed design guidelines.
EN-14	Developers and local governments should explore programs to reduce single occupancy vehicle trips such as telecommuting, ridesharing, alternative work schedules, and parking cash-outs.	Consistent. The proposed project includes a number of traffic control measures (TCMs) designed to reduce vehicle miles traveled (VTM).
EN-105	Local governments should employ land use planning measures, such as zoning, to improve jobs/housing balance and creating communities where people live closer to work, bike, walk, and take transit as a substitute for personal auto travel.	**Not inconsistent**. The proposed project includes both residential and non-residential development, creating opportunities for alternative modes of transportation. From an overly narrow project-specific perspective, because the LCRSP is primarily a residential development, it will not individually and independent of other areawide development, serve to promote the attainment of an areawide jobs-housing balance. Since all projects do not include both housing and employment-generating uses, individual projects cannot be realistically held to a jobs-housing balance standard.

Table 4.1-7 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2008 Regional Comprehensive Plan (Continued)		
	Air Quality Action Plan	
AQ-6	Local governments should support and pursue environmentally sustainable strategies that implement and complement climate change goals and outcomes such as updating their general plans to help address the State's AB 32 mandate. This should be consistent with State guidelines and requirements.	Consistent. Issues of greenhouse gas emissions and climate change have been addressed as part of the project's CEQA analysis and, where feasible, measures have been identified to reduce such impacts to a less-than-significant level.
AQ-7	Local governments should develop policies that discourage the location of sensitive receptors that expose humans to adverse air quality impacts such as amending general plans, zoning ordinances, business licensing, and related land use permitting processes to minimize human health impacts from exposure of sensitive receptors to local sources of air pollution. Jurisdictions should consider applicable guidance documents, such as [C]ARB's Air Quality and Lane Use Handbook: A Community Health Perspective and the South Coast AQMD's Guidance Document for Addressing Air Quality Issues.	Consistent. Project-related air quality impacts on proximal sensitive receptors have been addressed as part of the project's CEQA documentation and, where feasible, measures have been identified to reduce such impacts to a less-than-significant level.
AQ-8	Local governments should practice and promote sustainable building practices by: [AQ-8.1] Updating their general plans and/or zoning ordinances to promote the use of green building practices, which include incorporating LEED design standards and utilizing energy efficient, recycled-content and locally harvested or procured materials. [AQ-8.2] Developing incentive programs (e.g., density bonuses) to encourage green building and resources and energy conservation in development practices. [AQ-8.3] Adopting policies that strive for carbon neutrality for their own facilities and operations.	Consistent. The LCRSP integrates green building strategies, such as those identified in the United States Green Building Council's LEED, Energy Star Homes, Green Point Rated Homes, and the California Green Building Program, into its proposed design guidelines.
	Solid Waste Action Plan	
SW-12	Local governments should maximize waste diversion goals and practices and look for opportunities for voluntary actions to exceed the 50% waste diversion target.	**Not inconsistent**. Because the City has not adopted a C&D waste reduction ordinance, the City seeks voluntary measures by the Applicant to reduce construction wastes. Although composting and other recycling facilities are not explicitly identified, as indicated in the proposed LCRSP, "recycling centers as a principal use, collection and sorting only" is identified as a "conditionally permitted" land use within the "Village Center Commercial (VC)" district.
SW-14	Developers and local governments should integrate green building measures into project design and zoning including, but not limited to, those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program. Construction reduction measures to be explored for new and remodeled buildings include:	Consistent. The LCRSP integrates green building strategies, such as those identified in the United States Green Building Council's LEED, Energy Star Homes, Green Point Rated Homes, and the California Green Building Program, into its proposed design guidelines.

Table 4.1-7 (Continued)
PRELIMINARY CONSISTENCY ASSESSMENT - REGIONAL PLANS AND POLICIES

No.	SCAG Goal, Objective, Policy, or Action	Consistency Assessment
2008 Regional Comprehensive Plan (Continued)		
	Solid Waste Action Plan (Continued)	
SW-14 (Cont.)	[1] Reuse and minimization of construction and demolition (C&D) debris and diversion of C&D waste from landfills to recycling facilities. [2] An ordinance that requires the inclusion of a waste management plan that promotes maximum C&D diversion. [3] Source reduction through (1) use of building materials that are more durable and easier to repair and maintain, (2) design to generate less scrap material through dimensional planning, (3) increased recycled content, (4) use of reclaimed building materials, and (5) use of structural materials in a dual role as finish material (e.g., stained concrete flooring, unfinished ceilings, etc.). [4] Reuse of existing building structure and shell in renovation projects. [5] Building lifetime waste reduction measures that should be explored for new and removed buildings include: [a] Development of indoor recycling program and space, [b] Design for deconstruction, [c] Design for flexibility through use of moveable walls, raised floors, modular furniture, moveable task lighting and other reusable components.	
SW-16	Developers and local governments should support environmentally friendly alternative waste management strategies such as composting, recycling, and conversion technologies.	**Not inconsistent**. Because the City has not adopted a C&D waste reduction ordinance, the City seeks voluntary measures by the Applicant to reduce construction wastes. Although composting and other recycling facilities are not explicitly identified, as indicated in the proposed LCRSP, "recycling centers as a principal use, collection and sorting only" is identified as a "conditionally permitted" land use within the "Village Center Commercial (VC)" district.
SW-17	Developers and local governments should develop and site composting, recycling, and conversion technology facilities that are environmentally friendly and have minimum environmental and health impacts.	**Not inconsistent**. Because the City has not adopted a C&D waste reduction ordinance, the City seeks voluntary measures by the Applicant to reduce construction wastes. Although composting and other recycling facilities are not explicitly identified, as indicated in the proposed LCRSP, "recycling centers as a principal use, collection and sorting only" is identified as a "conditionally permitted" land use within the "Village Center Commercial (VC)" district.
SW-19	Developers and local governments should facilitate the creation of synergistic linkages between community businesses and the development of eco-industrial parks and material exchange centers where one entity's waste stream becomes another entity's raw material by making priority funding available for projects that involve co-location of facilities.	**Not inconsistent**. Because the City has not adopted a C&D waste reduction ordinance, the City seeks voluntary measures by the Applicant to reduce construction wastes. Although composting and other recycling facilities are not explicitly identified, as indicated in the proposed LCRSP, "recycling centers as a principal use, collection and sorting only" is identified as a "conditionally permitted" land use within the "Village Center Commercial (VC)" district.

SCAG acknowledges that the "Compass Blueprint 2% Strategy" is only a "guideline" concerning how and where the "growth vision" can be implemented within the SCAG region. As such, compliance with the principals of the Compass Blueprint cannot be dependent upon whether the project is located within a "strategic opportunity area." If that were the case, then only development located within designated areas would be deemed to be in compliance (i.e., all growth occurring outside a designated area would thus be found inconsistent with the Compass Blueprint). Such interpretation would be detrimental to any municipality that did not include a key opportunity area. As such, the terms "smart growth" and "Compass Blueprint 2% Strategy" are not and should not be deemed synonymous.

Since SCAG does not possess land-use controls, the "Compass Blueprint 2% Strategy" must be viewed as a general "guidance" document designed to encourage municipals to promote, through appropriate incentive zoning, future development along select transportation pathways and transit corridors. Because all communities are not equally benefitted, SCAG's "Compass Blueprint 2% Strategy" fails to take into consideration the need for local agencies to accommodate identified housing needs within each individual jurisdiction. Although the proposed project does not lie within a key opportunity area, its exclusion there from should not become the sole determinant of the project's consistency with SCAG's regional plans.

Each of the "growth visioning principals" presented in the 2004 Compass are separately examined in Table 4.1-7 (Preliminary Consistency Assessment - Regional Plans and Policies). As indicated therein, the LCRSP is generally consistent with the Compass Blueprint and, in the context of the policies presented therein, appears to further the regional planning efforts of SCAG. However, the proposed project may not further SCAG's objectives with regards to jobs-housing relationship (Policy GVP 1.2).

It is SCAG's policy to "locate new housing need existing jobs and new jobs near existing housing" (Policy GVP1.2). As indicated in Table 4.2-21 (Population, Household, and Employment Forecasts for Unincorporated San Bernardino County – 2008 Regional Transportation Plan), between 2010 and 2030, representing a time period generally reflecting the build-out period of the LCRSP, the jobs-housing ratio in the unincorporated portion of the County will decrease from only 0.93 to 0.79.

Since the jobs-housing ratio in the unincorporated County is not projected to achieve a minimal balance of ≥1.0 during the 2010-2030 timeframe, the geographic area presently comprising the unincorporated portion of the project site will remain "housing rich."

Ignoring any indirect and induced employment that may be associated with the proposed project, the project's projected operational jobs-housing ratio is estimated to range between 0.20 (1,697 jobs/8,407 units) and 0.40 (3,398 jobs/8,407 units) jobs per dwelling unit. Because SCAG's jobs-housing policies promote job formation over new residential development in "housing rich" areas, such as unincorporated San Bernardino County, individual development projects that do not further the attainment of that desired outcome could potentially impede progress toward achievement of a regional jobs-housing balance.

As indicated above, attainment of a jobs-housing balance may not be deemed applicable to the assessment of individual development project but must be examined from a

broader regional perspective. As indicated in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, representing a time period generally reflecting the build-out period of the LCRSP, absent the proposed project, the jobs-housing ratio in the City will improve from only 0.96 to 1.08. However, with the annexation of the unincorporated portion of the project site and the introduction of the proposed project, the jobs-housing ratio within the City will remain virtually unchanged between 2010 and 2030 (0.96).

As indicated in Table 4.1-7 (Preliminary Consistency Assessment – Regional Plans and Policies), the proposed LCRSP appears generally consistent with SCAG's 2004 Compass Blueprint and, in the context of the policies presented therein, appears to further the regional planning efforts of SCAG.

- **Regional Transportation Plan** (2008). The 2008 RTP emphasizes the importance of system management, goods movement, and innovative transportation financing. The plan strives to provide a regional investment framework to address the region's transportation and related challenges and looks to strategies that preserve and enhance the existing transportation system and integrate land use into transportation planning.

  The implementation plans presented in the 2008 RTP are based, in part, on the population, housing, and employment projections used by SCAG to assess regional growth over the 2008 RTP's planning period (2010-2035). The build-out of the LCRSP (2010-2030) will result in an increase in the number of individuals, households, and jobs within the project area. By comparing the growth projections upon which the 2008 RTP was derived to the development authorized under the proposed project and the anticipated increase in population, the number of new housing units, and the number of new jobs that might reasonably result from the implementation of the LCRSP, it may be generally possible to assess whether the LCRSP was included in and served as part of the development assumptions upon which that regional plan was built.

  The project's anticipated increase in population, housing, and employment opportunities, in the context of the parameters used to derive the 2008 RTP, is addressed in Section 4.2 (Population and Housing) herein. As indicated therein, despite the City's notification of the LCRSP project, it does not appear that the localized increase in population, housing, and employment which will logically result from the proposed project's implementation was specifically included in the 2008 RTP.

  Because the 2008 RTP does not purport to be a project-level analysis, it would be unlikely to see development from any proposed but as yet non-permitted project to be explicitly included in SCAG's growth forecasts. Since SCAG's growth forecasts are trend-based and not pending development-based, it is not surprising that the site-specificity of the LCRSP is not replicated in the 2008 RTP baseline analysis (from either a Citywide or Census Tract level perspective). Substantial growth is, however, identified and envisioned for the unincorporated area of the San Bernardino Associated Governments (SANBAG) and for the County as a whole. As a result, from a macro-level, substantial subregional growth is anticipated and serves as the basis for the transportation-related improvements outlined in the 2008 RTP. As a result, when examined from a population, housing, and employment projections perspective, the LCRSP is not inconsistent with the growth forecasts presented in the 2008 RTP.

The "RTP goals" presented in the 2008 RTP are separately examined in Table 4.1-7 (Preliminary Consistency Assessment - Regional Plans and Policies). As indicated therein, the LCRSP is generally consistent with the 2008 RTP and, in the context of the policies presented therein, appears to further the regional planning efforts of SCAG.[262]

Since SCAG does not possess land-use controls, the "Compass Blueprint 2% Strategy" must be viewed as a general guidance document designed to encourage municipals to encourage, through appropriate incentive zoning, future development along select transportation pathways and transit corridors. Because all communities are not equally benefitted (i.e., all communities do not include designated pathways, corridors, and other opportunity areas), any strict interpretation of the SCAG's "Compass Blueprint 2% Strategy" would obviously fail to take into consideration the need for local agencies to accommodate identified housing needs within each individual jurisdiction and would result in a redelegation of local planning authority to a regional governance.

Although the proposed project does not lie within a key opportunity area, its exclusion from a SCAG-identified "2% Strategy Opportunity Area" should not and cannot become the determinant of the project's consistency with SCAG's regional plans.

- **Regional Comprehensive Plan** (2008). SCAG developed the 2008 RCP as a "planning framework for the development and implementation of guidelines applied to both the public and private sectors."[263] One of the stated "economic outcomes" outlined in the 2008 RCP is to "[i]ncrease the region's economic vitality and attractiveness by focusing housing and job additions in urban centers, employment centers, and transportation corridors, such that there will be a minimum of 35 percent of the region's housing growth and 32 percent of employment growth in these areas from their levels in 2005 by 2035."[264] SCAG, therefore, acknowledges that substantial growth will continue to occur outside "urban centers, employment centers, and transportation corridors." As such, growth that does occur outside these centers and outside the 2004 "Compass Blueprints 2% Strategy Areas" is not and cannot be construed as being inconsistent with SCAG's regional projections, forecasts, and regional policies.

  As indicated in Table 4.1-7 (Preliminary Consistency Assessment – Regional Plans and Policies), the proposed LCRSP appears generally consistent with SCAG's 2008 RCP and, in the context of the policies presented therein, appears to further the regional planning efforts of SCAG.

[262]/ As indicated in the 2008 RTP PEIR: "SCAG shall receive a copy of the mitigation monitoring or reporting program prepared for each project within five days of adoption (in conjunction with the Notice of Determination), and shall receive a report documenting compliance with the pre-construction and construction measures on completion of construction prior to operation. As stated above, the documents will be analyzed through SCAG's Intergovernmental Review process to determine whether they are consistent with mitigation measures adopted with the 2008 RTP. If a project is found to be inconsistent with regional environmental mitigation policies or mitigation measures adopted as part of the 2008 RTP PEIR, then SCAG will send correspondence to the project's Lead Agency stating that the project conflicts with the RTP. Transportation projects are required to be consistent with the RTP including mitigation measures adopted as part of the PEIR for the RTP" (2008 RTP PEIR, p. 7-3). The proposed project is not a "transportation project" within the context of the 2008 RTP PEIR.

[263]/ *Op. Cit*., Your Guide to SCAG, 2008-2009, p. 23.

[264]/ *Op. Cit.*, Regional Comprehensive Plan – Helping Communities Achieve a Sustainable Future, p. 139.

4.1.5.3 Land-Use Overlay Districts

***Environmental Impact 1-7**. Implementation of the project's land-use overlay districts, in lieu of the underlying land-use designation, could change the character of the proposed development, introduce new environmental impacts, and/or increase the severity of those environmental efforts anticipated as a result of the development of the underlying zone.*

***Preliminary Determination 1-7**. Potentially significant unless mitigation incorporated.*[265]

Under the proposed LCRSP, a number of land-use overlay districts would be created. In lieu of the underlying land use, planning areas containing an overlay designation could be developed for the use(s) authorized under that overlay. Presented in Table 4.1-8 (Lytle Creek Ranch Specific Plan – Land-Use Overlay Districts) is a listing of all land-use overlay districts authorized under the proposed LCRSP, including the corresponding planning areas where those overlays would apply, the underlying land-use designation which would be replaced by the overlay, and the approximate acreages of those planning areas. Each of the project's five proposed overlay districts is individually addressed below.

Although each of the five overlay districts encompass entire planning areas, to the extent that a subsequent "B" level subdivision map were to create separate parcels and assign each a separate land-use designation, unless otherwise precluded by the Lead Agency, there is nothing in the proposed LCRSP that would preclude an overlay from encompassing only a portion of an assigned planning areas, such that multiple (albeit geographically separated) uses could be developed therein, with distinct portions of the affected planning area containing both the underlying and overtopping land uses.

Single-Family Residential Overlay

As noted in Table 4.1-8 (Lytle Creek Specific Plan – Land-Use Overlay Districts), the "Single-Family Residential Overlay" (SFR Overlay) encompasses a number of planning areas presently designated "Open Space/Recreation (OS/R)," "Open Space/Joint Use (OS/JU)," "Elementary School (ES)," and "Elementary School/Middle School (ES/MS)" in Neighborhoods II and III. With the implementation of the SFR Overlay, the underlying land-use designations would be replaced by the land uses and development standards authorized under that overlay.

As authorized under the proposed LCRSP, the SFR Overlay includes the following permitted uses: (1) residential, single-family detached and attached (2-14 dwelling units/acre); (2) model homes; (3) sales and leasing offices and trailers; (4) nursing homes and convalescent facilities; (5) independent living and assisted living residential facilities; and (6) home occupations. Authorized land uses within the SRF Overlay are, therefore, similar to those uses allowable under the "Single-Family Residential (SFR-1) (2-5 du/ac)," "Single-Family Residential (SFR-2) (5-8 du/ac)," and "Single-Family Residential (SFR-3) (8-14 du/ac)" districts. Because the SRF Overlay does not result in the introduction of any additional land uses not otherwise authorized under the proposed LCRSP and because a measure (Mitigation Measure 1-1) has been proposed to mitigation potential land-use conflicts associated with the proximal siting of uses

[265]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) physically divide an established community; and (2) substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect.

with different operational characteristics, implementation of this overlay, in lieu of the underlying land-use district, would not result in the introduction of any additional land-use impacts not otherwise addressed herein.

The SRF Overlay includes both the area comprising the existing and reconfigured El Rancho Verde Royal Vista Golf Course (PAs 95, 99, and 101) and the proposed "active adult recreation center" (PA 86) in Neighborhood II. Should the SRF Overlay be exercised, the golf course could be eliminated, reduced in size from its current acreage, or either not expanded and reconfiguration or not expanded and reconfigured in the manner represented in the proposed LCRSP. Similarly, the proposed "active adult recreation center" could be eliminated. Areas designated "Open Space/Recreation (OS/R)" or "Open Space/Joint Use (OS/JU)" use but subsequently developed in accordance with the provisions of the SFR Overlay could be developed to the density authorized in the "Single-Family Residential 3 (SFR-3) (8-14 du/ac)" district, subject only to the proviso that the total number of dwelling within the specific plan area not exceed 8,407 units. Should that occur, the Lead Agency's assumptions with regards to those planning area's possessing "Open Space/Recreation (OS/R)" and "Open Space/Joint Use (OS/JU)" designations (i.e., development for a public recreational use) may be forfeited.

As indicated in the proposed LCRSP: "Any and all planning areas designated as "Open Space/Recreation" may be reconfigured and re-sized to respond to actual park and open space needs pursuant to Quimby Act requirements." With regards to those requirements, as indicated in Table 4.9-15 (Park Dedication Requirements by Neighborhood), based on the proposed "parks and recreation plan" depicted in Figure 2-7 (Lytle Creek Ranch Specific Plan – Conceptual Park and Recreation Plan), although a park dedication deficiency of approximately 2.39, 14.00, and 3.78 acres has been identified in Neighborhoods I, II, and IV, respectively an estimated 31.02-acre park surplus exist in Neighborhood III and a total approximately 10.85-acre park surplus exists for the proposed LCRSP. As a result, from a land-use perspective, the elimination of the "active adult recreation center" (PA 86) and the "open space/joint use" areas (PAs 48 and 74) in Neighborhood III would not substantively affect the Applicant's ability to satisfy park dedication requirements or limit parkland availability below adopted City standards.

Absent from the proposed LCRSP is any explicit commitment that the El Ranch Verde Royal Vista Golf Course will be retained. Although the lost of the existing golf course or a proposed portion thereof would be considered adverse, based on the threshold criteria identified herein, that land-use impact would not be deemed significant.

With regards to those planning areas designated "Elementary School (ES)" (PA 49) and "Elementary School/Middle School (ES/MS)" (PA 69), the proposed LCRSP notes: "If the Rialto Unified School District elects not to utilize one or both of the designated school sites, then the unused school site(s) may develop with Single-Family Residential One, Two, or Three (SFR-1, SFR-2, or SFR-3) development, subject to City approval of a Site Plan." The proposed LCRSP further notes that the proposed "project will pay its fair share of fees to each school district." Payment of school impact fees, in lieu of any real property dedications, satisfies the Applicant's associated obligations. The conversion of the proposed project's two proposed school sites to a residential use would, therefore, not result in the creation of a significant land-use impact.

High Density Residential Overlay

As noted in Table 4.1-8 (Lytle Creek Specific Plan – Land-Use Overlay Districts), the "High Density Residential Overlay" (HDR Overlay) encompasses a number of planning areas

presently designated "Village Center Commercial (VC)" (PAs 89-91) in Neighborhood II. With the implementation of the HDR Overlay, the underlying land-use designations would be replaced by the land uses and development standards authorized under that overlay.

As authorized under the proposed LCRSP, the HDR Overlay includes only high-density residential products, such as condominiums, stacked flats, podium units, and apartments. The development standards for the "Multi-Family Residential (MFR) (18-28 du/ac)" shall apply to all uses with the HDR Overlay, except: (1) the density range shall be 25-35 dwelling units per acre; and (2) the maximum building height shall not exceed 55 feet. Authorized land uses within the SRF Overlay are, therefore, similar to those uses allowable under the "Multi-Family Residential (MFR) (18-28 du/ac)" and "High Density Residential (HDR) (25-35 du/ac)" districts. Because the HDR Overlay does not result in the introduction of any additional land uses not otherwise authorized under the proposed LCRSP and because a measure (Mitigation Measure 1-1) has been proposed to mitigation potential land-use conflicts associated with the proximal siting of uses with different operational characteristics, implementation of this overlay, in lieu of the underlying land-use district, would not result in the introduction of any additional land-use impacts not otherwise addressed herein.

Village Center Commercial Overlay

As authorized under the proposed LCRSP, the "Village Center Commercial Overlay" (VC Overlay) includes shopping centers, freestanding retail and commercial buildings, and office uses. Authorized land uses within the VC Overlay are similar to those uses allowable under the "Village Center Commercial (VC)" district. Because the VC Overlay does not result in the introduction of any additional land uses not otherwise authorized under the proposed LCRSP and because a measure (Mitigation Measure 1-1) has been proposed to mitigation potential land-use conflicts associated with the proximal siting of uses with different operational characteristics, implementation of this overlay, in lieu of the underlying land-use district, would not result in the introduction of any additional land-use impacts not otherwise addressed herein.

As noted in Table 4.1-8 (Lytle Creek Specific Plan – Land-Use Overlay Districts), the VC Overlay encompasses a number of planning areas presently designated "Single-Family Residential 2 (SFR-2) (5-8 du/ac)" (PAs 36, 38, and 42), "Single-Family Residential 3 (SFR-3) (8-14 du/ac)" (PA 35), "Multi-Family Residential (MFR) (14-28 du/ac) (PA 41), "High Density Residential (HDR) (25-35 du/ac)" (PAs 30 and 31), and "Open Space/Recreation" (PAs 37 and 40). With the implementation of the VC Overlay, the underlying land-use designations would be replaced by the land uses and development standards authorized under that overlay.

Under the proposed LCRSP, the following residential land uses would remain permitted uses therein: (1) residential, attached (14 dwelling units or fewer per net acre); (2) residential, multi-family (14 to 28 dwelling units per net acre); (3) residential (25-35 dwelling units per net acre; (4) nursing homes and convalescent facilities; and (5) independent living and assisted living residential facilities. Although the VC Overlay could result in the introduction of commercial land uses otherwise precluded in residentially-designated planning areas, with regards to those underlying planning areas with residential land use designations, if the VC Overlay were not to be exercised, single-family attached and multi-family dwelling units could still be developed within those areas.

If implemented, the VC Overlay would apply to two planning areas with a proposed "Open Space/Recreation (OS/R)" designation (PAs 37 and 40). With regards to PA 40, should the VC

Overlay be implemented, the "private recreation center" assumed in that 6.0-acre site would likely not be developed, resulting in either the need to relocate that facility to another planning area within Neighborhood III or the eliminate of a planned recreational opportunity. If relocated, since "parks, paseos, greenbelts and playgrounds" are identified as a permitted use in all zones other than "Open Space (OS)," excluding PA 28, the proposed "private recreational center" identified in PA 40 could be relocated to any other planning area within Neighborhood III.

As indicated in the proposed LCRSP: "Any and all planning areas designated as "Open Space/Recreation" may be reconfigured and re-sized to respond to actual park and open space needs pursuant to Quimby Act requirements." As indicated in Table 4.9-15 (Park Dedication Requirements by Neighborhood), based on an eligibility determination concerning which "Open Space/Recreation (OS/R)" and "Open Space/Joint Use (OS/JU)" planning areas are to be included in or excluded from the calculations and what percentage of each area may be eligible, with regards to land dedication only, the proposed LCRSP produces a 50.95-acre park dedication surplus, a 35.15-acre deficiency, or other surpluses or deficits in between based on what assumptions are applied. With regards to Neighborhood III, based on the proposed "parks and recreation plan" depicted in Figure 2-7 (Lytle Creek Ranch Specific Plan – Conceptual Park and Recreation Plan), when the golf course expansion, SCE easement, "private recreational centers" (PAs 40, 53, and 64), parkway improvements, and either 50 or 100 percent of the joint-use areas are excluded from the assessment of Quimby Act requirements, which could occur based on the City's discretion, a park deficit exists in Neighborhood III.

As a result, because implementation of the VC Overlay would reduce the inventory of proposed parkland acreage, independent of the City's inclusion or exclusion of the potentially impacted "private recreational center" (PA 40), the elimination of a portion of the "Grand Paseo" areas (PA 37) in Neighborhood III could potentially affect the Applicant's ability to satisfy park dedication requirements and could reduce parkland availability to below adopted City standards.

General Warehousing Overlay

Unlike the SRF Overlay, the HDR Overlay, and the VC Overlay, the proposed LCRSP does not have a land-use district which is comparable to that established under the "General Warehousing Overlay" (GW Overlay). This overlay allows for general warehousing and distribution centers, storage and self-storage, and other similar types of uses. As indicated in the proposed LCRSP, excluding temporary and conditionally permitted uses, uses permitted by right which are not authorized in any other land-use zone include, but may not be limited to: (1) truck and equipment rentals; (2) indoor pistol or rifle range; (3) wholesaling/distribution centers with no sales to consumers; (4) general warehousing with no sales to consumers; (5) mini-storage warehouses and self-storage; (6) lumber yards, outdoor; (7) pest control services; (8) tile manufacturing and sales; (9) contractor and similar equipment yards; and (10) central cleaning and laundry plants.

As noted in Table 4.1-8 (Lytle Creek Specific Plan – Land-Use Overlay Districts), the GW Overlay encompasses a number of planning areas presently designated "Single-Family Residential 1 (SFR-1) (2-5 du/ac)" (PA 3), "Single-Family Residential 3 (SFR-3) (8-14 du/ac)" (PAs 11, 13, and 15), and "Multi-Family Residential (MFR) (14-28 du/ac) (PA 20). Where the GW Overlay is applied to planning areas designated in the proposed LCRSP for residential uses (PAs 3, 11, 13, 15, and 20), to minimize potential PA-specific issues of land-use compatibility between residential uses and those uses permitted under the GW Overlay, if the GW Overlay is

implemented, the entire planning area must then be developed in accordance with the uses and standards applicable to the GW Overlay.[266]

As proposed, the LCRSP identifies certain "industrial and research uses" as either permitted or conditionally permitted uses within the "Village Center Commercial (VC)" and VC Overlay districts. Permitted uses listed therein include "research and development; provided however, that such uses must occur entirely within an enclosed building." Conditionally permitted uses within the "Village Center Commercial (VC)" zone include: (1) recording studios; provided, however, that such uses must occur entirely within an enclosed building; (2) bottling plants; and (3) welding, machine, and metal plating shops. With regards to "industrial and research uses," both the "Village Center Commercial (VC)" district and the GW Overlay authorize or conditionally authorize the same lands uses, such that, at least with regards to those uses, there exists no distinction between the two land-use categories. In contrast, the proposed LCRSP identifies certain "warehousing, storage, and heavy commercial uses" which would be permitted within the GW Overlay which would only be conditionally permitted within the "Village Center Commercial (VC)" and VC Overlay districts. Those uses include, but may not be limited to: (1) wholesaling/distribution centers, with no sales to consumers; (2) general warehouses, with no sales to consumers; (3) mini-storage warehouses and self storage; (4) lumber yards, outdoor; (5) pest control services; (6) tile manufacturing and sales; and (7) contractor and similar equipment yards. Unless conditionally permitted in the "Village Center Commercial (VC)" or VC Overlay, each of these uses would be unique to the GW Overlay.

Absent from both the proposed LCRSP and the City Municipal Code are definitions of the terms "wholesaling/distribution centers," "general warehouses," and "mini-storage and self storage," lumber yard, outdoors, "pest control services," "tile manufacturing and sales," and "contractor and similar equipment yards."[267] The Department believes that the terms "pest control services," "tile manufacturing and sales," and "contractor and similar equipment yards" are generally understandable and would not be anticipated to cause confusion as to the administration of the proposed LCRSP.

Since the term "lumber yard, outdoor" is not defined in the proposed LCRSP, the document does not state whether the use constitutes a retail location where lumber and wood-related products used in construction and home improvement would be offered for sale. Because this use is including under "warehousing, storage, and heavy commercial" in the proposed LCRSP

[266]/ Under the proposed LCRSP, each of the following residential land uses would be prohibited under the GW Overlay: (1) residential, single-family detached; (2) residential, attached (14 dwelling units or fewer per net acre); (3) residential, multi-family (14 to 28 dwelling units per net acre); (4) residential (25 to 35 dwelling units per net acre); (5) nursing homes and convalescent facilities; (6) independent living and assisted living residential facilities; and (7) all other "residential, lodging, and child care uses" identified in the proposed LCRSP.

[267]/ For informational purposes only, the following definitions are extracted from Division 10 (Definitions) of the County Development Code: (1) "Storage – Warehouse, Indoor Storage. Facilities for the storage of furniture, household goods, or other commercial goods of any nature. Includes cold storage. Does not include: warehouse, storage or mini storage facilities offered for rent or lease to the general public; warehouse facilities primarily used for wholesaling and distribution; or terminal facilities for handing freight" (Section 810.01.210[rrr]]); (2) "Storage – Personal Storage, Mini-Storage. Structures containing generally small, individual compartmentalized or lockers rented as individual storage spaces and characterized by low parking demand" (Section 810.01.210[ppp]); (3) "Wholesaling and Distribution. Establishments engaged in selling merchandise to retailers; to contractors, industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to persons or companies. Examples of these establishments include: [a] agents, merchandise or commodity brokers, and commission merchants, [b] assemblers, buyers and associations engaged in the cooperative marketing of farm products, [c] merchant wholesalers, [d] stores primarily selling electrical, plumbing, heating and air conditioning supplies and equipment. Also includes storage, processing, packaging, and shipping facilities for mail order and e-commerce retail establishments" (Section 810.01.250[f]).

and given the same status as "tile manufacturing and sales," it is assumed that this use is more machinery-oriented and would, therefore, include a saw and planing mill. Orders would be "built" and either picked up by or delivered to retailers or end users. Although some "big box" stores (e.g., Home Depot) include lumber sections, those uses would not reasonably constitute a "lumber yard, outdoor" Within the intent of the proposed LCRSP. Saw and planing mills are typically enclosed but noise from there operation could be emitted through ventilation openings.

With regards to warehousing and distribution centers, in order to provide a possible definition for those land uses, the Institute of Transportation Engineer's (ITE) "Trip Generation, 7th Edition" was review. As indicted therein, the following three separate land-use classifications have been established potentially encompassing these proposed on-site uses: (1) Warehousing (Land Use 150) – Warehouses are primarily devoted to the storage of materials but may also include office and maintenance areas; (2) Mini-Warehouses (Land Use 151) – Mini-warehouses are buildings in which a number of storage units or vaults are rented for the storage of goods; they are typically referred to as "self-storage" facilities; each unit is physically separated from other units and access is usually provided through an overhead door or other common access point; and (3) High-Cube Warehouses (Land Use 152) – High-cube warehouses are used for the storage of manufactured goods prior to their distribution to retail outlets; these facilities consist of large shells of steel buildings and large halls, often subdivided for individual tenants, with a typical ceiling height of 24 to 26 feet; they are also characterized by a small employment count due to a high level of mechanization, truck activities frequently outside of the peak hour of the adjacent street system and good freeway access.[268] All three of these warehouse types would be permitted with the GW Overlay.

The National Association of Industrial and Office Properties (NAIOP) has prepared a report, entitled "San Bernardino/Riverside County Warehouse/Distribution Center Vehicle Trip Generation Study,"[269] which included data collected at the driveway of ten warehouse/ distribution center sites in the Inland Empire and calculated trip generation rates based on that data. The following NAIOP definition was provided for these collection sites: "Warehouse/ distribution centers are used primarily for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. These facilities are commonly constructed utilizing concrete tilt-up techniques, with a typical ceiling height of at least 24 feet. Warehouse/distribution centers are generally greater than 100,000 SF [square feet] in size with a land coverage ratio of approximately 50% and a dock-high loading door ratio of approximately 1:5,000-10,000 SF; they are characterized by a small employment count due to a high level of automation, truck activities frequently outside of the peak hour of the adjacent street system and good freeway access. ITE Land Use: 152 (High-Cube Warehouse) is similar."[270] As noted by SANBAG: "A proposed development project would need to be consistent with the entire definition to qualify for use of the high-cube warehouse/distribution center trip generation rates. If the use does not meet the definition, then trip rates for another use would need to be selected, such as Institute of Transportation Engineers Land Use 150 (Warehousing) or Land Use 130 (Industrial Park)."[271]

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[268]/ Institute of Transportation Engineer, Trip Generation, 7th Edition, Volume 2, 2003, pp. 188, 217, and 258.

[269]/ National Association of Industrial and Office Properties, San Bernardino/Riverside County Warehouse/ Distribution Center Vehicle Trip Generation Study, January 2005.

[270]/ Memorandum from Steve Smith, Principal Transportation Analyst, San Bernardino Associated Governments to Comprehensive Transportation Plan Technical Advisory Committed (Subject: Trip Generation Rates for High-Cube Warehouse Distribution Center), April 19, 2005, p. 2.

[271]/ Letter from Steve Smith, Chief of Planning, San Bernardino Associated Governments to Greg Lantz, Economic Development Manager, City of Rialto, November 25, 2009.

Table 4.1-8
LYTLE CREEK RANCH SPECIFIC PLAN - LAND-USE OVERLAY DISTRICTS
(Planning Area, Underlying Land Use, and Approximate Acreage)

Neighbor.	Single-Family Residential			High Density Residential			Village Center Commercial			General Warehousing			Park Overlay		
	PA	Zone	Acre.	PA	Zone	Acre.	PA	Zone	Acre.	PA	Zone	Acre.	PA	Zone	Acre.
I										3	SFR-1	46.0			
										4	HDR	12.0			
										11	SFR-3	3.0			
										13	SFR-3	29.0			
										15	SFR-3	9.0			
Subtotal												99.0			
II	86[1]	OP/R	3.0	89	VC	6.0	92	HDR	13.0						
	87[2]	OP/R	45.0	90	VC	2.0									
	95[2]	OP/R	67.0	91	VC	3.2									
	99[2]	OP/R	60.0												
	101[2]	OP/R	35.0												
Subtotal			210.0			11.2			13.0						
III	48	OS/JU	5.0				30	HDR	4.5	78	VC	43.3	72	SFR-1	35.7
	49	ES	10.0				31	HDR	15.9						
	69	ES/MS	14.0				35	SFR-3	11.5						
	74	OS/JU	12.0				36	SFR-2	3.8						
							37[3]	OS/R	2.6						
							38	SFR-2	10.6						
							39	MFR	5.8						
							40[4]	OS/R	6.0						
							41	MFR	4.8						
							42	SFR-2	13.0						
Subtotal			41.0						78.6			43.3			35.7
IV										20	MFR	54.0			
Subtotal												54.0			
Total			251.0			11.2			91.5			196.3			35.7

Notes:
1. Identified as a private "active adult recreation center" in Figure 2-7 (Lytle Creek Ranch Specific Plan - Conceptual Parks and Recreation Plan).
2. Identified as a "golf course" in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary).
3. Identified as part of the "Grand Paseo."
4. Identified as a "private recreation center" in Figure 2-7 (Lytle Creek Ranch Specific Plan - Conceptual Parks and Recreation Plan).

Source: Environmental Impact Sciences

The CARB states that "[d]istribution centers or warehouses are facilities that serve as a distribution point for the transfer of goods. Such facilities include cold storage warehouses, goods transfer facilities, and inter-modal facilities such as ports. These operations involve trucks, trailers, shipping containers, and other equipment with diesel engines. A distribution center can be comprised of multiple centers or warehouses within an area. The size can range from several to hundreds of acres, involving a number of different transfer operations and long waiting periods. A distribution center can accommodate hundreds of diesel trucks a day that deliver, load, and/or unload goods up to seven days a week. To the extent that these trucks are transporting perishable goods, they are equipped with diesel-powered transport refrigeration units (TRUs) or TRU generator sets."[272,273]

A large percentage of the vehicle trips associated with warehouse and distribution center uses may involve heavy-duty trucks.[274] For intersection capacity analysis, truck trips are converted into passenger car equivalents (PCE) based on the following ratios: (1) 2-axle trucks – 2.0 PCE; (2) 3-axle trucks – 2.5 PCE; and (3) 4- and more axle trucks – 3.0 PCE.[275] In addition, because warehouses and distribution centers may receive and transport shipments to and from ports and from remote locations, vehicle trip lengths may be longer than may be associated with other non-residential uses and the hours of operation for warehouse and distribution centers may be extended to accommodate non-peak-hour trips.

Since the GW Overlay may not be built-out to encompass all planning areas so designated, absent an intervening street, open space area, or utility easement, those uses authorized within the GWO Overlay could abut a number of residentially-designated areas, including "Single-Family Residential 2 (SFR-2) (5-8 du/ac)" (PAs 36, 38, and 42), "Single-Family Residential 3 (SFR-3) (8-14 du/ac)" (PAs 35 and 41), "Multi-Family Residential (MFR) (14-28 du/ac)" (PA 44), and "High Density Residential (HDR) (25-35 du/ac)" (PAs 30-31).

The implementation of the GW Overlay for a planning area may result in the siting of "distribution centers" in proximity to sensitive lands uses based on air quality considerations and associated health risks. As indicated in Table 4.7-5 (California Air Resources Board Recommendations on Siting Sensitive Land Uses), the CARB recommends that local agencies avoid siting new sensitive land uses within 1,000 feet of a distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where TRU operations exceed 300 hours per week.[276] The CARB estimates an 80 percent drop-off in

[272]/ California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005, p. 11.

[273]/ "TRU generator set" means a generator set that is designed and used to provide electric power to electrically-driven refrigeration units of any kind. This includes, but is not limited to, generator sets that provide electricity to electrically-powered refrigeration systems for semi-trailer vans and shipping containers. TRU generator sets are commonly used in conjunction with ocean-going cargo containers while being transported on land by railcars or semi-trailers (Source: California Air Resources Board, Revised Staff Report: Initial Statement of Reasons for Proposed Rulemaking – Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units and TRU Generator Sets, and Facilities where TRUs Operate, October 28, 2003, p. IV-1).

[274]/ Based upon the 1997 Commodity Flow Survey published by the United States Census Bureau, semi-trailer vans and truck vans are estimated to transport approximately 83 percent by weight of all commodities in California. These motor vehicles may operate locally, regionally, intra-State, inter-State, or any combination thereof (Source: California Air Resources Board, Revised Staff Report: Initial Statement of Reasons for Proposed Rulemaking – Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units and TRU Generator Sets, and Facilities where TRUs Operate, October 28, 2003, p. IV-4).

[275]/ An alternative PCE rate may be established by the City Engineer based on subsequent project-level analyses conducted for later development projects.

[276]/ *Op. Cit.*, Air Quality and Land Use Handbook: A Community Health Perspective, Table 1-1, pp. 4.

pollutant concentrations at approximately 1,000 feet from a distribution center.[277] The elimination of unnecessary idling will reduce the localized impacts cause by diesel particulate matter and other air toxics in diesel vehicle exhausts.[278]

Idling refers to the operation of an engine in the operating mode where the engine is not engaged in gear, where the engine operates at a speed at the revolutions per minute specified by the engine or vehicle manufacturer for when the accelerator is fully released and there is no load on the engine.[279] As defined in Section 2485(h)(9) in Title 13 of the CCR: "'Idling' means the vehicle engine is running at any location while the vehicle is stationary."

Because much of the project site is confined to the area extending between Riverside Avenue, Sierra Avenue, and Lytle Creek Road and Lytle Creek Wash and because existing residential uses abut Riverside Avenue and Lytle Creek Road, the provision of a 1,000-foot setback requirement between an on-site warehouse or distribution center and on-site and/or off-site sensitive receptors would not generally appear feasible.

On October 20, 2005, subsequent to the publication of CARB's recommended setback standards, the CARB issued a regulation amending Title 13 of the CCR and establishing specific requirements to reduce idling emissions from new and in-use trucks beginning in 2008. As specified in Section 2485(c) in Title 13 of the CCR,[280] except as otherwise noted, commencing on February 1, 2005, the driver of any vehicle subject to this section shall comply with the following requirements: "(A) the driver shall not idle the vehicle's primary diesel engine for greater than 5.0 minutes at any location. (B) the driver shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 100 feet of a restricted area." As defined in Section 2485(h)(16): "'Restricted area' means any real property zoned for individual or multifamily housing units that has one or more of such units on it."

CARB's regulation further state that, on or after January 1, 2008, truck drivers operating in California shall not operate an internal combustion APS on any vehicle equipped with a 2007 and subsequent year primary engine unless the vehicle is equipped with an APS meeting the emission performance requirements, as follows: (1) be equipped with a verified Level 3 in-use strategy for particular matter control; or (2) have its exhaust routed directly into the vehicle's exhaust pipe, upstream of the diesel particulate matter after-treatment device. Mandatory compliance with the State's existing anti-idling regulations minimizes the potential for air quality-related land-use compatibility conflicts attributable to diesel emissions associated with warehousing and distribution center operations occurring in proximity to near-site sensitive receptors.

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[277]/ *Ibid,* Table 1-2, p. 6.

[278]/ *Ibid,* pp. 11 and 12.

[279]/ United States Environmental Protection Agency, Compilation of State, County, and Local Anti-Idling Regulations, EPA420-B-06-004, April 2006, p. 2.

[280]/ As indicated in Section 2485 in Title 13 of the CCR: "(a) Purpose. The purpose of this airborne toxic control measure is to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. (b) Applicability. This section applies to diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicle weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. This specifically includes: (1) California-based vehicles; and (2) Non-California-based vehicles."

In recognition of the potential land-use compatibility impacts associated with the placement of warehouse and distribution center uses adjacent to other existing sensitive uses within and adjoining the specific plan area, a mitigation measure (Mitigation Measure 1-1) is recommended imposing specific requirements for the preparation of use-specific analyses accompanying later project-specific development proposals. As specified therein, subsequent use-specific studies may include, but may not be limited to, traffic and air quality analyses. Where applicable, air quality studies may include health risk assessments.

The WRCOG has developed "Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities." These guidelines were formulated to provide local planning departments, developers, and other stakeholders a set of tools to promote the sensitive siting of warehouse and distribution centers and to minimize the impacts of diesel particulate matter (diesel PM) exposure from on-road trucks associated with those uses on existing communities and sensitive receptors. Without endorsement, the following goals and recommended strategies were outlined therein:

- Goal 1. Minimize exposure to diesel emissions to neighbors that are situated in close proximity to the warehouse/distribution center.

  - ◊ Create buffer zone of at least 300 meters (roughly 1,000 feet, can be office space, employee parking, greenbelt) between warehouse/distribution center and sensitive receptors (housing, schools, daycare centers, playgrounds, hospitals, youth centers, elderly care facilities, etc.).
  - ◊ Site design shall allow for trucks to check-in within facility areas to prevent queuing of trucks outside the facility.
  - ◊ Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
  - ◊ Design warehouse/distribution center so that interior vehicular circulation shall be located away from residential uses or any other sensitive receptors.
  - ▪

- Goal 2. Eliminate diesel trucks from unnecessarily traversing through residential neighborhoods.

  - ◊ Require warehouse/distribution centers to clearly specify on the facility site plan primary entrance and exit points.
  - ◊ Require warehouse/distribution centers to establish specific truck routes and post signage between warehouse/distribution center and freeway and/or primary access arterial that achieves the objective. The jurisdiction may not have an established truck route but may take the opportunity to consider the development of one.
  - ◊ Provide food options, fueling, truck repair and or convenience store on-site or within the warehouse/distribution center complex.
  - ◊ Require warehouse/distribution centers to provide signage or flyers identifying where food, lodging, and entertainment can be found, when it is not available on site.

- Goal 3. Eliminate trucks from using residential areas and repairing vehicles on the streets.

- ◊ Allow homeowners in the trucking business to acquire permits to park vehicles on property, residential areas or streets (Note: Some jurisdictions already restrict parking of oversized vehicles on residential streets regardless of ownership).
- ◊ Establish overnight parking within the warehouse/distribution center.
- ◊ Allow warehouse/distribution facilities to establish an area within the facility for repairs.

▪ Goal 4. Reduce and/or eliminate diesel idling within the warehouse/distribution center.

- ◊ Require the installation of electric hook-ups to eliminate idling of main and auxiliary engines during loading and unloading and when trucks are not in use.
- ◊ Train warehouse managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks within the facility.
- ◊ Require signage that informs truck drivers of the California Air Resource Board regulations (which include anti-idling regulations).
- ◊ Post signs requesting that truck drivers turn-off engines when not in use.
- ◊ Restrict idling within the facility to less than ten minutes.

▪ Goal 5. Establish a diesel minimization plan for on- and off-road diesel mobile sources to be implemented with new projects.

- ◊ Encourage warehouse/distribution center fleet owners to replace their existing diesel fleets with new model vehicles and/or cleaner technologies, such as electric or compressed natural gas.
- ◊ Require all warehouse/distribution centers to operate the cleanest vehicles available.
- ◊ Provide incentives for warehouse/distribution centers and corporations which partner with trucking companies that operate the cleanest vehicles available.
- ◊ Encourage the installation of clean fuel fueling stations at facilities.

▪ Goal 6. Establish an education program to inform truck drivers of the health effects of diesel particulate and the importance of reducing their idling time.

- ◊ Provide warehouse/distribution center owners/managers with informational flyers and pamphlets for truck drivers about the health effects of diesel particulates and the importance of being a good neighbor. The following information should be provided: (1) health effects of diesel particulates; (b) benefits of minimizing idling time; (c) CARB idling regulations; and (d) importance of not parking in residential areas.

▪ Goal 7. Establish a public outreach program and conduct period community meetings to address issues from neighbors.

- ◊ Encourage facility owners/management to conduct period community meetings inviting neighbors, community groups, and other organizations.
- ◊ Encourage facility owners/management to have site visits with neighbors and members of the community to view measures that the facility has taken to reduce and/or eliminate diesel particulate emissions.

- ◊ Encourage facility owners/management to coordinate an outreach program that will educate the public and encourage discussion relating to the potential for cumulative impacts from a new warehouse/distribution center.
- ◊ Provide facility owners/management with the necessary resources and encourage the utilization of those resources such as, the California Air Resource Board and the South Coast Air Quality Management District regarding information about the types and amounts of air pollution emitted in an area, regional air quality concentrations, and health risks estimated for specific sources.
- ◊ Require the posting of signs outside of the facility providing a phone number where neighbors can call if there is an air quality issue.[281]

In recognition of the potential land-use conflicts that could result from the introduction of warehousing and distribution centers on the project site, the Lead Agency has formulated a recommended mitigation measure (Mitigation Measure 1-11) requiring that future project proponents submit detailed plans outlining those design and operational efforts which are being proposed to reduce project-specific and site-specific impacts on proximal sensitive receptors. Each project's "good neighbor" plan shall be approved by the Director and those site design and operational measures established therein shall become conditions of approval for the associated warehouse/distribution center.

As proposed, in accordance with the proposed LCRSP, a total of not more that 849,420 square feet of non-residential land uses, excluding institutional, educational, recreational, and infrastructure-related uses,[282] may be developed within the specific plan area. Although no square footages have been explicitly assigned either by the Applicant or the Lead Agency, institutional, educational, recreational and infrastructure-related uses are addressed through the assignment of acreages to those uses and through the depiction and description of those facilities and improvements herein. The 849,420 square feet of non-residential use also encompass any square footage which would be developed if the GW Overlay were to be implemented. Should those uses allowable under the GW Overlay be pursued, subsequent on-site development of any of the uses allowed under the GW Overlay would necessitate a corresponding reduction in the square footage of neighborhood-serving commercial uses and services that might be developed within the "Village Center Commercial (VC)" district and VC Overlay.

As such, excluding institutional, educational, recreational, and infrastructure-related uses, the 849,420 square feet of non-residential use identified in the proposed LCRSP and examined herein constitutes a finite cap with regards to those general and specialty commercial, office, business park, storage and self-storage, warehousing and distribution center, light industrial and manufacturing, heavy commercial, and other similar uses authorized or conditionally authorized under the proposed LCRSP.

Because the nature of any such change would be speculative, since the implementation of that Applicant-proposed provision could substantively alter the nature of the proposed project and its accompanying environmental analysis, absent an administrative or non-administrative

[281]/ *Op. Cit*., Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities, Final, Recommended Local Guidelines.

[282]/ The potential environmental impacts attributable to those acreage-based uses and depicted and described institutional, educational, and recreational facilities and infrastructure-related improvements are addressed in this EIR.

amendment to the specific plan, accompanied by supportive environmental documentation, the Department believes that the above provision could potentially exceed the CEQA authorization established under this EIR and would, therefore, recommend that the Lead Agency defer consideration of any proposal to exceed the 849,420 square feet of general and specialty commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar uses examined herein pending receipt of a formal development proposal.

Prior to the approval of any increase in non-residential square footage over the 849,420 square feet (excluding institutional, educational, recreational, and infrastructure-related uses), authorized in the proposed LCRSP and examined herein, the Applicant or the Lead Agency would likely need to initiate an administrative or non-administrative amendment or other modification to the proposed LCRSP and the Lead Agency would likely need to conduct appropriate CEQA documentation in support thereof. The need for and nature of that documentation would be at the discretion of the Lead Agency.

As indicated in the proposed LCRSP, the GW Overlay "expressly allows for the continued use and operation of existing storage, warehousing, and wholesaling uses and related uses within these areas including, but not limited to Monier Life Tile at 3511 N. Riverside Avenue, Rialto." Because Monier Lifetile constitutes an existing land use and because its continuing operation is assumed under the project's "existing setting" for an unspecified time period, no further analysis of that specific land use is presented herein.

Park Overlay

As noted in Table 4.1-8 (Lytle Creek Specific Plan – Land-Use Overlay Districts), the "Park Overlay" (Park Overlay) is limited to a single planning area (PA 72) which is presently designated "Single-Family Residential 1 (SFR-1) (2-5 du/ac)." With the implementation of the Park Overlay all or a portion of the 35.7-acre underlying land-use designations would be replaced by a community park. Under the provisions of the proposed LCRSP's "transfer of development units" provisions, all or a portion of the 100 dwelling units that would be authorized within that planning area could be developed elsewhere within Neighborhoods II and III, subject to the provision that the total number of projected AM and PM vehicle trips for Neighborhoods II and III do not exceed 12,483 projected AM and PM (combined) vehicle trips.[283]

Should the Park Overlay be implemented, the Lead Agency would envision the development of a large community park in PA 72 containing a number of multi-use athletic fields, comfort facilities, on-site parking, and other recreational uses. High-intensity sports and other night lighting could be incorporated into the community park's design and development to allow for organized evening recreational activities.

4.1.5.4 Annexation

Environmental Impact 1-8*. Proposed is the annexation of that approximately 1,753.1-acre portion of the project site presently located in unincorporated County into the City. To the extent that the proposed annexation failed to conform to the Cortese-Knox-*

[283]/ Information addressing the implementation and administration of this proposed project's trip allowance procedure is presented in "Lytle Creek Ranch Specific Plan – Maximum Trip Allowance Procedure" (Crain & Associates, December 14, 2009), included in Volume II (Traffic Impact Analysis) herein, and in the proposed "Lytle Creek Ranch Specific Plan."

Hertzberg Local Government Reorganization Act of 2000, annexation may be denied or delayed.

***Preliminary Determination 1-8**. Potentially significant unless mitigation incorporated.*[284]

As illustrated in Figure 4.10-3 (West Valley Water District Annexation Area), proposed is the annexation of that portion of the project site which is not presently within the WVWD service area. The proposed project also includes annexation and/or detachment of project lands into or from existing County districts and service area and associated reorganization of existing governmental services, including, but not limited to, reorganization of existing CSA 70-GH and detachment from the San Bernardino County Fire Protection District and its Valley Service Zone. Because those changes are not anticipated to generate any potentially significant land-use impacts, those actions are not further addressed herein.

As illustrated in Figure 2-22 (Lytle Creek Ranch Specific Plan – Conceptual Annexation Plan), proposed is the annexation of that approximately 1,753.1-acre portion of the project site presently located in unincorporated County jurisdiction into the City. All lands proposed for annexation are located in the City-adopted and LAFCO-approved northern Sphere of Influence. An approximately 1,753.1-acre portion of the project site is presently under the jurisdiction of the County. The Applicant proposes to record an "A" level subdivision map encompassing the proposed LCRSP. That subdivision would be subject to applicable provisions of the Subdivision Map Act. As indicated in Section 66454 therein: "Any subdivider may file with a city the tentative map of a proposed subdivision of unincorporated territory adjacent to such city. The map, in the discretion of the city, may be acted upon in the manner provided in Article 2 (commencing with Section 66452) of this chapter, except that if it is approved, such approval shall be conditioned upon annexation of the property to such city within such period of time as shall be specified by the city, and such approval shall not be effective until annexation of such property to the city has been completed. If annexation is not completed within the time specified or any extension thereof, then the approval of such map by such adjacent city shall be null and void. No subdivision of unincorporated territory may be effected by approval of a map by a city unless annexation thereof to the city is completed prior to the approval of the final map thereof."

In accordance therewith, the Applicant would be precluded from recordation of the final "A" level map pending annexation of the area depicted in that subdivision map. As such, the Lead Agency is provided reasonable assurance that development would only proceed upon LAFCO's approval or conditional approval of the proposed annexation of those County unincorporated lands which are included herein.

As proposed, within the general area of Neighborhood I, the proposed annexation includes that portion of the I-15 Freeway right-of-way (ROW) dividing PAs 10 and 11; however, the proposed annexation excludes those segments of the I-15 Freeway ROW dividing PAs 5, 6, and 10 and extending eastward therefrom. In the general vicinity of Neighborhoods III and IV, also excluded is that portion of the I-15 Freeway ROW extending easterly from Sierra Avenue/Riverside Avenue to Sycamore Creek Drive. As such, there appear to exist inconsistencies in the manner in which the Applicant has approached the annexation of existing Caltrans right-of-way (i.e., including some contiguous Caltrans ROW while excluding others).

[284]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) physically divide an established community; and (2) substantively conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an adverse environmental effect.

The annexation of real property into the City is subject to LAFCO review. In accordance with applicable provisions of the Coretese-Knox-Hertzberg Local Government Reorganization Act (CKHLGRA), as indicated, in pertinent part, in Section 56741 of the CGC: "Unless otherwise provided in this division, territory may not be annexed to a city unless it is contiguous to the city at the time the proposal is initiated pursuant to this part." As defined in Section 56031 of the CGC: "(a) 'Contiguous' means both of the following: (1) In the case of annexation, territory adjacent to, or territory adjoining territory within, the local agency to which annexation is proposed. (2) In the case of consolidation, territory of a local agency or agencies which is adjacent to, or adjoining the territory of, the consolidating local agency or to the territory of another local agency which is contiguous to the consolidating local agency and to be consolidated with the consolidating local agency. (b) Territory is not contiguous if the only contiguity is based upon a strip of land more than 300 feet long and less than 200 feet wide, that width to be exclusive of highways."[285]

As further stipulated under Section 56744 of the CGC: "Unless otherwise determined by the [Local Agency Formation] commission pursuant to subdivision (m) of Section 56375, territory shall not be incorporated into, or annexed to, a city pursuant to this division if, as a result of that incorporation or annexation, unincorporated territory is completely surrounded by that city or by territory of that city on one or more sides and the Pacific Ocean on the remaining sides."[286]

In response to the City's release of the NOP and noticed scoping meeting, LAFCO has raised a number of issues concerning items for which LAFCO may have jurisdictional authority, including issues regards identified "exclusion areas" (i.e., real property not included within the area of proposed annexation). LAFCO asserts that certain lands (which are neither included in the proposed LCRSP nor identified as "off-site" areas beyond the boundaries of the proposed specific plan but nonetheless included in the EIR) need to be included in order to allow the annexation of contiguous lands to proceed and/or to avoid the creation of unincorporated "County islands" or "County pockets."

As illustrated in Figure 4.1-32 (LAFCO-Identified "Exclusion Areas"), those areas include, but may not be limited to, that real property: (1) bordering Neighborhoods III and IV along and inclusive of the I-15 Freeway right-of-way between Sierra Avenue/Riverside Avenue and Sycamore Creek Drive (I-15 Freeway ROW South Exclusion); (2) bordering Neighborhoods I and IV and separating PAs 13 and 15 from PAs 17, 18, and 22 (Sycamore Creek Drive ROW Exclusion); and (3) abutting Neighborhood I and bordered on the north by PAs 4 and 5, on the west by PA 15, on the south by PA 6, and on the east by County-owned lands, inclusive of the I-15 Freeway right-of-way (I-15 Freeway ROW North Exclusion). In addition, although not a part of the proposed LCRSP (with the exception of the "off-site" SoCalGas easement), LAFCO states that the County-owned parcel (County Parcel) east of PA 6 and extending to the north of Glen Helen Parkway and to the south of Clearwater Parkway, inclusive of the I-15 Freeway right-of-way, needs to be included in order to eliminate the creation of an unincorporated County pocket. Each of the four exclusion areas is uninhabited.

[285]/ It is noted that the term "highway" is not specifically defined in the CKHLGRA. It is, however, assumed that the term is inclusive of roadway comprising the federal Interstate Highway System (e.g., I-15 Freeway).

[286]/ As indicated, in pertinent part, in Section 56375 of the CGC, LAFCO powers and duties include: "(m) To waive the restrictions of Section 56744 if it finds that the application of the restrictions would be detrimental to the orderly development of the community and that the area that would be enclosed by the annexation or incorporation is so located that it cannot reasonably be annexed to another city or incorporated as a new city."

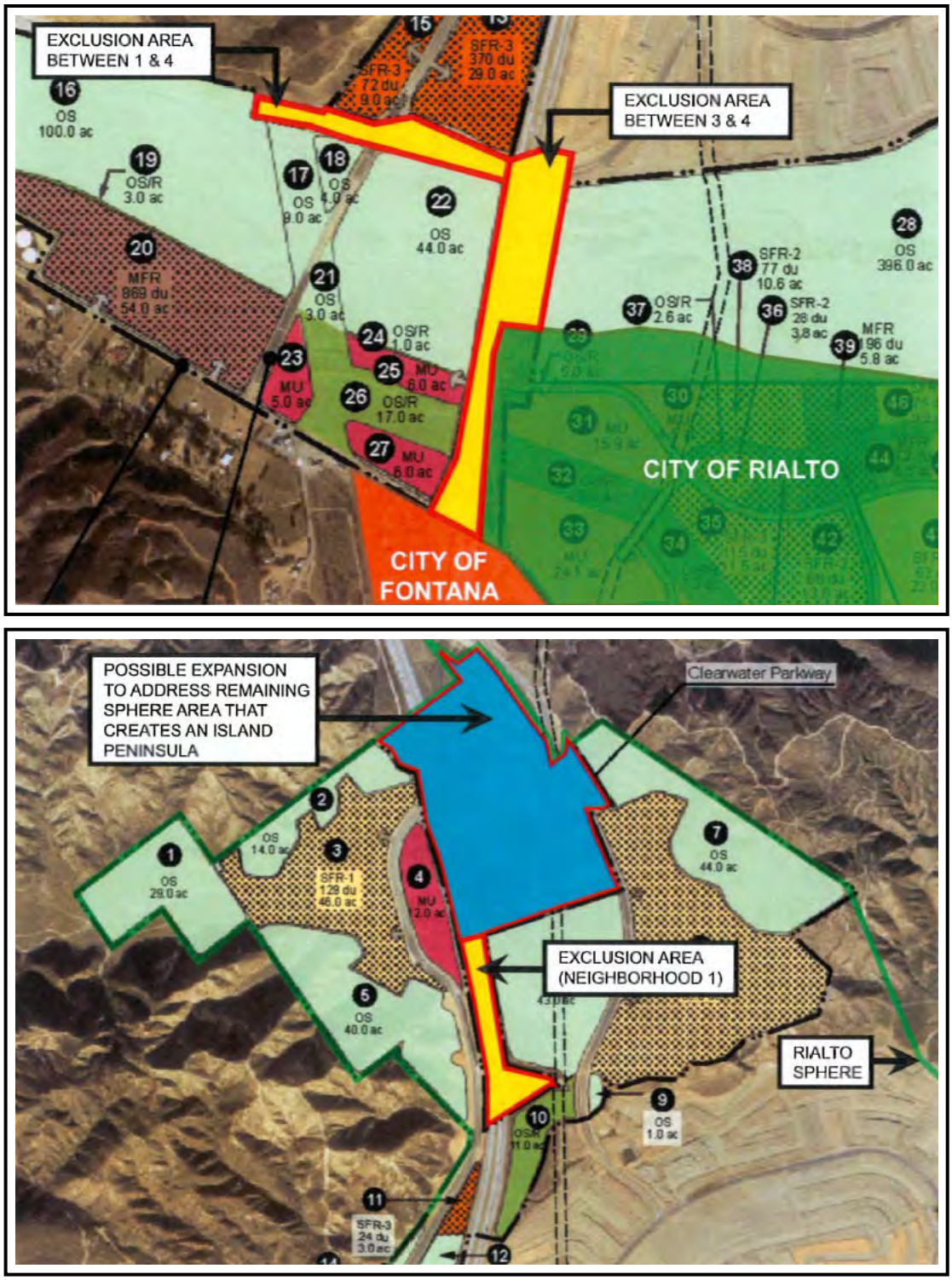

Figure 4.1-32
LAFCO-IDENTIFIED "EXCLUSION AREAS"
Source: San Bernardino County Local Agency Formation Commission

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With the exception of the "off-site" SoCalGas easement, the four geographic areas described above have not been included within this EIR, no land-use designation for those areas is provided in the proposed LCRSP, and annexation has not been proposed by the Applicant. Because the I-15 Freeway ROW North Exclusion, the I-15 Freeway ROW South Exclusion, and the Sycamore Creek Drive ROW Exclusion are each comprised of highly disturbed lands primarily consisting of existing road pavement, the inclusion of those lands into the project area would not be expected to result in the introduction of any new significant environmental impacts and/or increase the severity of those existing environmental effects identified herein. Similarly, since the County Parcel constitutes a County-owned open space area and since no project-related changes or improvements to that property are proposed therein, excluding those related project improvements within the SoCalGas easement, the inclusion of the County Parcel would not be expected to result in the introduction of any new significant environmental impacts and/or increase the severity of those existing environmental effects identified herein.

LAFCO states that, as presently outlined, "Neighborhood 4 cannot be annexed since it will not be contiguous to the City unless the freeway areas between Neighborhood[s] 3 and 4 is included as part of the annexation to the City. Likewise, Neighborhood 1 would not be considered to be a part of the annexation to the City unless the right-of-way area along Sycamore Creek Road between Neighborhood 1 and 4 is included as part of the annexation."[287]

As illustrated in Figure 2-11 (Lytle Creek Ranch Specific Plan – Typical Internal Roadway Cross Sections), the right-of-way for Glen Helen Parkway is only 114-feet wide. Pursuant to Section 56031, to the extent that lands comprising a "highway" are excluded in calculating width, if more than 300-feet in length, that area located to the north of the I-15 Freeway within Neighborhood I separating PAs 5 and 11 may not satisfy the minimum 200-foot width requirement notwithstanding the inclusion of the I-15 Freeway right-of-way in Figure 2-22 (Lytle Creek Ranch Specific Plan – Conceptual Annexation Plan). If less than 300-feet in length, although a portion of the annexation area narrows to only 114 feet, the specified minimum width requirement can likely be satisfied without the inclusion of the 1-15 Freeway ROW North Exclusion.

With regards to those lands in Neighborhood I which are located to the north of the I-15 Freeway (Sycamore Canyon), north and east of the point where the San Bernardino National Forest comes in closes contact with the I-15 Freeway ROW (between PAs 5 and 11), because the boundaries of the SBNF would effectively preclude the widening of that area proposed for annexation between PAs 5 and 11, except through encroachment on National Forest System lands, the Applicant would likely request and LAFCO grant the waiver authorized under Section 56375(m) of the CGC.

With regards to those lands in Neighborhood I which area located to the south of the I-15 Freeway (Sycamore Flat), with the inclusion of that segment of the I-15 Freeway right-of-way which is now included in the Applicant-proposed annexation, assuming that highway alignment count toward minimum width requirements (Section 56031, CGC), PAs 9 and 10 (in combination with the existing Clearwater Parkway right-of-way) extends to the north and west of the I-15 Freeway ROW North Exclusion and physically links the Sycamore Flat area with the remainder of Neighborhood I. However, to the extent that the I-15 Freeway right-of-way is excluded by statute from any calculation of specified width requirements, absent the annexation of all or a

[287]/ Letter from Kathleen Rollings-McDonald, Executive Officer, San Bernardino County Local Agency Formation Commission (Re: Notice of Preparation of a Draft Environmental Impact Report for the Lytle Creek Ranch Specific Pan) to Gina Gibson, Senior Planner, City of Rialto, Development Services Department, dated July 31, 2009, p. 5.

portion of the area comprising the County-approved LCNPD (Rosena Ranch), no other opportunities exist which would allow the Applicant to satisfy the 200-foot width requirement specified under Section 56031 of the CGC.

Because annexation would thus be precluded pending the annexation of all or a portion of the Rosena Ranch area, with regards to that portion of Neighborhood I located south of the I-15 Freeway (Sycamore Flat), the Applicant would likely request and LAFCO would likely grant the waiver authorized under Section 56375(m).

As noted by LAFCO, based on the Sycamore Creek Drive ROW Exclusion, Neighborhood I is noncontiguous with Neighborhood IV. Similarly, based on the I-15 Freeway ROW South Exclusion, Neighborhood IV is noncontiguous with Neighborhood III. As illustrated in Figure 4.1-32 (LAFCO-Identified "Exclusion Areas"), Neighborhood IV is actually contiguous with the City of Fontana. Although contiguous with the City of Fontana, as shown in Figure 4.1-4 (San Bernardino Local Agency Formation Commission - City of Rialto Adopted Sphere of Influence), Neighborhood IV is nonetheless located in the City-adopted Sphere of Influence.

Because the Sycamore Creek ROW Exclusion and the I-15 Freeway ROW South Exclusion appear to isolate Neighborhoods I and IV from contiguous City lands, LAFCO may not consent to the approval of the Applicant-proposed annexation without the inclusion and concurrent annexation of those areas. Although LAFCO's denial of the annexation of Neighborhoods I and IV would not preclude the City's adoption of the proposed LCRSP (as prezoning for the area's later annexation), a final "A" level or "B" level subdivision map could not be recorded encompassing those neighborhoods not then annexed. Implementation of the proposed LCRSP would then only proceed if the County were to adopt those portions of the proposed LCRSP remaining in County jurisdiction and if the County were to approve such other discretionary actions as may be associated therewith. Such actions would materially change the nature of the project, including the content of the proposed development agreement, now before the Lead Agency.

In addition to the independent analysis to be performed by LAFCO, the Lead Agency has formulated a recommended mitigation measure (Mitigation Measure 1-12) conditioning the recordation of any final subdivision map for lands within Neighborhoods I and IV upon the annexation of those lands into the City. Implementation of that recommended measure will reduce potential annexation impacts to a less-than-significant level.

In addition, LAFCO also raised the following additional annexation-related issues: (1) since only a portion of the area being annexed into the City is to be annexed into the WVWD, although a water district can annex non-contiguous areas, it is LAFCO's policy that City and water district boundaries be coterminous; and (2) unless there are parcel changes, such as splits and mergers, which are completed prior to annexation, the annexation boundaries must conform to existing lines of parcel assessment or ownership. Since LAFCO acknowledges that City and WVWD boundaries do not need to be coterminous and since lot splits can be eliminated through traditional Subdivision Map Act and subdivision ordinance authorized actions, neither of these issues raises to a level of significance under CEQA.

4.1.5.5 Cumulative Impacts

***Environmental Impact 1-9**. Implementation of the proposed project in combination with those other related projects identified herein will result in the further urbanization of the*

general project area, including the conversion of vacant or under-developed properties to higher-intensity land uses.

***Preliminary Determination 1-9**. Less-than-significant impact.*

As indicated in Table 3-1 (Valley Planning Area - Total Socioeconomic Projections), the City and County are and will continue to undergo rapid urbanization in response to regional growth. With that urbanization, real property previously designated for open space, agriculture, or resource conservation will be or has already been redesignated in order to accommodate a range of residential and non-residential uses.

With that conversion and subsequent intensification, the feasibility of returning those properties to their previous use diminishes or may be eliminated in its entirety. Although, in some instances, the change may be reversible, the commitment of real property to one use may narrow the range of future uses for which that land may be utilized, particularly in those circumstances where a higher intensity use replaces a lower intensity use.

Independent of other economic variable, this is a trend that has and will continue throughout the region throughout the life of the project. The incremental effects of development within and adjacent to existing open space and in close proximity to conservation areas results in a loss or diminishment of both the existing conservation value and the functionality of those areas and produces a corresponding reduction in certain beneficial purposes for which those lands may now be used (e.g., open space preservation, watershed, and wildlife habitat). As those areas convert to urban uses, the resources (e.g., agricultural, biological, and mineral) located thereupon are or may be forever lost to future generations.

A project would normally be deemed to produce a significant environmental effect if the project were to substantively conflict with any applicable land-use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating adverse environmental effects. As indicated in Table 4.1-6 (Preliminary Consistency Assessment - City General Plan Goals and Policies), with regards to the City General Plan, the LCRSP project (including the annexation of the project site and the implementation of the land uses authorized thereunder) has been examined in the context of compliance with and conformity to applicable or potentially applicable land-use plans and policies and found to be generally consistent with and/or not in substantial conflict with those requirements.

4.1.6 Recommended Mitigation Measures

- **Mitigation Measure 1-1**. Unless otherwise waived by the City's Development Services Director (Director) on a case-by-case basis, development applications involving the construction of any of the permitted land uses identified in the specific plan and listed in the "General Land-Use Compatibility Matrix" (see Table 4.1-4 in the DEIR) shall be accompanied by the submittal to the Director of a site-specific and use-specific analysis that addresses the potential land-use conflicts identified therein and identifies the design measures (such as landscaping, screening, etc.), site planning measures (such as setbacks, massing), development standards in the LCRSP, and such other measures that will be employed to ensure compatibility among adjacent land uses. Upon acceptance and subject to the Director's discretion, should the resulting investigation indicate the absence of any significant environmental effects, the Director may administratively grant authorization for such use. All identified design measures, site

planning measures, development standards, and other measures shall be imposed as subsequent conditions of approval for individual development projects. For the purpose of environmental compliance, "adjacent" shall be defined as directly abutting and shall not include uses separated by a street public or private right-of-way or designated open space area.

- **Mitigation Measure 1-2**. No grading, landscape, and street improvement plans shall be approved or authorized within the recorded easements of Calnev Interstate Pipeline (Calnev) and Southern California Gas Company's (SoCalGas) natural gas transmission pipelines until approved by the City and the utility company and/or pipeline operator.

- **Mitigation Measure 1-3**. The specific plan land-use map shall be modified to depict the existing alignment of the recorded easement for the Calnev Interstate Pipeline and Southern California Gas Company's natural gas transmission pipelines where they traverse the project site. No habitable structures or structures that would impede access to the pipeline easement shall be placed within the easement area, unless otherwise approved by SoCalGas or Calnev.

- **Mitigation Measure 1-4**. With the exception of open space, prior to approving any land use within an area designated as a "high consequence area" pursuant to Title 49, Part 92, Subpart O of the Code of Federal Regulations (CFR) for covered pipeline segments (as defined in 49 CFR 192.903), if any, of the Calnev Interstate Pipeline and Southern California Gas Company's natural gas transmission pipelines located within the project boundaries, the Applicant shall provide to the City if available a copy of the pipeline integrity management plan, as prepared by the pipeline operator pursuant to 49 CFR 192.907. The submittal of the pipeline integrity management plan is intended for the purpose of public disclosure and informed decision making and is not determinant of any project-level entitlements with regards to those properties subject thereto.

- **Mitigation Measure 1-5**. The "Lytle Creek Ranch Specific Plan" identifies two sites that are proposed as school sites for an elementary school and an elementary/middle school. Prior to the submittal of any "B" level tentative subdivision map (excluding any "A" level subdivision map for financing purposes only) designating a potential school site or joint-use site which is intended to be made available for use by a local school district, if required, the Applicant shall consult with the Rialto Unified School District (RUSD) regarding the RUSD's school site selection process and obtain the RUSD's consent to include a potential school site or joint-use site as part of the tentative subdivision map application. Prior to acquisition of the school site, the RUSD shall prepare an initial school site evaluation, in accordance with the California Department of Education's (CDE) School Facilities Planning Division's SFPD 4.0 (Initial School Site Evaluation) (CDE, Revised July 2009) which shall include a "school site pipeline risk analysis" in accordance with the CDE's "Guidance Protocol for School Site Pipeline Risk Analysis" (CDE, 2007) or such alternative analytical methodology as may be designated by the benefitting school district and acceptable to the CDE.

- **Mitigation Measure 1-6**. Prior to the approval of any tentative "B" level tentative subdivision map (excluding any "A" level subdivision map for financing purposes only) allowing for residential development or other sensitive land uses on lands abutting active mining areas, the Applicant shall delineate on the plan or map a buffer zone (which might be inclusive of road right-of-way) from the edge of those active mining areas of a

width and configuration acceptable to the City and the Applicant shall incorporate within that buffer zone solid fencing, with a minimum height of not less than six feet above finish grade, and landscaping of a type and intensity acceptable to the City.

- **Mitigation Measure 1-7**. In order to avoid potential conflicts with the United States Forest Service's resource management plans, prior to the approval of any tentative tract map on lands abutting the National Forest, the Applicant shall prepare a land-line survey delineating the project's boundaries relative to boundaries of the San Bernardino National Forest. The Applicant shall avoid disturbance to all public land survey monuments, private property corners, and forest boundary markers. In the event that any such land markers or monuments on National Forest System lands are destroyed by an act or omission of the Applicant, depending on the type of monument destroyed, the Applicant shall reestablish or reference same in accordance with: (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States"; or (2) the specifications of the County Surveyor; or (3) the specifications of the Forest Service. Further, the Applicant shall ensure that any such official survey records affected are amended, as provided by law.

- **Mitigation Measure 1-8**. With the exception of Planning Area 15 which is subject to a 24-foot building setback requirements, unless otherwise approved by the responsible fire authority or a lesser setback is approved by the Director upon receipt of a use-specific application, design and development plans shall include a minimum 25-foot building setback from adjoining National Forest System lands. Landscape plans for the setback area shall, to the extent feasible, utilize plant materials indigenous to the San Bernardino National Forest.

- **Mitigation Measure 1-9**. Prior to the approval of any tentative "B" level tentative subdivision map (excluding any "A" level subdivision map for financing purposes only), the Applicant shall submit documentation, acceptable to the City Engineer, demonstrating the availability of potable water supplies, the sufficiency of fire flow, and the capacity of wastewater conveyance and treatment systems to the area of and adequate to support the level of development that would be authorized within the tract map area and/or the Applicant's plans and performance schedule for the delivery, to the tract map area, of those requisite services and systems.

- **Mitigation Measure 1-10**. If, as a result of the implementation of the proposed flood control improvements or other Applicant-initiated actions, the boundaries of the 100-year flood zone are modified or would likely be modified as a result thereof, the Applicant shall prepare and submit to the Federal Emergency Management Agency (FEMA), with proof of delivery to the City Engineer, a letter of map amendment (LOMA), including appropriate mapping and hydrologic analyses, requesting that FEMA revise the designation of affected on-site and off-site areas.

- **Mitigation Measure 1-11**. When a warehouse or a distribution center is proposed within 1,000 feet of an existing on-site or off-site sensitive receptor or within 1,000 feet of an on-site planning area designated for residential, school, or recreational use, the Applicant shall submit and, when acceptable, the Director shall approve a "good neighbor" plan, including the minimization of cut-through traffic and on-street parking, detailing each project's design elements, operational strategies, and other proposed actions to minimize potential land-use and associated impacts attributable to that use

upon those receptors. Implementation of the "good neighbor" site design elements, operational strategies, and other proposed actions, as approved by the Director, shall be adopted as conditions of approval for the associated warehouse or distribution center.

- **Mitigation Measure 1-12**. Prior to the recordation of any final subdivision map, including both "A" level and "B" level maps, for any portion of Neighborhoods I and IV, those areas shall be annexed into the City and such map shall not be effective until annexation of such property to the City has been completed to the satisfaction of the Director. If annexation has not been completed within one year of the approval of any tentative subdivision map for any portion of Neighborhoods I and IV, then the approval of such map shall be null and void. No subdivision of unincorporated lands shall be effected by approval of any map by the City unless annexation thereof to the City has been completed prior to the approval of the final map thereof.

4.1.7 Significant Unavoidable Adverse Effects

The proposed project has been shown to be generally consistent with both the City General Plan and with a number of regional plans formulated by SCAG, including the 2004 Compass Blueprint, 2008 RTP, and 2008 RCP. Substantial evidence exists to support a determination by the City's decision-making body that, because jobs-housing balance is a community-based planning consideration, it does not need to be applied to individual development activities. As a result, those regional planning policies promoting the attainment of a jobs-housing balance may not be deemed directly applicable to the proposed project.

As mitigated, the approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative land-use or planning impacts.

4.2 POPULATION AND HOUSING

4.2.1 Technical Reports

No site-specific or project-specific technical reports focusing specifically on the issues of population and housing were prepared or examined by the Lead Agency. Many of the technical reports referenced elsewhere in this EIR, however, have possible relevancy to the existence of potential constraints affecting housing production and availability and/or population and housing growth and were considered by the Lead Agency in the preparation of this analysis.

4.2.2 Regulatory and Policy Setting

4.2.2.1 United States

Federal housing laws, including the Civil Rights Act of 1964 (also known as the Fair Housing Act), the Fair Housing Amendments Act of 1988, the Housing and Urban Development Act of 1968, and the Cranston Gonzalez Affordable Housing Act of 1990, relate primarily to civil rights and fair housing requirements and to the construction and occupancy of federally assisted housing. Although civil rights and fair housing requirements are germane to all public and privately funded housing, because compliance with federal law is mandatory, no further discussion of those regulations is provided in the context of this topical issue.

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **National Affordable Housing Act**. Title I of the National Affordable Housing Act of 1990 established the requirement that states and local governments that apply for direct assistance under certain United States Department of Housing and Urban Development (HUD) programs have a "consolidated plan" that has been approved by HUD. As indicated in the implementing legislation, "the overall goal of the community planning and development programs covered by this part is to develop viable urban communities by providing decent housing and a suitable living environment and expanding economic opportunities principally for low- and moderate-income persons. The primary means towards this end is to extend and strengthen partnerships among all levels of government and the private sector, including for-profit and non-profit organizations, in the production and operation of affordable housing" (24 CFR Part 91.1[a]). The consolidated plan must contain a housing and homeless needs assessment, a housing market analyses, priority needs and objectives, a long-term strategy, and an annual action plan. The action plan and certifications must be submitted annually and the remaining information must be submitted every five years. Both the State and the City have recently adopted five-year and annual consolidated plans.

  The consolidated plan is a prerequisite to an agency's receipt of certain HUD funds and serves to outline an agency's strategy to address identified housing needs. The "State of California 2005-2010 Consolidated Plan"[1] and the "City of Rialto 2005-2009 Consolidated Plan"[2] are discussed under regional and local settings, respectively.

[1]/ California Department of Housing and Community Development, State of California 2005-2010 Consolidated Plan, May 2005.

[2]/ City of Rialto, City of Rialto 2005-2009 Consolidated Plan, adopted April 1, 2005.

- **Older Americans Act**. As indicated in the Older Americans Act, as codified in Title 42, Chapter 35, Sections 3001-3058(ee) of the United States Code (U.S.C.): "The Congress hereby finds and declares that, in keeping with the traditional American concept of the inherent dignity of the individual in our democratic society, the older people of our Nation are entitled to, and it is the joint and several duty and responsibility of the governments of the United States, of the several States and their political subdivisions, and of Indian tribes to assist our older people to secure equal opportunity to the full and free enjoyment of the following objectives. . .Obtaining and maintaining suitable housing, independently selected, designed and located with reference to special needs and available at costs which older citizens can afford."

- **Americans with Disabilities Act**. Title III of the Americans with Disabilities Act of 1990 (42 U.S.C. 12181 *et seq.*) (ADA) authorizes the United States Department of Justice (USDOJ) to certify that state laws, local building codes, or similar ordinances meet or exceed the ADA Standards for Accessible Design (ADA Standards), codified in Appendix A, in Part 36, in Title 28 of the Code of Federal Regulations (CFR), for new construction and alterations. Title III applies to public accommodations and commercial facilities, including most private businesses and non-profit service providers. Section 4459(c) of the CGC indicates that the scope of accessibility regulations in the California Building Standards Code shall not be less than the application and scope of accessibility requirements of the ADA. The requirements outlined in Chapter 11B of the California Building Standards Code meet the new construction and alteration requirements of Title III of the ADA.

Unless a building qualifies as housing for older persons, it may not discriminate based on familial status. That is, it may not discriminate against families in which one or more children under 18 years of age live with a parent, a person who has legal custody of the child or children, or the designee of the parent or legal custodian. Housing for older persons is exempt from the prohibition against familial status discrimination if: (1) the United States Department of Housing and Urban Development (HUD) determines that it is specifically designed for and occupied by elderly persons under a federal, state, or local government program; or (2) it is occupied solely by persons who are 62 years of age or older or it houses at least one person who is 55 years of age or older in at least 80 percent of the occupied units and adheres to a policy that demonstrates an intent to house persons who are 55 years old or older. Under these provisions, the Applicant seeks to identify Neighborhood II as an "age-restricted" community.

4.2.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Older Californians Act**. As indicated, in part, in Section 9001 of the Older Californians Act, as codified in Sections 9000-9757.5 of the California Welfare & Institutions Code: "The Legislature hereby finds and recognizes all of the following: (a) Older individuals constitute a fundamental resource of the state that previously has been undervalued and poorly utilized, and ways must be found to enable older individuals to apply their competence, wisdom, and experience for the benefit of all Californians. (b) There is a continuing increase in the number of older individuals in proportion to the total population. (c) Today, 14 percent of California's population currently is 60 years of age and over. (d) By the year 2010, the first influx of baby boomers will constitute 29.2 percent of California's total population over 60 years of age. By the year 2020, baby

boomers will constitute 70.2 percent of California's total population over 60 years of age. (e) By the year 2020, older individuals will represent 21 percent of California's total population." As further indicated in Section 9002(d)(5) therein, the California Department of Aging shall "[e]ncourage public and private development of suitable housing."

- **California Environmental Quality Act**. Referencing Section 21000(g) of CEQA, "it is the intent of the Legislature that all agencies of the State government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian." As further indicated in Section 21001(d) of CEQA, the State Legislature finds and declares that it is the policy of the State to "[e]nsure that the long-term protection of the environment, consistent with the provisions of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions." Referencing Section 15021(d) of the State CEQA Guidelines, "CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian."

- **California Government Code**. The CGC reinforces the existence of an overarching Statewide housing goal. As indicated in Section 65580 of the CGC: "The Legislature finds and declares as follows: (a) The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order. (b) The early attainment of this goal requires the cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians of all economic levels. (c) The provision of housing affordable to low- and moderate-income households requires the cooperation of all levels of government. (d) Local and state governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provisions for the housing needs of all economic segments of the community. (e) The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental, and fiscal factors and community goals set forth in the general plan and to cooperate with other local governments and the state in addressing regional housing needs."

  As required under California law, each municipality is required to prepare a comprehensive general plan as a guide for its physical development. Each general plan is required to contain seven mandatory elements, including a housing element. As specified in Section 65581 of the CGC, in requiring the preparation of that element, it is the intent of the State Legislature to: (1) assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goal; (2) assure that counties and cities will prepare and implement housing elements which, along with federal and State programs, will move toward attainment of the State housing goal; (3) recognize that each locality is best capable of determining what efforts are required by it to contribute to the attainment of the State housing goal; and (4) ensure that each local government cooperates with other local governments in order to address regional housing need, including special needs.

In order to address regional housing needs, the CGC contains specific requirements for regional housing needs assessments (RHNA). Section 65581 of the CGC requires cities and counties to recognize their responsibilities in contributing to the attainment of the State's housing goal and acknowledges that each locality is best capable of determining what efforts are required. As indicated in Section 65584(a) of the CGC: "For purposes of subdivision (a) of Section 65583, the share of a city or county of the regional housing needs includes that share of the housing need of persons at all income levels within the area significantly affected by a general plan of the city or county. . .The appropriate council of governments shall determine the share for each city or county consistent with the criteria of this subdivision and with the advice of the department [Department of Housing and Community Development] subject to the procedure established pursuant to subdivision (c) at least one year prior to the second revision, and at five-year intervals following the second revision pursuant to Section 65588. The council of governments shall submit to the department information regarding the assumptions and methodology to be used in allocating the regional housing need."

SCAG is mandated under Section 65584 of the CGC to determine the existing and projected housing needs for the five-county region, as well as the share of this need to be allocated to individual cities and counties in the SCAG region. The resulting RHNA serves, in part, as the basis for the preparation of local housing elements. Before local housing elements must be updated, the regional COG allocates to each local jurisdiction its fair share of the RHNA for the next five-year housing element period. AB 2158 (Lowenthal), approved by the Governor on September 22, 2004, amended the system for determining each community's share of the regional need for housing. Additionally, AB 1233 (Jones), approved by the Governor on October 6, 2005, requires that any portion of a local government's share of a regional housing need that is not met during one planning period must be carried forward to the next round of fair-share housing allocations and, within the first year of the planning period for the new housing element, zone or rezone adequate sites to accommodate the unaccommodated portion of the regional housing need allocation from the prior planning period.

As specified in AB 242 (Blakeslee), as approved by the Governor on April 29, 2008, amending Section 65584.07 of the CGC: "If an annexation of unincorporated land to a city occurs after the council of governments, subregional entity, or the department for areas with no council of governments, has made its final allocation under Section 65504.03, 65584.04, 65584.06, or 65584.08, a portion of the county's allocation may be transferred to the city. The city and the county may reach a mutually acceptable agreement for transfer of a portion of the county's allocation to the city, which shall be accepted by the council of governments, subregional entity, or the department, whichever allocated the county's share. If the affected parties cannot reach a mutually acceptable agreement, then either party may submit a written request to the council of governments, subreagional entity, or to the department for areas with no council of governments, to consider the facts, data, and methodology presented by both parties and determine the number of units, by income category, that should be transferred from the county's allocation to the city" (Section 65584.07[d][1], CGC).

AB 2348 (Mullin), approved by the Governor on September 23, 2004, prevents local agencies from disapproving a housing development project for very low, low, or moderate-income households or conditioning approval in a manner that would render the project infeasible for development unless it makes certain written findings. In addition, when an applicant proposes a housing development for lower income

households within the jurisdiction of a city, county, or city and county, that local agency shall provide the applicant incentives or concessions for the production of housing units and child-care facilities. The agency shall adopt an ordinance specifying how compliance with the provisions of the bill will be implemented.

The CGC further links housing with the provision of proximal employment opportunities. As indicated in Section 65890.1 of the CGC: the State Legislature "finds and declares that: (a) State land use patterns should be encouraged that balance the location of employment-generating uses with residential uses so that employment-related commuting is minimized. (b) Balance in employment and residential land use patterns reduces traffic congestion and may contribute to improvement of air quality in urban area. (c) Balancing of employment-generating land uses and residential land uses improves economic and housing opportunities and reduces loss of economic productivity caused by transportation delay. (d) The attainment of a more balanced land use pattern requires the cooperation of government agencies with the private sector to assure that public and private decisions affecting land use take into consideration the need to seek balance in the location of employment-generating land uses and residential land uses. (e) Local agencies and state agencies should cooperate to facilitate the balancing of employment-generating land uses and residential land uses and provisions of transportation to serve these uses. (f) Local governments have the primary responsibility to plan for local land use patterns, within the parameters established by state law to achieve statewide needs. (g) Housing must be provided for the estimated 3 million new workers and their families expected to be added to the California economy in the 1990's. (h) It is the intent of the Legislature to move toward the goal that every California worker have available the opportunity to reside close to his or her jobsite."[3]

Sections 65915 through 65918 of the CGC requires local governments to grant a density bonus of at least 25 percent or provide other incentives of equal value to a developer in exchange for an agreement that the extra units in excess of existing zoning be affordable. As authorized therein, when a developer of housing agrees or proposes to construct at least 20 percent of the total units for "lower income" households (as defined in Section 50079.5 of the H&SC), 10 percent of the total units for "very low income" households (as defined in Section 50105 of the H&SC), or 50 percent of the total dwelling units for "qualifying residents" (as defined in Section 51.3 of the Civil Code), a city and/or county shall either grant a density bonus and at least one additional concession or incentive unless the city and/or county makes a written finding that the additional concession or incentive is not required in order to provide for affordable housing costs (as defined in Section 50052.5 of the H&SC) or for rents for the targeted units to be set as specified or provide other incentives of equivalent value based upon the land cost per unit. In exchange, the developer shall agree to and the city and/or county shall ensure continued affordability of all lower income density bonus units for 30 years or a longer period if required by the construction or mortgage financing assistance program, mortgage insurance program, or rental subsidy program. Those units targeted for lower income households shall be affordable at a rent that does not exceed 30 percent of 60 percent of area median income. Those units targeted for very low-income households shall be affordable at a rent that does not exceed 30 percent of 50 percent

[3]/ As further indicated in 65890.3 of the CGC, the California Department of Housing and Community Development (HCD) was directed to prepare a guidebook for use by cities, counties, councils of government, State agencies, and the private sector in the planning and development of a housing supply to meet the need created by employment growth. HCD has not, as of yet, prepared that guidebook.

of the area's median income. If a city and/or county does not grant at least one additional concession or incentive, the developer shall agree to and the city and/or county shall ensure continued affordability for 10 years of all lower income housing units receiving a density bonus.

In the context of the CGC, "density bonus" means a density increase of at least 25 percent, unless a lesser percentage is elected by the developer, over the otherwise maximum allowable residential density under the applicable zoning ordinance and land-use element of the general plan as of the date of application by the developer to the city, county, or city and county. The granting of a density bonus shall not be interpreted, in and of itself, to require a general plan amendment, zoning change, or other discretionary approval. The density bonus shall not be included when determining the number of housing units that are equal to 10 or 20 percent of the total. The density bonus shall apply to housing developments consisting of five or more units.

Where there is a direct financial contribution to a housing development pursuant to Section 65915 of the CGC through participation in the cost of infrastructure, write-down of land costs, or subsidizing the cost of construction, the city and/or county shall assure continued availability for low- and moderate-income units for 30 years. When appropriate, the agreement, as provided for in Section 65915 of the CGC, shall specify the mechanisms and procedures necessary to carry out this section.

- **Health and Safety Code**. With an aging population, the design of residential dwellings takes on increased importance. The term "universal design" is a broadly encompassing approach to the design and development of products, architecture, and environments around human diversity. Universal design recognizes the changing diversity of needs important to all people, regardless of their varying age, ability, or condition during an entire lifetime.

  AB 2787, as adopted in 2002, added Section 17959 of the Health and Safety Code (H&SC), requiring that the California Department of Housing and Community Development (HCD) to develop and certify one or more "universal design" ordinances applicable to new construction and alterations for voluntary adoption by local governments. HCD certified a model ordinance on October 31, 2005. Notwithstanding laws restricting the authority of local governments to adopt building standards that vary from the California Building Standards Code (Title 24, CCR), the model ordinance may be adopted as new building standards. AB 1400, as adopted in 2003, added Section 17959.6 of the H&SC, requiring builders constructing new for-sale residential units to provide a "checklist of universal accessibility features to a purchaser of a home beginning ninety days after HCD certified a model ordinance. The checklist must be provided for new single-family, duplex, triplex, townhouse, condominium, or other dwellings and must include specified standards and features. Builders may develop their own checklists.[4]

In an August 28, 2007 California Court of Appeal decision, the First Appellate District upheld the approval by a municipality of a mixed-use development, including an award of a 40 percent density bonus for the inclusion of affordable and senior citizen housing (Friends of Lagoon

[4]/ California Department of Housing and Community Development, Universal Design: New Model Local Ordinance Availability and New Builder Checklist Requirements, Information Bulletin 2005-13, November 10, 2005, p. 1.

Valley v. City of Vacaville). The Court of Appeal looked to the plain language and legislative history of Section 65915 of the CGC and determined that the 35 percent maximum density bonus level described in the statute reflects the maximum density increase statutorily imposed upon municipalities. Nothing in the statute, however, constrains a municipality from exercising its discretion to award a density bonus in excess of the statutory minimum. A municipality is not required to enact an ordinance in order to award density bonuses and incentives.

4.2.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **San Bernardino County General Plan**. The "County of San Bernardino Housing Element"[5] (County Housing Element), as adopted on March 13, 2007, presents a comprehensive statement by the County of its broad and specific commitments to meet existing and future housing needs in unincorporated areas. Within unincorporated areas, the County Housing Element details the County's five-year strategy for expanding housing opportunities for the various economic segments of the unincorporated portions of the County and provides the primary policy guidance for local decision making relative to housing.

  As indicated therein, relative to housing the "overall goals" of the County include: (1) Develop and maintain structurally sound, sanitary, attractive and affordable housing and living environments for all economic segments of society. (2) Develop efficient well-coordinated housing programs relevant to the County that meet the intent of all applicable State and federal laws. (3) Implement strategies aimed at developing a balance between housing and employment opportunities for all residents. (4) Develop sufficient infrastructure and services to accommodate existing and planned residential development.[6]

  In the context of the proposed project, those housing goals, objectives, and programs presented in the County Housing Element that appear to be most closely related to the unincorporated County portion of the project site are presented below.

  - Goal H11. Because it is desirable to optimize use of and limit adverse impacts on existing infrastructure and natural resources, such as open space and air quality, more intensive residential development shall be encouraged in areas close to major transportation corridors where the infrastructure already exists and/or is underutilized, through the following actions-programs:

    - ◊ Program H11.2. Guide residential development to areas where existing infrastructure is underutilized, reducing further stress on aging infrastructure until those impacts can be corrected.

[5]/ County of San Bernardino, County of San Bernardino Housing Element, adopted on March 13, 2007.
[6]/ *Ibid*., p. 4-19.

- ◊ Program H11.3. Guide residential infill development to areas of the County where appropriate.

- ◊ Program H11.4. Continue to reduce the length and number of vehicle trips, which in turn, reduces congestion and air pollutant emissions, while preserving the unique character of the individual region.

- Goal H12. Because there are existing areas lacking the necessary infrastructure that could be appropriate for residential development, the following actions programs shall be pursued.

  - ◊ Policy H12.1. Identify areas of insufficient housing where [County] General Plan designations are underutilized due to insufficient infrastructure.

  - ◊ Policy H12.2. Throughout the County, study infrastructure development alternatives that would stimulate residential development.

- Goal V/H1. Encourage a diversity of housing types that will accommodate all individuals and families from all income levels.

  - ◊ Policy V/H1.1. The following methods of housing types and design shall be encouraged in the Valley Region provided they are compatible with established land use patterns and the environment of the region. Some of these types will augment and contribute to the supply of affordable housing in the region. (a) Single Family Dwelling Units. (b) Mobile home parks/manufactured home land-leased communities. (c) Multiple Family Residential apartment projects. (d) Large lot and/or clustered residential lots adjacent to Chino Agricultural/Dairy Preserve.

  - ◊ Policy V/H1.4. Within the Valley Region, the types of development to be favored are: urban infill, single family detached, clustered development with single family appearance, and single family detached on large lots.[7]

As indicated in the County General Plan, on average, there are 4.82 persons per household in the unincorporated portions of the Valley Planning Region. The "maximum population density average" (MPDA) per square mile, based on a 2.5-acre minimum lot size for the Valley Region is 1,234 persons per square mile.[8]

- **San Bernardino County Development Code**. Chapter 83.03 (Affordable Housing Incentives – Density Bonus) of the County Development Code specifies the provisions through which the County will offer density bonuses, incentives, and concessions for the development of housing that is affordable to the types of households and qualifying residents identified in Section 83.03.020 (Eligibility for Bonus, Incentives, or Concessions). This chapter serves to implement the provisions of Section 65915 *et seq*. of the CGC.

[7]/ *Ibid*., pp. 4-19 through 4-41.
[8]/ *Ibid*., p. II-9.

As defined in Section 810.01.030 of the County Development Code, "affordable housing" means "[h]ousing with the contract rent or price, including all housing costs, which is affordable by low and very low (lower and low or moderate) income households as defined by the [United States] Department of Housing and Urban Development (HUD) pursuant to the United States Housing Act of 1937 for the Riverside-San Bernardino Primary Metropolitan Statistical Area (PMSA)."

4.2.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. As indicated in the City General Plan (Conservation Element), jobs-housing balance has become a "major planning and public policy issue." The City General Plan notes that job-housing balance "refers to the distribution of employment relative to the distribution of workers within a given geographic area. A community is considered 'balanced' when these distributions are approximately equal."[9] In the context of the proposed project, with regards to jobs-housing balance, the following policies are extracted from the City General Plan.

  - Goal 5.2. Improve the balance between jobs and housing in order to create a more efficient urban form and/or reduce the vehicle miles traveled (VMT).

    - ◊ Policy 5.2.6. Improve the jobs-housing balance through new development and redevelopment project review and actions.[10]

  The City General Plan includes an Economic Development Element. As indicated therein, the City of Rialto faces the following economic development challenges: (1) to secure competitive advantages and stem any erosion of its economic base by nearby competitors; (2) to address the concerns of internal economic structure, such as industrial area disuse, commercial under-development, and downtown character; (3) to ensure adequate government revenues to finance essential public services; and (4) to create and maintain a distinctive community image, attractive to both businesses and residents.[11] With regards to economic development, the following policies appear to be the most applicable to the proposed project.

  - Goal 1.1. Promote an economic base and positive business climate providing primary commercial serves to the resident population.

  - Goal 1.2. Provide a broader base of employment opportunities for Rialto and the west San Bernardino Valley.

[9]/ *Op. Cit.*, City of Rialto General Plan, Conservation Element, p. X-9.
[10]/ *Ibid.*, p. X-10.
[11]/ *Ibid*, Economic Development Element, p. III-1.

- Goal 1.6. Utilize the specific plan process for planning in established area of Rialto which may undergo land use transformation.

  - ◊ Policy 1.6.1. Establish criteria for comprehensiveness in such specific plans to address critical issues relative to the area in question.

  - ◊ Policy 1.6.2. Encourage master planning and, where appropriate, mixed use character at major in-fill sites.[12]

At the time of this document's preparation, the City's Housing Element, as adopted on March 3, 2001, covered the period 2000-2005.[13] As indicated therein: "Assuring the availability and adequacy of decent, affordable housing is an important goal for the City of Rialto."[14] As further noted therein, one key element in meeting the housing needs of all segments of the community is the provision of adequate sites for all types, locations, sizes, and prices of housing. Providing a balanced inventory of housing, in terms of unit type, cost range, and style, allows the City to fulfill a variety of housing needs. The following policies have been developed to provide adequate sites to ensure housing diversity.

- Goal 2.0. Provide adequate residential sites through appropriate land use, zoning, and specific plan designations.

  - ◊ Policy 2.4. Promote the phased and orderly development of new neighborhoods consistent with the provision of infrastructure improvements.[15]

With regards to specific plans, the Housing Element notes: "Specific Plans provided added flexibility from residential development standards established within the Zoning Ordinance. The purpose of the Specific Plans is to provide focused planning and development standards tailored to the unique characteristics or purpose of a particular area of Rialto."[16]

Although neither identified as a separate goal or policy, the City's Housing Element indicates that, while requiring developers to construct site improvements, pay towards other infrastructure costs, or provide public services and utility systems increases the cost of housing and impact affordability, these requirements are deemed necessary to maintain the quality of life desired by City residents and are consistent with the City General Plan's goals to ensure that public services and facilities will be in place at the time they are needed.[17]

Applicable or potentially applicable population and housing policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential

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[12]/ *Ibid*., pp. III-1 through III-4.

[13]/ As reported by the California Department of Housing and Community Development on February 26, 2008, the City's Housing Element was deemed "in compliance" with State housing element law for the current planning period (http://www.hcd.ca.gov/hpd/hrc/plan/he/status.pdf).

[14]/ City of Rialto (Cotton/Bridges/Associates), City of Rialto 2000-2005 Housing Element, March 2001, p. 2-1.

[15]/ *Ibid*., p. 5-6.

[16]/ *Ibid*., p. 3-7.

[17]/ *Ibid*., p. 3-11.

compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. No City Municipal Code excerpts are cited herein.

4.2.3 Environmental Setting

In its December 2008 report, the UCLA Anderson Forecast predicts that the current recession inflicting the national economy will feature four quarters of negative growth, followed by very tepid growth rates, and rising unemployment rates that last through 2010. The California forecast will share the national recession, with negative growth through the middle of next year and high unemployment until 2010. The outlook for California calls for a very weak first three quarters of 2009.[18]

It is evident that current economic conditions confronting the nation, the State, and the region differ from those conditions event prior to the 2008. As such, since most forecasts predate that time period, those population, housing, and employment projections presented in those forecasts may not fully reflect the impacts of those conditions. The Lead Agency's advisory and decision-making bodies should, therefore, consider the data presented throughout this document in the context of recent economic events and recognize that certain forecasts may be affected by those events.

4.2.3.1 Regional Setting

The nation, the State, and the Inland Empire are each experiencing an economic downturn. As reported by Beacon Economics: "Like the nation and the State, we believe the Inland Empire is unquestionably in a recession. It will be some time before an official beginning will be identified, but the recession will likely be determined to have started some time in mid-2008. The Inland Empire entered the recession earlier than other areas, with financial activity employment dropping first, followed by a loss of jobs in the construction sector. Now the effects of the recession have infected financial markets and consumer spending, losses are more pervasive, with accelerating declines in manufacturing and retail trade."[19]

Many of the studies and statistics cited herein where prepared and/or formulated prior to the current economic downturn and now appear overly optimistic. Those agency projections referenced herein should, therefore, be viewed in the context of the setting that existed at the time when each study was prepared. While projections may remain realistic based on long-term trends, it should be assumed that any timeframes referenced in those projections may now be elongated based on the current economic environment.

Regional Setting

In January 1992, the State Legislature sponsored a consensus project conducted by the Center for California Studies at California State University, Sacramento. In 1993, then Governor Pete Wilson established a Growth Management Council, which, in January 1993, advocated the need for reform to State statutes and administrative procedures in the areas of infrastructure,

[18]/ UCLA Anderson Forecast, December 2008 Economic Outlook, December 11, 2008 (http://www.uclaforecast.com/default.asp).

[19]/ Beacon Economics, 2008 Inland Empire Economic Forecast, Volume 3, Number 5, October 2008, p. 34.

housing, integration and coordination of State planning, local comprehensive plans, CEQA, permit streamlining, councils of government, congestion management, air quality, and agricultural protection. The two groups advocated more compact development, which includes moderately higher densities, a mixing of residential and commercial uses, infill development, and cluster projects around mass transit stations. The Growth Management Council's report to the Governor stated: "The issue of housing is the most politically contentious in the growth management puzzle, but it is also the piece without which no others will fit. Higher densities, market-driven, inevitably must be some part of this piece. California cannot support a population growth past thirty million people based on existing housing and transportation patterns without unacceptable economic, social and environmental costs. If the State wishes to preserve mobility, open space and a viable agricultural industry, clean air and environmental quality, and an economy that works, it cannot continue to support traditional, low-density land use patterns based on large single-family detached dwellings, nor a transportation system based overwhelmingly on single-occupancy vehicle usage."[20]

The California Department of Housing and Community Development is the State's principal housing agency. HCD performs four primary functions: (1) advocating and supporting housing development for all Californians by assisting cities and counties prepare and implement the housing element portions of their general plans; (2) developing, administering, and enforcing building codes, manufactured housing standards, and mobile home park regulations; (3) administering State and federal housing and community development finance programs; and (4) compiling and disseminating critical information on housing, planning, financing, and community and economic development issues."[21]

As indicated by HCD: "If present trends continue, California's population will likely reach 40 million by 2010. The greatest increases in population growth are expected to be for those over 65 years of age and under 19 years of age. Currently seniors (those age 65 and older) represent 11 percent (3,595,658) of California's total population according to US [United States] Census figures. This segment of the population is projected to account for more than 23 percent of the State's population growth (a total of more than 830,000 persons) between 2000 and 2010. Children are expected to account for almost 28 percent of the State's population growth during the same period."[22]

The California Department of Finance (DOF) indicates that California's population approached 37.7 million persons as of January 1, 2007. The State grew by about 1.3 percent during 2006, adding close to 470,000 residents. California now represents about 12.5 percent of the United States population. Between January 2006 and January 2007, the four fastest growing counties, based on numeric population changes, were: (1) Los Angeles County (73,945 individuals); (2) Riverside County (65,018 individuals); (3) San Diego County (34,156 individuals); and (4) San Bernardino County (34,030 individuals). Almost half of the State's population resident in four counties: Los Angeles, Orange, San Diego, and San Bernardino.[23]

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[20]/ Governor's Office of Planning and Research, Strategic Growth: Taking Charge of the Future: A Blueprint for California: Report of the Growth Management Council to Governor Wilson, California Governor's Interagency Council on Growth Management, Strategic Growth Council, January 1993.

[21]/ California Department of Housing and Community Development, Performance Management System, 2005-2010, July 2005, p. 11.

[22]/ *Op. Cit.*, State of California: 2005-2010 State Consolidated Plan, May 2005, p. 7.

[23]/ California Department of Finance, State Adds Almost 470,000 in 2006; 2007 Population Nears 37.7 Million, May 1, 2007.

The DOF indicates that, as of January 1, 2008, the population of the County was estimated to be 2,055,766 individuals, an increase of only 1.5 percent from January 1, 2007 (2,026,325 individuals). As of January 1, 2008, the population of the City was estimated to be 99,767 individuals, representing an increase of 0.9 percent from January 1, 2007 (98,870 individuals).[24] Presented in Table 4.2-1 (California Department of Finance – January 2008 Population and Housing Unit Inventory) is information concerning the population and the number, type, and occupancy rates for housing units with the State, County, and City, as reported by the DOF.

Table 4.2-1
CALIFORNIA DEPARTMENT OF FINANCE
JANUARY 2008 POPULATION AND HOUSING UNIT INVENTORY

		State of California	County of San Bernardino	City of Rialto
Population	Total Population	38,049,462	2,055,766	99,767
	Residing in Households	37,178,510	2,003,608	98,963
	Residing in Group Quarters	870,952	52,158	804
Housing Units	Total	13,443,836	685,642	26,854
	Single – Detached	7,711,960	483,447	19,014
	Single – Attached	965,671	29,459	586
	Multiple – 2 to 4	1,064,724	40,321	1,908
	Multiple – 5+	3,106,519	88,714	3,543
	Mobile Homes	594,962	44,701	1,803
	Occupied	12,653,045	606,005	25,426
	Percent Vacant	5.88	11.61	5.32
	Persons/Household	2.938	3.306	3.892

Source: California Department of Finance, Table E-5 (City/County Population and Housing Estimates, 1/1/2008)

California's population is expected to grow to nearly 44 million by 2020 and nearly 55 million by 2050. Two-thirds of the State's population currently lives south of Bakersfield. California is the most ethnically diverse state in country, with no majority ethnic group. The population is 46.8 percent White, 33.2 percent Hispanic, 11.1 percent Asian, 6.2 percent Black, 0.4 percent American Indian/Alaskan Native, and 0.7 percent Hawaiian/Pacific Islander.[25]

As illustrated in Figure 4.2-1 (California Projected Population Age 60 and Over), the elderly population (age 60 and over) in California has grown rapidly throughout this century. Between 1950 and 1990, the elderly population grew from 1.6 million to 4.2 million, an increase of 157 percent. This trend will continue, as the elderly population is expected to reach 12.5 million by 2040, an increase of 232 percent from 1990. The highest growth rates will occur in the next 30 years, largely due to the aging of the baby boomers (persons born between 1946 and 1964). The first wave of baby boomers will turn 60 year of age between 2000 and 2010, resulting in a 32 percent increase, and will increase another 38 percent by 2020. Beginning in 2010, 1 in 5 Californians will be 60 years of age or older.[26] By 2030, about 20 percent of Americans will be over 65 years old.[27]

[24]/ California Department of Finance, Table E-1 (City/County Population Estimates with Annual Percent Change, January 1, 2007 and 2008), 2008.
[25]/ Governor's Office of Emergency Services, State of California Multi-Hazard Mitigation Plan, September 2004, p. 53.
[26]/ California Department of Aging (http://www.aging.state.ca.us/html/stats/oldest_old_population.html).
[27]/ California Department of Parks and Recreation, Office of Historic Preservation, Comprehensive Statewide Historic Preservation Plan for California, 2000-2005, May 2001, p. 6.

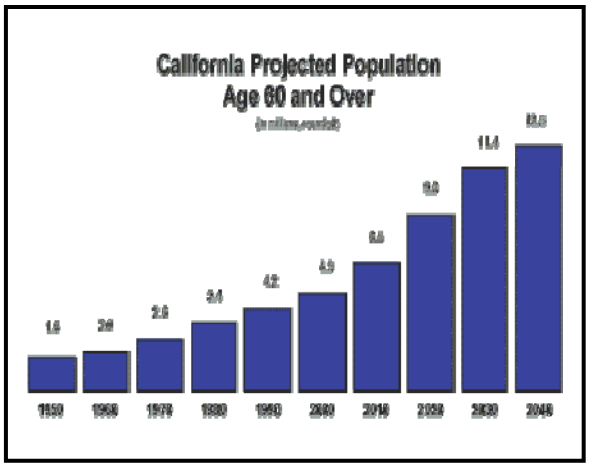

Figure 4.2-1
CALIFORNIA PROJECTED POPULATION AGE 60 AND OVER
Source: California Department of Aging

As of July 2005, an estimated 78.2 million Americans were between the age of 45 and 54. In California, the greatest growth in population for the years 2005-2015 will be in the 45-54 age group (just over 1.5 million), followed by the 55-64 age group (about 1.4 million), and the 65 and over age group (about 1.3 million).[28] With regards to the Inland Empire, between 2005 and 2015, it is projected that the number of residents ages 55-69 will double.[29]

As further indicated by the California Department of Transportation (Caltrans): While California's general population is expected to increase nearly 29 percent by 2020, the senior age group is projected to increase about 71 percent. Fueled by aging baby boomers, projections indicated in 2020, there will be about 2.6 million more Californians over the age of 65 today than there were in 2000. The baby boom generation has driven all their lives and will likely continue to drive more and longer than previous generations. This generation of older Californians is expected to live longer than previous generations and will need transportation choices to maintain a healthy, active, independent lifestyle."[30]

In 2003, California had a total of 12.7 million housing units, of which 6.3 percent were vacant (compared to a 10.3 percent vacancy rate nationally). Of the occupied housing units, approximately 58 percent were owner occupied and approximately 42 percent were renter occupied. Approximately 64 percent of the State's housing units are single-family structures, 31 percent are located in multi-family structures, and four percent are mobile homes. Seventeen percent of California's housing stock has been built since 1990.

As indicated by the Brookings Institute, between 1900 and 2000, America's population shifted from being mostly rural (60 percent) to mostly urban (80 percent). Between 1960 and 2000, urbanized population grew by about 80 percent and urbanized land area grew by about 130 percent.[31] By 2030, about one-half of the buildings in which Americans live, work, and shop will have been built after 2000. In 2000, the nation had about 300 billion square feet of built space. By 2030, the nation will need about 427,000 billion square feet of built space to accommodate growth projections. About 82 billion square feet of that space will be from replacement or

[28]/ California Energy Commission, The Role of Land Use in Meeting California's Energy and Climate Change Goals, Final Staff Report, CEC-600-2007-008-SF, August 2007, p. 23.
[29]/ Johnson, Hans P., Reed, Deborah M., and Hayes, Joseph M., The Inland Empire in 2015, Public Policy Institute of California, 2008, p. v.
[30]/ California Department of Transportation, California Transportation Plan 2025, April 2006, p. 17.
[31]/ Nelson, Arthur, A., Toward a New Metropolis: The Opportunity to Rebuild America, The Brookings Institution Metropolitan Policy Program, December 2004, p. 1.

existing space and about 131 billion square feet will be new space. Most of the space built between 2000 and 2030 will be residential. The largest component of this space will be homes. Over 100 billion square feet of new residential space will be needed by 2030. Overall, most of that growth will occur in the southern and in the western portion of the nation.[32]

Projected housing demand for the State and for the Los Angeles Metropolitan Area, including the number of housing units projected to be building between 2000 and 2030, is presented in Table 4.2-2 (Residential Unit Demand for the United States, California, and Los Angeles Metropolitan Area). Between 2000 and 2030, the fastest growing segment of the housing market will be among the elderly. During that period, the nation's elderly population will double. With about 25 million new elderly households (assuming about 1.4 persons per elderly household), that demographic will account for about one-half of the 40 million new households projected between 2000 and 2030.[33]

Table 4.2-2
RESIDENTIAL UNIT DEMAND FOR THE UNITED STATES, CALIFORNIA, AND LOS ANGELES METROPOLITAN AREA

	Geographic Area		
	United States	**California**	**Metropolitan Area**
Population (2000)	281,421,906	33,871,648	16,374,000
Housing Units (2000)	115,904,641	12,214,549	5,678,000
Units per Person (2000)	0.4119	0.361	0.347
Population (2030)	375,755,479	46,806,172	21,490,000
Housing Units (2030)	154,756,268	16,878,904	7,452,000
Growth-Related Units	38,851,627	4,664,355	1,774,000
Units Lost (2000-2030)	20,087,433	2,297,190	1,068,000
New Housing Units Needed (2000-2030)	58,939,060	6,961,545	2,842,000
Percent New Units Built After 2000	50.9	57.0	50.1

Source: The Brookings Institution Metropolitan Policy Program

As reported by the Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century[34]: "A housing crisis is on the horizon. The dramatic, unparalleled increase in the sheer number of persons over age 65 will do more than challenge our housing resources – it will exhaust them, unless we are ready. A major effort at increasing the public and private production of housing designed for seniors must begin immediately if the Nation is to meet the needs of increasing numbers of seniors, especially for those seniors requiring services."[35]

Starting from the national and moving to the State level, it is possible to focus on progressively smaller planning areas. The entire southern California area can be defined as a "mega-region,"

[32]/ *Ibid*., p v.
[33]/ *Ibid*., p 22
[34]/ The Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century was established by Congress on October 20, 1999 under the Mandates of Public Law 106-74. The Commission was created to study and report back to Congress on housing and health facility needs for this and the next generation of seniors in America and was empowered to offer specific policy and legislative recommendations to increase affordable housing and improve health-related service options for seniors now and as the "Baby Boomer" generation reaches retirement age.
[35]/ Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century, A Quiet Crisis in America, June 30, 2002, p. 70.

extending from Kern County to Mexico and inland to the State's eastern boundaries. As described by SCAG: "The southern California mega-region's concurrent roles as tourist destination, entertainment capital, and breadbasket are well known and remain relevant today despite unprecedented growth and change over the last century. From its earlier days as a home to trading posts, agriculture, ranches, and missions, southern California has created and maintains an image of idyllic climate, striking natural resources and ample opportunity. This perception sets the region apart, luring new residents to a new kind of place. . .The desire to create a new place led to the development of the many cities, towns and suburbs that have since growth together to form a poly-centric region."[36]

The southern California mega-region is expected to see sustained and rapid population growth in the future. According to DOF projections, the mega-region's population will increase to 27.7 million by 2030, representing a 35 percent increase from 2000. This growth exceeds the projected national increase of 28.9 percent over that same period. It is noted that "[l]ike many countries in the world, declining fertility rates combined with the retirement of baby-boom generation will constrain employment growth and pose a threat to economic vitality. The proportion of the elderly population to total population for the mega-region will increase from 10.4 percent in 2000 to 17 percent in 2030. In order words, of the 7.2 million population growth between 2000 and 2030, 37 percent will be elderly."[37]

With regards to housing affordability, in 2002, the mega-region had lower housing affordability than the national average. While more than one-half of the nation's households could afford the median-priced house in 2002, less than one-third of the mega-region's households could afford the area's median-priced home. When comparing homeownership rates in the nation's largest metropolitan regions, southern California's homeownership rate ranked eighth (above only the New York region). Among those metropolitan regions, southern California had the highest percentage of owners and renter households with housing costs greater than 30 percent of the household income. In addition, almost 20 percent of the mega-region's households lived in crowded housing in 2000, compared to only six percent nationally.[38]

Within the SCAG region, population growth accounted for about 56 percent of the total increase in the State in 2003. As shown in Figure 4.2-2 (Top Ten Counties in Population Increase in 2003), the top four California counties in terms of population increase were in the SCAG region and included Los Angeles, Riverside, San Bernardino, and Orange Counties. Within the region, every county grew at a faster rate than the rest of the State. In particular, Riverside County achieved the highest growth rate and San Bernardino County was sixth in ranking. About 35 percent of the total population increase in the region occurred in the Inland Empire.[39]

As indicated by the California Department of Housing and Community Development (HCD), California is experiencing very high rates of population growth and continued tightening of its housing markets. As of January 1, 2005, the State's population was 36,810,358 persons, representing an increase of 539,267 persons and reflecting an increase of 1.5 percent from 2004. Housing production has not kept pace with the State's housing needs. The greatest

[36]/ Kern County Council of Governments, San Diego Association of Governments, Southern California Association of Governments, The Southern California Mega-Region - A Case Study of Global Gateway Regions: America's Third Century Strategy, September 2005, p. 5.

[37]/ *Ibid*., p. 6.

[38]/ *Ibid*., p. 24.

[39]/ Southern California Association of Governments, The State of the Region 2004: Measuring Regional Progress, December 2004, p. 18.

production gap is with regards to multi-family housing.[40] As indicated in Table 4.2-3 (Single-Family and Multi-Family Building Permits – Top Markets in 2006),[41] the Riverside-San Bernardino-Ontario market ranked fifth nationally in 2006 in total single-family building permits issued but ranked only 22nd of the top fifty markets in total multi-family building permits.

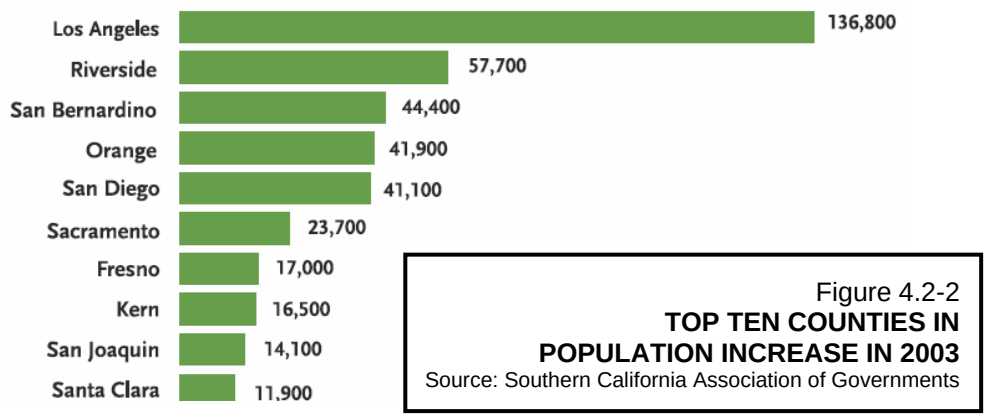

Figure 4.2-2
TOP TEN COUNTIES IN POPULATION INCREASE IN 2003
Source: Southern California Association of Governments

The California Building Industry Association (CBIA) reports that between 2000 and 2005, the average number of building permits issued for new residential construction averaged 175,000 units. During 2004-2005, housing production exceeded 200,000 units for the first time since 1989. The CBIA indicates that "the homebuilding industry is able to provide only 80 percent of the total [housing] need. The difference represents the inability of the industry to provide moderately priced housing for the first-time homebuyer, largely due to the continuing constraints in the developable land supply in the coastal urban cores of the State and the burgeoning extractions demanded by local government."[42] The CBIA estimates that building permits for only 180,000 new housing units will be issued in 2006. Single-family starts are expected to drop to between 125,000 and 135,000 units, compared to nearly 155,000 units in 2005.[43]

In 2006, the SCAG region added 213,000 residents and reached a population of 18.5 million persons. Population growth within the region accounted for 46 percent of the total increase in the State. Four of the top six California counties experiencing absolute population increases were in the SCAG region and included Los Angeles County (First), Riverside County (Second), San Bernardino County (Fourth), and Orange County (Sixth). Conversely, from 2005 to 2006, the total number of building permits issued in the region fell by 14 percent from 91,000 to 78,200 units. Within the region, the decline in building permits was concentrated in the Inland Empire. Specifically, during that period, the number of permits issued dropped by 9.000 units (26 percent) in Riverside County and 2,800 units (17 percent) in San Bernardino County.[44]

In January 2007, the CBIA predicted that between 110,000 and 120,000 single-family and 45,000 to 55,000 multi-family dwelling would be permitted Statewide in 2007.[45] Despite that

[40]/ California Department of Housing and Community Development, California's Deepening Housing Crisis, February 15, 2006, p. 1.
[41]/ National Association of Home Builders, Housing Facts, Figures, and Trends, May 2007, pp. 10-11.
[42]/ Nevin, Alan, 2006 Housing Forecast, California Building Industry Association, January 4, 2006, p. 1.
[43]/ California Building Industry Association, Housing Production Drops in July, CBIA Reports, Homebuilders Predict Market to Stabilize by End of Year, Cite Critical Need for Lower-Cost Homes and Condos, August 28, 2006.
[44]/ Southern California Association of Governments, The State of the Region 2007, December 6, 2007, pp. 17 and 45.
[45]/ Nevin, Alan, 2007 Housing Forecast, California Building Industry Association, January 4, 2007, p. 5.

forecast, in November 2007, the CBIA reported that the total housing starts in California, as measured by building permits issued, dropped 45 percent in November 2007 when compared to the same month the previous ago to 5,498 units. Production of single-family homes fell nearly 50 percent while construction of multi-family units decreased 36 percent when compared to November of 2006.[46] In San Bernardino County, single-family housing production peaked at 15,000 units in 2005, declined modestly to 13,000 units in 2006, and is further projected to decline to 11,000 units in 2007. Multi-family production in San Bernardino County tends to vary by year. During the past few years, the output has ranged from 1,500 to 4,500 units. In 2007, the CBIA projected that new multi-family housing development would total 1,500 units.[47]

Table 4.2-3
SINGLE-FAMILY AND MULTI-FAMILY BUILDING PERMITS
TOP MARKETS IN 2006

Rank	**Metro Area**	**Permits** (1,000s)
Single-Family Building Permits		
1	Houston-Baytown-Sugar Land TX	55.2
2	Atlanta-Sandy Springs-Marietta GA	53.9
3	Dallas-Fort Worth-Arlington TX	43.6
4	Phoenix-Mesa-Scottsdale AZ	38.8
5	**Riverside-San Bernardino-Ontario CA**	33.5
Multi-Family Building Permits		
1	New York-North New Jersey-Long Island NY-NJ-PA	44.5
2	Miami-Fort Lauderdale-Miami Beach FL	20.4
3	Los Angeles-Long Beach-Santa Ana CA	19.8
4	Chicago-Naperville-Joliet IL-IN-WI	18.1
5	Houston-Baytown-Sugar Land TX	16.6
6	Atlanta-Sandy Springs-Marietta GA	14.3
7	Dallas-Fort Worth-Arlington TX	12.9
8	Las Vegas-Paradise NV	12.1
9	Seattle-Tacoma-Believue WA	10.5
10	Washington-Arlington-Alexandria DC-WV-MD-WV	9.5
11	San Francisco-Oakland-Fremont CA	8.6
12	Austin-Round Rock TX	8.5
13	Phoenix-Mesa-Scottsdale AZ	8.0
14	Boston-Cambridge-Quincy MA-NH	7.7
15	Orlando FL	7.3
16	San Antonio TX	5.9
17	Philadelphia-Camden-Wilmington PA-NJ-DE-MD	5.5
18	Jacksonville FL	5.5
19	Portland-Vancouver-Beaverton OR-WA	5.2
20	Denver-Aurora CO	4.9
21	Charlotte-Gastonia-Concord NC-SC	4.9
22	**Riverside-San Bernardino-Ontario CA**	4.6

Source: National Association of Home Builders

[46]/ California Building Industry Association, New-Home Production Continues Decline in November, CBIA Announces, December 21, 2007.
[47]/ *Op. Cit*., 2007 Housing Forecast, p. 9.

Despite these declines, from a broader regional overview, SCAG notes that because, in response to housing prices in Los Angeles, Orange, and Ventura Counties, many families have moved to Riverside and San Bernardino Counties to buy affordable housing. Between 1990 and 2000, half of the total single-family housing constructed in the SCAG region occurred in San Bernardino County (64,529 units) and Riverside County (100,976 units). Conversely, multi-family building permit issuance in the Inland Empire has been very low throughout the past decade. Only about 7,650 multi-family housing units were constructed in San Bernardino County during the decade.

The Inland Empire has a large inventory of vacant and older single-family homes with significant rehabilitation and renovation problems. Approximately 40 percent of San Bernardino County's housing stock was built prior to 1969. The homeownership rate in San Bernardino County was 64 percent in 1997 and is projected to increase to 65 percent in 2010.[48]

As reported by HCD, California's homeownership rate in 2004 (59.7 percent) was the second lowest in the nation and ten percent lower than the national homeownership rate (69 percent). As of December 2005, only 14 percent of California's households could afford to buy the median priced single-family home, while nationwide affordability was 49 percent. California households, with a median household income of $54,140 are $73,810 short of the $127,950 qualifying income needed to purchase a median-priced home ($545,910) in California. The disparity between housing production and need has resulted in double-digit, year-to-year percentage increases in the median price over recent years. [49]

Job growth in the Inland Empire has not kept pace with housing. Because of the relatively lower cost of housing and high single-family housing production, there has been a worsening of traffic congestion and longer commutes to jobs in Orange and Los Angeles Counties for residents of the Inland Empire. This has contributed to a jobs-housing imbalance.[50] SCAG notes that between 1980 and 1996 (most recent data available), while the number of households increased by 24 percent, vehicle miles traveled (VMT) increased by more than 82 percent. The fact that VMT is increasing at a greater rate than households suggests an increase in miles driven for employment. Commuters in the Inland Empire drive greater distances and spend more money per month commuting than any other residents of the region.[51]

As illustrated in Figure 4.2-3 (San Bernardino County County-to-County Commuting), according to the 2000 Census, as reported by the California Economic Development Department (EDD), there were 456,568 (58.6 percent) total workers that lived and worked within the County. In comparison, there were a total of 120,189 (15.4 percent) workers that commuted into the County for in-County employment and 202,140 (26.0 percent) total workers that commuted to jobs located predominately in Riverside, Los Angeles, and Orange Counties. As such, in 2000, nearly 82,000 more workers commuted from homes in San Bernardino County to out-of-County jobs than entered the County for employment. SCAG notes that "[i]f the region maintains the current housing production, consequentially, the projected job and population growth will add more stress to the existing housing stock. The affects of diminished affordability, shallow housing supply, larger household size will impact livability for all in the SCAG region."[52]

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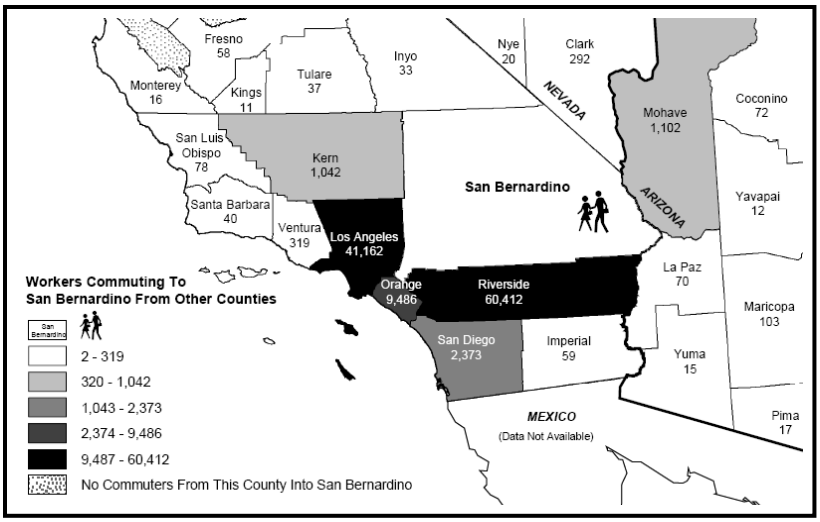
[48]/ Southern California Association of Governments, Housing in Southern California: A Decade in Review, January 2001, pp. 17-18.
[49]/ *Op. Cit*., California's Deepening Housing Crisis, p. 2.
[50]/ *Op. Cit*., Housing in Southern California: A Decade in Review, pp. 17-18.
[51]/ *Ibid.*, pp. 14-15.
[52]/ Southern California Association of Governments, Jobs, Housing Balance, June 2002, p. 5.



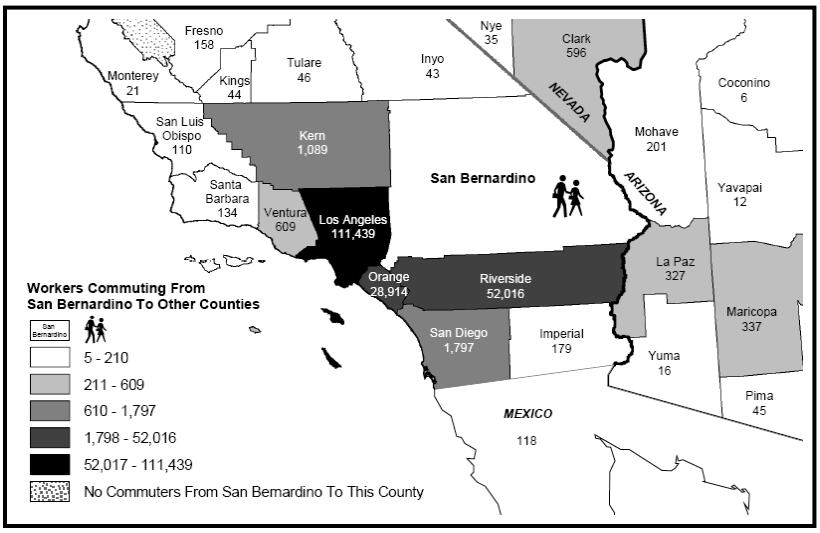


Figure 4.2-3
SAN BERNARDINO COUNTY COUNTY-TO-COUNTY COMMUTING
Source: California Economic Development Department

With regards to the Inland Empire, as noted by the Public Policy Institute of California (PPIC), the PPIC projects that "the coming decade will be a critical time for the Inland Empire as its population continues to expand and as the region increasingly plays a dual economic role – both creating new jobs locally and providing housing to residents who commute to jobs in other regions. Our projections indicate that the Inland Empire's population will grow from 3.9 million in 2005 to 4.9 million by 2015. Growth during that period will be equivalent to five times the current population of the City of San Bernardino. With recent and impending declines in new housing construction, annual growth rates will be lower than in recent years. Nonetheless, the Inland Empire will remain the locus of growth in southern California. Growth rates will be robust in all of the subregions of the Inland Empire. . .The primary driver of this population growth has been and will continue to be migration, primarily local. These flows have increased in recent years, with large and notable gains in the number of Inland Empire residents arriving from Orange and San Diego Counties. Los Angeles County, with its ten million residents, remains the primary origin of migrants to San Bernardino County, and Riverside County gains large numbers of migrants from Orange and San Diego County as well. The Inland Empire gains relatively small numbers of international migrants directly from abroad, and losses small numbers of migrants to other states. However, reflecting the demographic changes of their counties of origin, recent migrants are more likely to be Latino or Asian than in the past, and

large numbers of foreign-born individuals move to the Inland Empire from coastal counties. Recent migrants are slightly better educated than previous migrants or current residents. However, on a net basis, the Inland Empire attracts more migrants without a high school diploma than college graduates."[53]

The PPIC notes that, by 2015, "Latinos will constitute a majority population in the Inland Empire. Latinos will be the new majority of the most populated subregions as well, including the Coachella Valley, Northwestern Riverside, Western San Bernardino, and Eastern San Bernardino."[54]

As reported by University of Southern California's The Tomás Rivera Policy Institute, many people living in the Inland Empire are employed outside the Counties of Riverside and San Bernardino. While it is not clear whether this is the result of a lower level of high-spill, high-wage employment opportunities in the region, it is nonetheless a fact of the region's economic life. Data from the 2000 Census on workforce patterns reveals that 29 percent of the people living in the Inland Empire work outside the two county region, representing the highest rate for any region in the United States. By comparison, only three percent of the people in San Diego County work outside the county. In addition, 15 percent of workers in the Inland Empire commute more than 60 minutes to their place of employment.[55]

As an overview, presented in Table 4.2-4 (Overview of Top 25 Industries by Employment: 2000),[56] the top 25 leading industries by employment both in the Inland Empire and the State are compared. As indicated therein, San Bernardino and Riverside Counties are primarily host to service and manufacturing- or warehousing-oriented industries. The industries that employ the most people in the Inland Empire include food service and administrative services, while for the State, the top industries are administrative services and professional, scientific, and technical. The Inland Empire lags considerably behind Statewide employment in the science and technology sectors which ranks second Statewide but eighth in this region. In addition, an industry such as computers and electronics, which is among the top ten employment sectors Statewide, is not even among the top 25 sectors in the Inland Empire. Similarly, hospitals, which represent a potentially important site for research and development, is the seventh leading employer in California but ranks twenty-fourth in the Inland Empire.[57]

While the Inland Empire led the State in job growth between 1990 and 2000 (275,000 new jobs), most were in lower-tech industries. Between 1998 and 2001, Riverside and San Bernardino County added over 100,000 new jobs (representing an absolute growth of 14 percent), the top three growth industries were special trade contractors (16,818 new jobs), food and drinking places (10,718 new jobs), and building development and construction (5,661 new jobs), accounting for 30 percent of all job growth within the Inland Empire. While there was also strong growth in the professional and scientific service industries (5,513 new jobs), that sector accounted for only five percent of all new jobs within the region.[58]

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[53]/ *Op. Cit.*, The Inland Empire in 2015, Public Policy Institute of California, pp. iii-iv.
[54]/ *Ibid.*, p. v.
[55]/ Tornatzky, Louis and Barreto, Matt, Economic Development and the Knowledge Economy in California's Inland Empire – Progress or Stagnation, The Tomás Policy Institute, August 2004, pp. 7-8.
[56]/ *Ibid.*, Table 11, p. 11.
[57]/ *Ibid.*, p. 10.
[58]/ *Ibid.*, pp. 12-13.

Table 4.2-4
OVERVIEW OF TOP 25 INDUSTRIES BY EMPLOYMENT: 2000

Inland Empire			State of California			Inland Empire Rank
Rank	NAICS Code	Description	Rank	NAICS Code	Description	
1	722	Food Service and Drinking Places	1	561	Administrative/Support Services	2
2	561	Administrative/Support Services	2	541	Professional/Scientific/Technical	8
3	235	Special Trade Contractors	3	722	Food Service and Drinking Places	1
4	621	Ambulatory Health Care Services	4	235	Special Trade Contractors	3
5	421	Wholesale Trade, Durable Goods	5	621	Ambulatory Health Care Services	4
6	452	General Merchandise Stores	6	421	Wholesale Trade, Durable Goods	5
7	445	Food and Beverage Stores	7	622	Hospitals	24
8	541	Professional/Scientific/Technical	8	334	Computer/Electronic Production Man.	-
9	441	Motor Vehicle and Parts Dealers	9	422	Wholesale Trade, Nondurable Goods	12
10	623	Nursing/Residential Care Facilities	10	522	Credit Intermediation and Related	17
11	713	Amusement/Gambling/Recreation	11	551	Management of Companies and Enterprises	25
12	422	Wholesale Trade, Nondurable Goods	12	445	Food and Beverage Stores	7
13	332	Fabricated Metal Product Man.	13	611	Educational Services	23
14	813	Religious, Grantmaking, Civic and Professional	14	813	Religious, Grantmaking, Civic and Professional	14
15	484	Truck Transportation	15	524	Insurance Carriers and Related	-
16	326	Plastics and Rubber Products Man.	16	452	General Merchandise Stores	6
17	522	Credit Intermediation and Related	17	623	Nursing/Residential Care Facilities	10
18	721	Accommodations	18	441	Motor Vehicle and Parts Dealers	9
19	811	Repair and Maintenance	19	721	Accommodations	18
20	336	Transportation Equipment Man.	20	531	Real Estate	-
21	233	Building, Developing, and Gen. Cont.	21	624	Social Assistance	-
22	448	Clothing/Clothing Access. Stores	22	332	Fabricated Metal Product Man.	13
23	611	Educational Services	23	233	Building, Developing, and Gen. Cont.	21
24	622	Hospitals	24	513	Broadcasting/Telecommunications	-
25	551	Management of Companies and Enterprises	25	713	Amusement/Gambling/Recreation	11

Source: The Tomás Policy Institute, University of Southern California

As noted by the PPIC: "Employment projections show that the Inland Empire economy is shifting to industries that hire workers with lower levels of education, particularly administrative services. However, within several major industries, the recent trend has been toward hiring more workers with higher levels of education. If this trend continues, employment opportunities will shift slightly, with an increase demand for more educated workers. The decline in the share of jobs for workers who have not completed high school coupled with the large supply of such workers suggests that the least educated adults will face even more difficulties in the future labor market. . .in an ongoing challenge for the region, the share of adults with a college degree as well as the share of jobs that require a college degree will remain far lower than the rest of the State."[59]

[59]/ *Op. Cit.*, The Inland Empire in 2015, Public Policy Institute of California, p. vii.

Role of State, Regional, and Local Agencies

In addition to the City, a number of State, regional, and local entities are responsible for the preparation and/or administration of plans, programs, policies and projections addressing population and housing. Those agencies and those plans and projections that appear most applicable to the project's environmental setting are discussed below.

- **United States Department of Housing and Urban Development**. The County received a variety of entitlement grants from the United States Department of Housing and Urban Development (HUD) and serves as the clearinghouse for those funds for all unincorporated areas and thirteen cooperating cities. Eleven cities within the County, including the City of Rialto, receive funding directly from HUD. HUD requires state and local governments to produce a five-year "consolidated plan" and "annual action plan" to receive funds from the Community Development Block Grant (CDBG), Emergency Shelter Grant (ESG), HOME Investment Partnerships Program (HOME), and Housing Options for People with AIDS (HOPWA) formula grant programs. The five-year plan must include an analysis of low-income housing needs, the needs of homeless persons and special needs populations, and the local housing market.

  Four "special needs groups" are identified in the County's "Final 2005-2010 Consolidated Plan," including large families, single-person households, and elderly, and the disabled (including persons with HIV/AIDS). Presented in Table 4-2-5 (County of San Bernardino Housing Needs for Special Needs Populations)[60] is a summary of the estimated housing need by special needs group. With regards to the elderly, the plan notes that the 2000 Census indicated that 11.5 percent of the total population was over the age of 60. Although the elderly represent a small share of the County's total population, 22.9 percent of all County households consist of elderly persons. According to a 1993 survey of senior needs conducted by the San Bernardino County Department of Aging and Adult Services, a majority of seniors live alone (51%), are low income (47%), and have some type of handicap (33%). Over 46 percent of those surveyed were 75 years or older.[61]

Table 4-2-5
COUNTY OF SAN BERNARDINO
HOUSING NEEDS FOR SPECIAL NEEDS POPULATIONS

Special Needs Group	Households in Need of Supportive Housing
Elderly	24,000
Frail Elderly	3,400
Severe Mental Illness	2,400
Developmentally Disabled	1,340
Physically Disabled	2,700
Persons with Alcohol/Other Drug Addition	28,700
Persons with HIV/AIDS	300

Source: County of San Bernardino

[60]/ County of San Bernardino, County of San Bernardino Final 2005-2010 Consolidated Plan Update and 20072008 Action Plan, May 29, 2007, Table I-21, p. I-27.
[61]/ *Ibid*., p. I-24.

- **California Department of Housing and Community Development**. As a HUD program recipient, the State also is required to prepare a consolidated plan. As indicated in the California Department of Housing and Community Development's "2005-2010 Consolidated Plan," the overall goal of the community planning and development programs covered under the consolidated plan is to "develop viable communities by providing decent housing, a suitable living environment, and expanded economic opportunities principally for low- and moderate-income persons."[62]

  The State's consolidated plan indicates that California's population is growing at an annual rate of 1.53 percent, adding approximately 520,000 individuals each year. The greatest increases in population growth are expected to be for those individuals over 65 years of age and those individuals under 19 years of age. In 2004, seniors (age 65 and over) represented 11 percent of California's population. This segment of the population is projected to account for more than 23 percent of the State's population growth between 2000 and 2010. Children (age 19 and under) are expected to account for almost 28 percent of the State's population growth during that same period. Population growth increments and rates are projected to vary by race and ethnicity. Hispanics (both immigrants and native born) are projected to account for 78 percent of the State's population growth between 2000 and 2010 when 37 percent of all Californians will be of Hispanic origin. Two-thirds of the State's Hispanic population is under the age of 35. Due to their relative youth, the rate of Hispanic formulation and entrance into the workforce, this segment of the population will constitute the greatest level of housing demand over the next several decades.

  Housing production has not kept pace with the State's housing needs, especially with regards to rental and low-income households. The average annual housing need is projected to be approximately 220,000 housing units. New housing construction has lagged substantially below that identified need.[63] In 2003, California's homeownership rate was the third lowest in the nation (58.9 percent) and ten percent lower than the national rate of 69.3 percent. In December 2004, only 19 percent of the State's households could afford to buy the median priced single-family home.[64]

  In addition to the Statewide consolidated plan, Section 50450 of the Health and Safety Code (H&SC) requires the development of a "California Statewide Housing Plan" (CSHP) to be developed in cooperation with the private housing industry as well as regional and local housing and planning agencies and other agencies of the State. The plan "serves as a state housing plan for all relevant purposes." As indicated in the current CSHP update: "Few issues facing California are as important as the State being able to meet its future housing needs. Between 1997 and 2020, California will likely add more than 12.5 million new residents and should form approximately 5 million new households. Almost all of this growth will occur in metropolitan areas. To meet the housing needs of California's growing population, homebuilders and developers will have to build an average of 220,000 housing units each year between now and 2020. Achieving this level of production will be difficult."[65]

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[62]/ *Op. Cit*., State of California 2005-2010 Consolidated Plan, pp. 14-15.
[63]/ *Ibid*., p. 12.
[64]/ *Ibid*., pp. 7-9.
[65]/ California Department of Housing and Community Development, Raising the Roof: California Housing Development Projections and Constraints, 1997-2020, May 2000, Chapter 1 (Summary).

With regards to the State's projected population growth, the CSHP, as prepared by the HCD, noted: "Barring a major disaster or depression, California's population will grow from its current size of just under 34 million to 40 million by 2010, and to 45.5 million by 2020. While these are smaller growth increments than had previously been forecast, they represent a huge and ultimately transforming increase in the state's population."[66]

In order to address these concerns: "California will need an unprecedented amount of new housing construction - more than 200,000 units per year through 2020 - if it is to accommodate projected population and household growth and still be reasonably affordable. California will need more suburban housing, more infill housing, more ownership housing, more rental housing, more affordable housing, more senior housing, and more family housing. California will also need more diverse housing, and more diverse neighborhoods. California's high land and construction costs, coupled with the cumbersome and open-ended nature of the local entitlements process, have served to discourage innovative land planning, site design, and building design."[67] The State concluded that "[s]hould annual rates of housing production during the next twelve years mirror those of the last twelve, the future of housing in California will be one of extreme shortages. Among the state's major metropolitan regions, the six-county Greater Los Angeles Metropolitan Region would suffer an average yearly production deficit of 48,400 housing units."[68]

- **California Health and Human Services Agency**. California is home to nearly four million people over age 65, representing the largest older adult population in the nation. This number is expected to more than double over the next several decades. In response, Senate Bill 910 requires the California Health and Human Services Agency (CHHS) to prepare a strategic plan on aging for long-term planning purposes.[69]

  As indicated in the "Strategic Plan for an Aging California Population": "The rapid aging of California's population represents a demographic imperative that cannot be ignored. California's population is expected to increase by 172% by 2040, with most of the growth occurring in the coming 20 years. The greatest growth will be among the oldest Californians, those age 85 years and older, whose numbers are projected to grow 200% over that 40 year period. By 2040, the ratio of the elderly to adults under 65 will have increased by 80%. . .According to the 2000 Census, roughly 3.6 million California's 34 million residents were 65 or older, representing about 11% of the State's overall population, compared to a nationwide average of 13%. This difference between California and the rest of the nation are due in large part to the State's comparatively large numbers of international immigrants, who tend to be younger than the rest of the population and are more apt to be male. Important shifts in the State's age distribution are predicted for the next 50 years, as mortality rates decline and life expectancy increases. Currently, life expectancy in California is 78.8 years, about one year longer than the nation as a whole. By 2050, CPRC [University of California Policy Research Center] estimates a 50% probability that life expectancy in California will reach 84.2 years. As a result of this aw well as other factors, the State's population age 65 or older is expected to double in 25 years and triple in 50 years. By 2050, the median forecast

[66]/ *Ibid*., Chapter 7 (Conclusions and Policy Challenges).
[67]/ *Ibid*., Chapter 1 (Summary).
[68]/ *Ibid*.
[69]/ California Health and Human Services Agency, Strategic Plan for an Aging California Population – Getting California Ready for the "Baby Boomers," October 14, 2003, p. 1.

projects nearly 11 million seniors in the State, the size of the current population under 20."[70]

Every four years, each State Unit of Aging is required by federal law to submit a "State Plan on Aging." At a minimum, this plan must specify: (1) the State's goals and objectives for the four-year period; (2) Statewide program objectives to implement the requirements of Title III of the Older Americans Act of 1965, as amended (OAA); (3) a resource allocation plan indicating the proposed use and the distribution of Title III funds for each planning and service area (PSA); (4) the geographic boundaries of each PSA and of the Area Agency on Aging (AAA) designated for each PSA[71]; (5) the prior federal fiscal year information on low income, minority, and rural older adults; and (6) compliance with assurances currently required by the OAA, as amended. The State plan also addressees key socio-demographic factors that shape funding needs and priorities, priorities unmet needs identified by the California Department of Aging (CDA) and the AAA, and outlines CDA's objectives in working with the AAAs to provide cost-efficient, high-quality services to California's older adults and caregivers. When approved by the Federal Administration on Aging (AoA) in compliance with federal laws and regulations, the State receives federal funds to administer the State plan. These federal funds are matched with State and local funds.[72]

As indicated in the "California State Plan on Aging 2005-2009," between 2005 and 2020, the percent of Californians age 60 and over is projected to increase by 59 percent form 5.5 million to 8.7 million. As indicated in Table 4.2-6 (California Projected Population Age 60 and 85 and Over Percentage Change between 2005 and 2020),[73] a number of the State's PSAs, including PSA 20 (San Bernardino), are expected to have much higher levels of growth. Projections also indicate that by 2020, California will see a 21 percent increase in older adults age 85 and over. During that timeframe, a number of the State's PSAs, are projected to experience a much higher level of growth. The greatest areas of population growth among those age 85 and over, in terms of sheer numbers, are projected to be concentrated in Riverside and San Bernardino Counties, with increases of 61 percent and 53 percent, respectively.

- **Southern California Association of Governments**. Founded in October 1965, SCAG has been designated a joint powers authority (JPA) established under State law. SCAG is mandated by federal and State government to develop regional plans for transportation, growth management, housing development, air quality, and other issues of regional significance.[74] Included in the SCAG planning process is the preparation of an integrated growth forecast.[75] Presented in Table 4.2-7 (Southern California Association of Governments - 2007 Integrated Growth Forecast for San Bernardino County) are SCAG's housing, employment, and population forecasts for the County for the period 2000-2035.

[70]/ *Ibid*., pp. 3-4.
[71]/ For PSA 20 (San Bernardino), the designated AAA is the San Bernardino County Department of Aging and Adult Services.
[72]/ California Health and Human Services Agency, Department of Aging, California State Plan on Aging 2005-2009, p. 1.
[73]/ *Ibid*, Tables 3 and 5, pp. 8-12.
[74]/ Southern California Association of Governments, Your Guide to SCAG, 2008-2009, 2008, p. 5.
[75]/ Southern California Association of Governments, Integrated Regional Growth Forecast and Regional Housing Assessment Methodology, September 28, 2006.

Table 4.2-6
CALIFORNIA PROJECTED POPULATION AGE 60 AND 85 AND OVER PERCENTAGE CHANGE BETWEEN 2005 AND 2020

	2005 60+	2020 60+	Delta	Percent Change	2005 85+	2020 85+	Delta	Percent Change
California	5,507,167	8,742,297	3,235,129	59	-	-	-	-
	-	-	-	-	559,226	679,366	120,140	21
PSA 20	232,268	404,655	172,387	74	-	-	-	-
	-	-	-	-	18,636	28,604	9,968	53

Source: California Health and Human Services Agency

Table 4.2-7
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS 2007 INTEGRATED GROWTH FORECAST FOR SAN BERNARDINO COUNTY
(1,000s)

Factor	2000	2005	2010	2015	2020	2025	2030	2035
Housing Units	601	656	729	804	883	974	1,054	1,131
Employment	587	704	810	905	994	1,097	1,207	1,321
Population	1,710	1,971	2,182	2,359	2,540	2734	2,947	3,169
Households	529	576	641	706	776	857	926	994

Source: Southern California Association of Governments

As indicated in SCAG's 2004 Compass Blueprint, "[r]ecent trends and existing conditions point to an unmet demand for a greater diversion of housing throughout the six-county region. During the 1990's, the overall supply of housing did not match the increasing demand in the SCAG region. Even as the population continued to grow, home construction lagged behind. The number of annual building permits decreased by 20 percent between 1990 and 2000. Further, those units built were out of sync with the demand for a broader array of housing choices from an increasingly diverse southern California."[76] As indicated in the 2008 RCP, the SCAG region is "still growing – the region is expected to add another seven million residents by 2035. The new arrivals are members of our own growing families and those attracted by the strong regional economy and we can expect this growth regardless of the land use decisions we make."[77]

Section 65584 of the CGC requires SCAG to adopt a final RHNA at least one year before the housing element due date. SCAG's current RHNA, as adopted on July 12, 2007, serves to quantify the need for housing within each jurisdiction within the SCAG region between January 1, 2006 and June 30, 2014.[78] The RHNA consists of the

[76]/ *Op. Cit*., Southern California Compass – Growth Vision Report, June 2004, p. 10.

[77]/ *Op. Cit*., Regional Comprehensive Plan – Helping Communities Achieve a Sustainable Future, October 2, 2008.

[78]/ The RHNA is mandated by State Housing Law as part of the periodic process of updating local housing elements of the general plan. The RHNA quantifies the need for housing within each jurisdiction during specified planning periods. Communities use the RHNA in land use planning, prioritizing local resource allocation, and in deciding how to address identified existing and future housing needs resulting from population, employment and household growth. The RHNA does not necessarily encourage or promote growth, but rather allows communities to anticipate growth, so that collectively the region and subregion can grow in ways that enhance quality of life, improve access to jobs, promotes transportation mobility, and addresses social equity, fair share housing needs.

following measurements of housing need: (1) existing need; and (2) future need. The "existing need" assessment simply examines key variables from the 2000 Census to measure ways in which the housing market is not meeting the needs of current residents. The "future need" for housing is determined primarily by the forecasted growth in households in a community. Each new household (created by a child moving out of a parent's home, by a family moving into a community, and so forth) creates the need for a housing unit. The housing need for those new households is then adjusted to account for an ideal level of vacancy needed to promote housing choice, moderate cost, and acceptable levels of housing upkeep and repair.

Based on SCAG's assessment, the total regional housing needs during that period (January 2006 - June 2014) is 699,368 units, including 165,457 units for very low-income households, 113,649 units for low-income households, 126,715 units for moderate-income households, and 293,547 units for above moderate-income households. The RNHA for the County is presented in Table 4.2-8 (SCAG RNHA-2006: Construction Needs for Unincorporated San Bernardino County).[79]

Table 4.2-8
SCAG RHNA-2006
CONSTRUCTION NEEDS FOR UNINCORPORATED SAN BERNARDINO COUNTY

Income Category	Construction Need
Very-Low Income	4,802
Low Income	3,324
Moderate Income	3,899
Above Moderate Income	8,598
Total	20,622

Source: Southern California Association of Governments

Pursuant to Section 65584.07(d)(1) of the CGC, annexation of the project site may necessitate a transference of a portion of the County's allocation to the City, thus decreasing the County's allocation and increasing that of the City.

- **County of San Bernardino**. As indicated in the County's "Initial Study Environmental Checklist Form - County of San Bernardino Housing Element Update: 2000-2005": "The Housing Element Land Inventory Analysis of residential development potential of the Valley Region demonstrates that the West and East Valley Subregional Statistical Areas contain ample vacant land designated for residential uses to satisfy the RNHA new construction need of 16,211 units. The land inventory analysis. . .demonstrates that the Valley Region contains over 25,000 acres of land suitable for ultimate build-out of up to 61,756 dwelling units under County land use designations, and over 26,000 acres of land that could accommodate up to 69,994 dwelling units under a combination of County and city land use plans. . .Of the 16,211 dwelling units approved for unincorporated County areas by SCAG, the majority of these units are projected to be located in the Valley region. Approximately 70% of the new housing construction in the County between 2000 and 2010 is expected to be located in the Valley region."[80]

[79]/ Southern California Association of Governments, Proposed Final Regional Housing Needs Allocation Plan – Planning Period (January 1, 2006 – June 30, 2014) for Jurisdictions within the Six-County SCAG Region, June 26, 2007, p. 6.

[80]/ County of San Bernardino, Initial Study Environmental Checklist Form – County of San Bernardino Housing Element Update: 2000-2005, undated, p. 2.

As part of the County's planning process for its recent comprehensive update of the County General Plan, the County prepared a number of "background reports" which serve as reference documents and technical appendices for that planning document. Those reports contain information applicable to an understanding of the project's existing environmental setting and conditions likely to exist in the foreseeable future. As indicated in the County's "Housing Use Background Report": "This document is a reformatting of the June 2003 adopted Housing Element. . .This background report was used in formulating the Housing policies and programs and has been reformatted herein to be consistent with the overall general plan program. The information is identical to that presented to the State for certification"[81] Information from the County Housing Element and technical appendices, as well as information from the County's accompanying CEQA documentation and "Housing Use Background Report," are cited herein. The information presented may exist in multiple County reports and publications.

Between 1990 and 2000, the County's population increased by over 354,000 people, representing an increase of about 25 percent. During that same period, the population of the SCAG region and the State increased by only 16 and 9 percent, respectively. Population growth projections between 2000 and 2020 are presented in Table 4.2-9 (Population Growth Trends 2000-2020 – San Bernardino County and United States).

Table 4.2-9
POPULATION GROWTH TRENDS 2000-2020
SAN BERNARDINO COUNTY AND UNITED STATES

Year	Population			Annual Growth Rate		
	County[1]	California[2]	United States[2]	County	California	United States
2000	1,772,537	35,521,000	274,634,000	2.3	1.2	0.9
2005	2,005,402	34,441,000	285,961,000	1.2	0.6	0.4
2010	2,239,578	37,644,000	297,716,000	1.1	0.9	0.4
2015	2,512,670	41,373,000	310,133,000	1.2	0.9	0.4
2020	2,830,000	45,278,000	322,742,000	1.2	0.9	0.4

Notes:
1. 1994 SCAG Growth Forecast
2. United States Census

Source: County of San Bernardino

As indicated in the County Housing Element, the "elderly" are identified as a "special needs group." The "special housing needs of the elderly are an important concern since many retired persons are likely to be on fixed low incomes. In addition, the elderly maintain special needs related to housing construction and location. . .In terms of location, because of limited mobility, the elderly also typically need to have access to public facilities and public transit facilities."[82]

For planning purposes, the County is divided into three regional statistical areas (RSAs). The project site is primarily located within the Valley Region. The Valley Region has experienced the most extensive growth since 1970. Although it includes only 20 percent of the County, nearly three-quarters of the County's population resides within that

[81]/ County of San Bernardino, Housing Background Report, November 1, 2005, p. 3-1.
[82]/ *Op. Cit.*, County of San Bernardino Housing Element, p. 57.

region.[83] As indicated in Table 4.2-10 (San Bernardino County - Projected Population Growth Trends 1970-2020), the majority of future County growth will occur within the Valley Region. Similarly, the spatial distribution of new residential construction is expected to continue to be skewed toward the Valley Region. About 70 percent of all new units built in the County between 2000 and 2010 will be located within that region.[84]

Table 4.2-10
SAN BERNARDINO COUNTY PROJECTED POPULATION GROWTH TRENDS
(1970-2020)

RSA	Total Population	Percent of Total Population	Growth	Percent of Growth	Average Household Size
Valley					
1970	545,040	79.7	-	-	3.2
2020	1,995,665	70.5	-	-	3.1
Change	266.2%	(9.2)	1,450,626	67.6	(0.1)
Mountain					
1970	20,374	3.0	-	-	2.9
2020	136,823	4.8	-	-	2.9
Change	571.6	1.9	116,449	5.4	0
Desert					
1970	118,658	17.3	-	-	3.2
2020	697,562	24.6	-	-	3.2
Change	487.9	7.3	578,904	27.0	0
County Total					
1970	684,072	100.0	-	-	3.2
2020	2,830,050	100.0	-	-	3.1
Change	313.7	-	2,145,978	100.0	(0.1)

Source: County of San Bernardino

Excluding the Sycamore Flat and Sycamore Canyon areas, the project site is located within the County's "East Valley Sub-Region (RSA 29)." Between 2000 and 2010, the subregion's population, inclusive of both unincorporated and incorporated areas, was projected to increase from 618,698 to 764,790 individuals, representing an increase of 146,092 persons (23.6 percent). During that same period, the number of dwelling units was projected to increase from 199,426 to 250,179 units, representing an increase of 50,753 units (25.4%).[85] In 2000, about 34.4 percent (212,453 jobs) of the County's total jobs were located in RSA 29. By 2010, although this percentage was projected to decrease to about 32.8 percent, total employment within RSA 29 was projected to increase to 282,528 jobs, representing an increase of 70,075 jobs. During that same period total Countywide employment was projected to increase from 617,054 to 860,708 jobs (39.5%).[86]

In 2000, the County's housing inventory was 610,317 units, while the County provided 617,054 employment opportunities. Those figures represent a jobs-housing ratio of 1.01. The County stated that a "ratio of 1.5 is considered to be the standard

[83]/ *Op. Cit.,* Housing Element Background Report, pp. 3-33 and 3-34.
[84]/ *Ibid.*, p. 3-39.
[85]/ *Ibid.*, Table 3-6, p. 3-36; Table 3-9, p. 3-41.
[86]/ *Op. Cit.*, Housing Background Report, Table 3-12, p. 3-45.

measurement threshold for determining an employment-rich versus a housing-rich community. Given that the Inland Empire is one of the last remaining inexpensive areas to live relative to other southern California regions, it is expected that San Bernardino County will remain housing-rich."[87] It is acknowledged that no "standard measurement" has been adopted by the County. However, the County Housing Element suggests a different standard (objective). As indicated therein, the County seeks to "[f]acilitate a job/housing balance with the objective of a ratio of 1.2 jobs to 1 dwelling unit."[88] Although no formal ratio has been established by the City, it is the policy of the City to "[i]mprove the jobs-housing balance through new development and redevelopment project review and actions" (Policy 5.2.6).[89]

In 1995, California's Little Hoover Commission concluded that, in order to restore or retain economic vitality and respond to identified housing need, the State must find ways to reduce the time, cost, and risk associated with the development approval process. As indicated in their 1995 publication: "The Building Industry Association of Southern California asserts that the State's housing market is inhibited by two prime circumstances. The first is the financial burden on new construction to pay for community improvements. The second is no-growth sentiment that constrains the availability of land. That sentiment often translates into controversies and delays, additional studies and mitigation. The higher costs and risks associated with the approval process prompts developers to build projects that will be least controversial and will contain the biggest profit margins. . .[T]he market is distorted by four factors: (1) Neighborhood opposition makes it difficult to increase density or redevelop existing cities. (2) Suburban development is often down zoned to a lower density. (3) Current laws make it hard to establish new cities. (4) And for fiscal reasons, local governments encourage developers to build fewer large and expensive homes rather than more compact, affordable units."[90]

Employment Data

As reported by the EDD, between 2001 and 2005, total industry employment within the County increased by 79,500 jobs, representing a growth of 14 percent. Trade, transportation, and utilities; professional and business services; and construction led job growth, contributing 52,800 additional jobs. Annual average County employment by industry in 2005 is represented in Figure 4.2-4 (San Bernardino County Employment by Industry – 2005 Annual Average).

The Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA)[91] includes both the Counties of Riverside and San Bernardino. As indicated in a recent EDD (August 15, 2008) employment report: "The unemployment rate in the Riverside-San Bernardino-Ontario MSA was 8.9 percent in July 2008, up from a revised 8.1 percent in June 2008, and above the year-age estimate of 6.5 percent. This compares with an unadjusted unemployment rate of 7.6 percent for California and 6.0 percent for the nation during the same period. The unemployment rate

[87]/ *Op. Cit.*, Initial Study Environmental Checklist Form – County of San Bernardino Housing Element Update: 2000-2005, p. 5.

[88]/ *Op. Cit*., County of San Bernardino Housing Element, Housing Program 13-d, p. 171.

[89]/ *Op. Cit.*, City of Rialto General Plan, Conservation Element, p. X-10.

[90]/ State of California, Making Land Use Work: Rules to Reach our Goals, Report No. 136, Little Hoover Commission, November 2, 1995.

[91]/ The United States Census Bureau divides the United States into metropolitan statistical areas (MSAs), defined as counties with a significant degree of economic interaction. The Inland Empire MSA comprises Riverside and San Bernardino Counties. Measuring approximately 28,000 square miles, the Inland Empire is the largest MSA in the United States.

was 9.3 percent for Riverside County and 8.5 percent in San Bernardino County."[92] At that time, those rates were considerably higher than the Statewide average of 7.6 percent but lower than the 10.9 percent rate reported for the City.

In July 2008, the civilian labor force in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area was 1,824,300, of which 1,661,900 individuals were employed and 162,400 individuals were unemployed. Within the 12-month period between July 2007 and July 2008, the number of unemployed individuals increased from 117,100 to 162,400, representing a 38.7 percent increase. During that period, construction-related jobs recorded the greatest year-over decline, down 17,800 jobs.

Between July 2007 and July 2008, specialty trade contractors contributed the most of the job loss in this section (down 15,000 jobs), mainly from building foundation and exterior contractors (down 10,100 jobs). Construction of buildings declined by 2,500 jobs and heavy and civil engineering construction decreased by 300 jobs.[93]

4.2.3.2 Local Setting

Regional Transportation Plan

As the designated Metropolitan Planning Organization (MPO) for the SCAG region, SCAG is mandated by federal law to adopt a regional transportation plan (RTP) every four years to address the region's transportation needs. SCAG updates the growth forecasts presented in each RTP. Those growth forecasts play an important role in projecting future travel demand and air quality in the SCAG region.

On May 8, 2008, SCAG adopted the "Final 2008 Regional Transportation Plan: Making the Connection" (2008 RTP). The 2008 RTP presents population, employment, and household growth forecasts for the period 2005 to 2035 for the five-county region and for the cities. In the derivation of that document, SCAG prepared County and City population, households, and employment forecasts for the 2005-2035 planning period. Projections used in the 2008 RTP are presented in Table 3-4 (Population, Household, and Employment Forecasts for the County of San Bernardino – 2008 Regional Transportation Plan) and in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan).

As illustrated in Figure 4.2-5 (Census Tract Map), the project site is located in Census Tracts 27.01 and 27.02. Census Tract 27.01 is located south of Lytle Creek and includes portions of the Cities of Rialto and Fontana. Census Tract 27.02 is located to the north of the channel and includes the Sycamore Flats and Sycamore Canyon areas. Growth projections for Census Tracts 27.01 and 27.02 are presented in Table 4.2-11 (Population, Housing, and Employment Forecasts for Census Tracts 27.01 and 27.02 - 2008 Regional Transportation Plan).

[92]/ California Economic Development Department, Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside and San Bernardino Counties) – Region Declines by 15,000 Nonfarm Jobs over the Month; 26,000 Over the Year, August 15, 2008.

[93]/ *Ibid*.

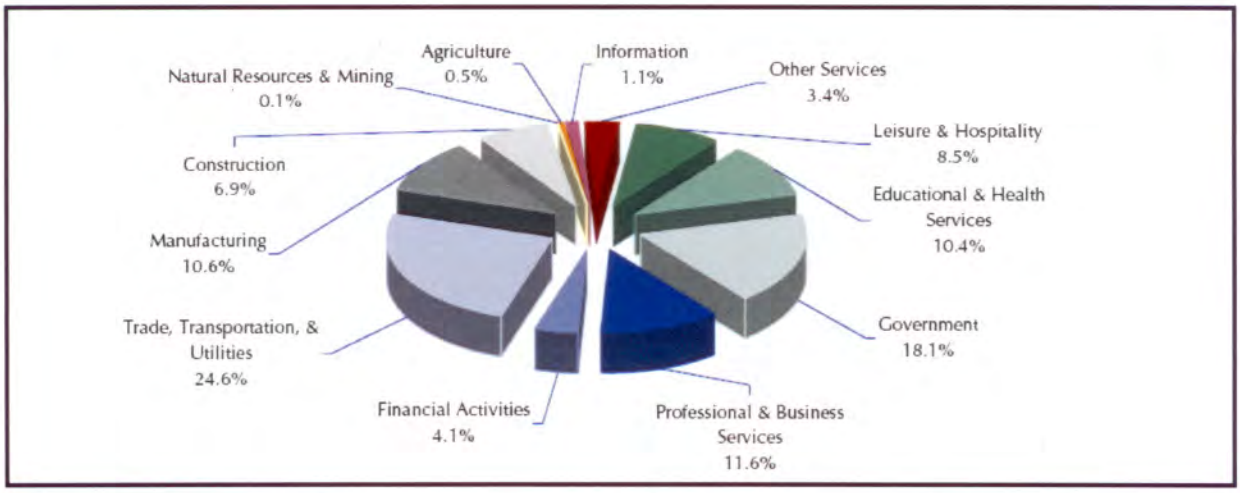

Figure 4.2-4
SAN BERNARDINO COUNTY EMPLOYMENT BY INDUSTRY - 2005 ANNUAL AVERAGE
Source: California Economic Development Department

2005 Industry Employment total: 645,900

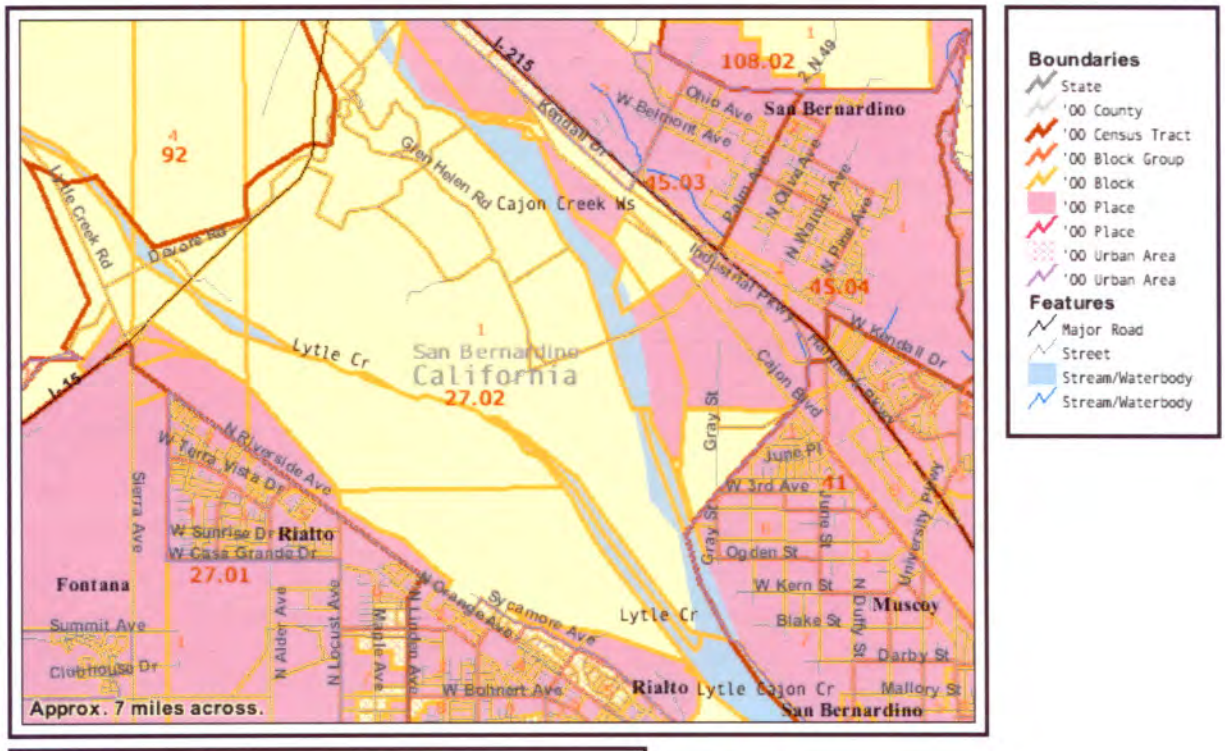

Figure 4.2-5
2000 UNITED STATES CENSUS TRACTS
Source: United States Census Bureau

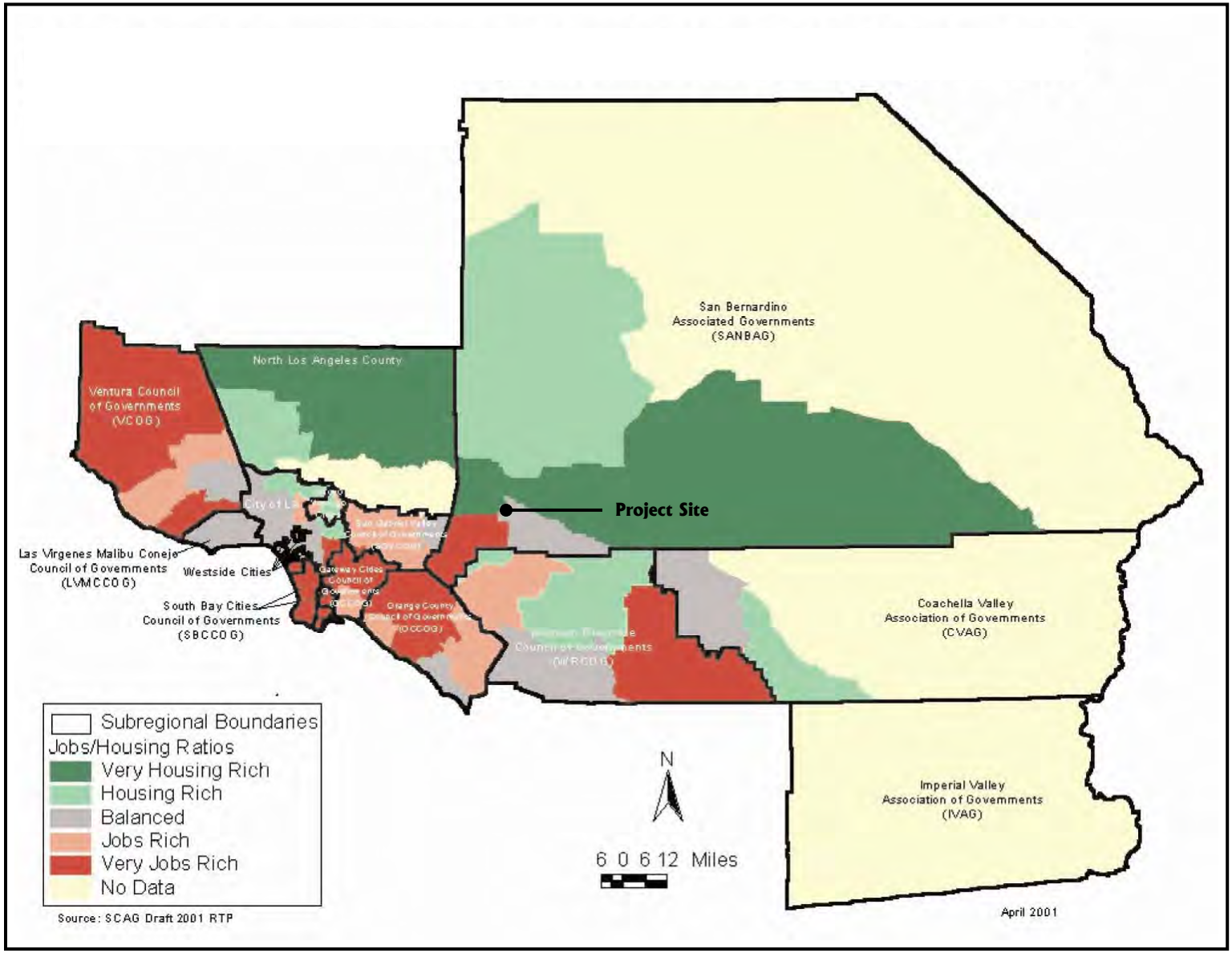

Figure 4.2-6
PROJECTED JOBS-HOUSING BALANCE IN THE SCAG REGION 2025 BY REGIONAL STATISTICAL AREA
Source: Southern California Association of Governments

Table 4.2-11
POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECASTS FOR CENSUS TRACTS 27.01 AND 27.02 2008 REGIONAL TRANSPORTATION PLAN

Forecast Year	Population (persons)		Households		Individuals per Household[1]		Employment (jobs)		Jobs-Housing Balance	
	Tract 27.01	Tract 27.02	Tract 27.01	Tract 27.02	Tract 27.01	Tract 27.02	Tract 27.01	Tract 27.02	Tract 27.01	Tract 27.02
2005	10,991	7,139	2,781	1,847	3.95	3.87	1,984	1,164	0.71	0.63
2010	12,900	8,028	3,258	2,090	3.96	3.84	3,027	1,360	0.93	0.65
2015	14,735	8,874	3,896	2,412	3.78	3.68	3,893	1,517	1.00	0.63
2020	16,453	9,657	4,429	2,679	3.72	3.61	4,571	1,637	1.03	0.61
2025	18,125	10,416	4,945	2,939	3.67	3.54	5,367	1,780	1.09	0.61
2030	19,733	11,148	5,429	3,179	3.64	3.51	6,268	1,939	1.16	0.61
2035	21,276	11,849	5,888	3,407	3.61	3.48	7,612	2,190	1.29	0.64
2005-2035 Change	10,285	4,710	3,107	1,560	(0.34)	(0.39)	5,628	1,026	0.58	0.01
2010-2030[2] Change	6,833	3,120	2,171	1,089	(0.32)	(0.36)	3,241	830	0.45	(0.02)
	9,953		3,260		-		4,070		-	
Project	≤32,720		8,407		3.89		≤3,398		0.40	

Notes:
1. For the purpose of this comparison the terms "household" and "housing units" are assumed to be synonymous.
2. Representing the time period which equates to the project's build-out.

Source: Southern California Association of Governments

Rialto Consolidated Plan

As indicated in the City's "2005-2009 Consolidated Plan," the consolidated plan identifies the City's needs in housing, homelessness, community development, and economic development and presents the City's strategies to address those needs. The consolidated plan serves as a planning document, an application for HUD's formulaic grant programs, an articulation of local priorities, and a five-year strategy that the City follow for the implementation of HUD programs.[94]

Using data which is slightly different from that utilized by SCAG and presented in Table 4.2-12 (City of Rialto and Unincorporated San Bernardino County [RSA 29] – Population, Housing, and Employment Projections), in describing the existing community setting and referencing data from the 2000 Census, the consolidated plan states that the City is made up of 24,659 households (the average household size is 3.69 persons). Of those households, 83.2 percent constitute families (the average family size is 4.01 individuals) and 16.8 percent are comprised of non-families. The 2000 Census counted 26,045 total housing units, of which 1,386 units (5.3 percent) were vacant. In addition, 32,460 residents were employed and 6.3 percent of the City's residents were unemployed.[95] Single-family detached units account for 72.2 percent of the City's existing occupied housing stock. A total of 11,883 units (48 percent) are more than 25 years of age. About 25 percent of the City's housing stock is over 35 years of age.[96]

[94]/ *Op. Cit*., City of Rialto 2005-2009 Consolidated Plan, p. I-1.
[95]/ *Ibid*., pp. I-4 and I-5.
[96]/ *Ibid*., pp. IV-3, IV-5, and IV-6.

Table 4.2-12
CITY OF RIALTO AND UNINCORPORATED SAN BERNARDINO COUNTY (RSA 29) POPULATION, HOUSING, AND EMPLOYMENT PROJECTIONS

Forecast Year	Population (persons)	Households	Population Per Household	Employment (jobs)	Jobs-Housing Balance
City					
2000	92,171	24,693	3.70	23,854	0.97
2005	97,848	25,313	3.83	26,326	1.04
2010	99,936	26,059	3.80	29,725	1.14
2015	102,851	27,659	3.69	32,769	1.18
2020	105,727	29,339	3.57	35,866	1.22
2025	108,486	31,042	3.47	39,988	1.26
2030	111,128	32,805	3.36	42,141	1.28
2000-2030 Change	18,957	8,112	(0.34)	18,287	0.31
Unincorporated (RSA 29)					
2000	66,214	18,377	3.49	17,913	0.97
2030	114,264	35,154	2.95	34,476	0.98
2000-2030 Change	48,050	16,777	(0.54)	16,563	0.01

Source: Southern California Association of Governments

It is noted that the projections excerpted from the "City of Rialto 2005-2009 Consolidated Plan," as presented in Table 4.2-12 (City of Rialto and Unincorporated San Bernardino County [RSA 29] – Population, Housing, and Employment Projections), differ from those extracted from SCAG's more current 2008 "Regional Transportation Plan" and presented in 2008 Regional Transportation Plan) and in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan). For analytical purposes, the latter data is given greater credence.

Identified housing needs within the City included affordable housing, housing rehabilitation, minor home repair, homeownership assistance, rental/mortgage assistance, rental acquisition/ rehabilitation, rent control, senior housing, fair housing assistance/education, cold weather shelter, domestic violence shelter, and transitional housing.[97] As indicated in the City's consolidated plan, numerous barriers have been identified adversely affecting the City's ability to promote the development of affordable housing. The "primary barrier" impeding the development of affordable housing projects is identified as "getting governmental approvals."

In addition, local zoning regulations and practices "have the intended or unintended effect of increasing housing costs, and effectively excluding prospective moderate-income households from locating affordable housing for purchase or rent. Separation of residential from non-residential uses exacerbates traffic problems since most employees must then drive to work."[98]

As indicated in the "Amendment to the 2005-2009 Consolidated Plan & 2008-2009 Action Plan," the City is the "largest City in the Riverside/San Bernardino/Ontario metropolitan statistical area (MSA, also known as the 'Inland Empire'). Since the foreclosure crisis became newsworthy in summer of 2007, this MSA at one point was the fourth most impacted foreclosure area in the

[97]/ County of San Bernardino, Housing, Community, and Economic Development Needs Identification Report for the 2005-2010 Five-Year Consolidated Plan for the HUD Housing and Community Development Grant Program, Program Year 2006-2007, p. 37.

[98]/ *Op. Cit*., City of Rialto 2005-2009 Consolidated Plan, p. VIIII-2 and VIII-3.

country. . .There were a total of 49,973 properties taken all the way through the foreclosure process in the MSA from July 1, 2007 through September 30, 2008 in Riverside (29,607) and San Bernardino (20,366) Counties. In relation to all housing units (as estimated by the California Department of Finance, 2008), this represents 3.42% for the MSA (3.83% in Riverside County and 2.97% in San Bernardino County). This also corresponds to 1 in 29 homes becoming bank-owned during this period."[99]

Regional Housing Needs Assessment

SCAG's adopted housing needs for the City are presented in Table 4.2-13 (SCAG RHNA-2006: Existing Need – All Incomes Housing Problems Detail for the City of Rialto). Based on SCAG's assessment, the RNHA for the City is presented in Table 4.2-14 (SCAG RNHA-2006: Regional Housing Need Allocation Plan for the City of Rialto).[100] As indicated therein, for the period 2006-2014, the City's housing needs total 4,323 dwelling units.

Table 4.2-13
SCAG RHNA-2006: EXISTING NEED
ALL INCOMES HOUSING PROBLEMS DETAIL FOR THE CITY OF RIALTO

Households		**Income Level** (Percent of Median)					
		<30%	**30- 50%**	**50- 80%**	**80- 95%**	**>95%**	**Total**
All Households	Renters	1,935	1.550	1.920	605	1,740	7,750
	Owners	965	1,535	2,910	1,690	9,635	16,735
	Total Households	2,900	3,085	4,830	2,295	11,375	24,485
Households with any Problems	Renters	1,700	1,335	1,280	255	390	4,960
	Owners	725	1,210	2,040	920	2,495	7,390
	Total Households	2,425	2,545	3,320	1,175	2,885	12,350
Households with Overpayments	Renters	1,115	855	575	35	10	2,590
	Owners	500	805	1,310	680	1,220	4,515
	Total Households	1,613	1,660	1,885	715	1,230	7,105
Households with Overcrowding	Renters	560	450	660	220	335	2,245
	Owners	210	400	695	245	1,195	2,745
	Total Households	770	850	1,355	465	1,550	4,990

Source: Southern California Association of Governments

Pursuant to Section 65584.07(d)(1) of the CGC, annexation of the project site may necessitate a transference of a portion of the County's allocation to the City, thus decreasing the County's allocation and increasing that of the City.

Jobs-Housing Balance

In 1997, SCAG conducted an assessment of regional jobs-housing balance. As indicated in SCAG's "The New Economy and Jobs/Housing Balance in Southern California," "a balance between jobs and housing in a metropolitan region can be defined as a provision of an

[99]/ City of Rialto, Final Amendment to the 2005-2009 Consolidated Plan & 2008-2009 Action Plan, November 25, 2008, Neighborhood Stabilization Program, pp. 2-3.

[100]/ Southern California Association of Governments, Final Regional Housing Needs Allocation Plan – Planning Period (January 1, 2006 – June 30, 2014) for Jurisdictions within the Six-County SCAG Region, July 12, 2007, p. 6.

adequate supply of housing to house workers employed in a defined area (i.e., community or subregion). Alternatively, a jobs-housing balance can be defined as an adequate provision of employment in a defined area that generates enough local workers to fill the housing supply."[101] The mean for the SCAG region in 1997 was 1.25 jobs per household. The projected mean for the SCAG region in 2025 is 1.43. The projected median for the SCAG region in 2025 is 1.31 jobs per household, up from the 1997 mean of 0.91.[102]

Table 4.2-14
SCAG RNHA-2006: REGIONAL HOUSING NEED ALLOCATION PLAN FOR THE CITY OF RIALTO

Income Category	Construction Need
Very-Low Income	1,023
Low Income	700
Moderate Income	812
Above Moderate Income	1,788
Total	4,323

Source: Southern California Association of Governments

As reported by SCAG, in 1997, with a population of 81,304 individuals within the City, there were a total of 23,965 households and 18,668 jobs. The jobs-housing ratio for the City in 1997 was 0.78 jobs per household.[103] In comparison, with regards to County unincorporated areas, with a population of 284,692 individuals, there were a total of 87,706 households and 39,947 jobs. The jobs-housing balance ratio in unincorporated County areas was 0.46. Unincorporated San Bernardino County can, therefore, be currently described as being "housing rich" and/or "jobs poor."

When examined from a broader perspective, the ratio between jobs and housing improves. As indicated in Figure 4.2-6 (Projected Jobs-Housing Balance in the SCAG Region - 2025 By Regional Statistical Area), SCAG projects that, in 2025, the regional statistical area in which the project is located (RSA 29) will be "balanced." Similarly with regards to the Inland Empire, SCAG noted: "Given current rates of population and jobs growth, over the next ten years the growth of new workers and new jobs will likely be balanced."[104]

As noted in Table 3-4 (Population, Household, and Employment Forecasts for the County of San Bernardino – 2008 Regional Transportation Plan) and Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, generally reflecting the build-out period of the LCRSP, without the explicit consideration of the proposed project, the jobs-housing ratio in the County will decrease from 1.27 to 1.24 while that in the City will have a modest increase from 0.96 to 1.08. As such, the County, the City, and RSA 29 may each be considered "balanced" based on existing growth forecasts.

SCAG indicates that a balance between jobs and housing in a metropolitan region can be defined as a provision of an adequate supply of housing to house workers employed in a defined geographic area, such as unincorporated San Bernardino County. However, an

[101]/ *Op. Cit*., The New Economy and Jobs/Housing Balance in Southern California, p. 15.
[102]/ *Ibid*., p. 101.
[103]/ *Ibid*., Table 4, pp. 94-95.
[104]/ *Ibid.*, p. 62.

alternative definition of jobs-housing balance can be posited. A jobs-housing balance can be defined to exist when there exists an adequate provision of employment in a defined area that generates enough workers to fill the housing supply. The definition of an area can be stated in term of an optimal "commute shed" around existing employment centers. Based on a commute time of 30 minutes and the average commute speed in the region of 28.4 miles per hour (mph), a commute shed can be defined as an area having a radius of about 14 miles around employment centers[105] or extending 14 miles outward from a residence. A jobs-housing balance for the region can, therefore, "be defined as an area extending about 14 miles around an employment center [or a residence] with a ratio between jobs and households on the order of 1.0-1.29 jobs per household."[106]

A jobs-housing balance does not necessarily curtain worker trips. Factors, such as housing costs and job opportunities influence the location where individuals live and work. Within the five-county SCAG region, Riverside and San Bernardino Counties have the lowest percent of workers who both live and work in the county (68 percent). For those counties, Table 4.2-15 (Home-Based Work Person Trip Distribution) displays the percentage of workers from each county who work in counties different from the county were they live. Table 4.2-16 (Average Home-to-Work Commute Distance) shows home-to-work commute distances by county of trip origination as of 1999. Workers within the counties that are the most housing rich have the longest commute distances.[107]

Table 4.2-15
HOME-BASED WORK PERSON TRIP DISTRIBUTION

From/To	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total Productions
Riverside	51,283	68,904	436,945	99,607	32	656,771
	7.81%	10.49%	66.53%	15.17%	0.00%	100.00%
San Bernardino	154,214	44,685	76,664	519,774	175	795,512
	19.39%	5.62%	9.64%	65.34%	0.02%	100.00%

Source: Southern California Association of Governments

Table 4.2-16
AVERAGE HOME-TO-WORK COMMUTE DISTANCE

County	Miles
Riverside	21.6
San Bernardino	21.3
Ventura	16.3
Orange	16.1
Los Angeles	14.9
Imperial	14.5

Source: Southern California Association of Governments

While there may exist some self-correction, in the future, the jobs-housing imbalance will continue to be a major issue in the region.[108] Although a regional imbalance may remain, as

[105]/ *Ibid*., p. 15.
[106]/ *Ibid*.
[107]/ Southern California Association of Governments, The New Economy and Jobs/Housing Balance in Southern California, adopted April 5, 2001, p. 18.
[108]/ *Ibid*., pp. 23 and 31.

indicated in Figure 4.2-6 (Projected Jobs-Housing Balance in the SCAG Region - 2025 By Regional Statistical Area),[109] SCAG projects that, in 2025, the regional statistical area in which the project is located (RSA 29) will be "balanced."

With regards to the larger Inland Empire, SCAG notes: "Historically, a housing rich subregion of the SCAG region, the Inland Empire has reached a phase of developmental maturation that is beginning to achieve a much more balanced pattern of growth. From 1990-2000, it had southern California's fastest growing economy, accounting for 40% of the 695,000 gain in overall southern California employment. This represented a 38% expansion of the local job market, compared to 9.6% for southern California as a whole. . .Clearly, much of the economic energy of southern California moved inland into Riverside and San Bernardino Counties in the 1990's. . .Development is showing the first signs of pushing deeper in the Inland Empire, moving east, south and north to less expensive, outlying areas. Both industrial and housing development are moving east along the I-10 corridor to Fontana, Rialto, Colton and San Bernardino and along the Route 60 corridor to Riverside and the Moreno Valley-Perris area. . .Current trends bode well for increasing jobs/housing balance in the Inland Empire. . .Given current rates of population and employment growth, over the next ten years the growth of new workers and new jobs will likely balance."[110]

As indicated by the County, with regards to jobs-housing balance, a "ratio of 1.0 indicates a balance. A ratio greater than 1.0 indicates a net in-commute; less than 1.0 indicates a net out-commute."[111] As further indicated by the HCD's "California's Inter-Regional Partnership Program – Jobs, Housing and Mobility Strategies":

> Jobs-to-housing ratios are sometimes used to characterize jobs-housing balance, yet identifying an appropriate ratio for use as target is difficult. A crude measure of jobs-housing balance is sometimes presented as a jobs-to-employed residents' ratio, where a ratio of 1:1 represents one job for each household. Generally, when the ratio is below 1.0 the area is considered to have a jobs deficit and housing surplus. This is a general indication of the need of the community to commute out of the area for employment. When the ratio is above 1.0 the area is considered to have a housing deficit and jobs surplus.
>
> When the National Center for Smart Growth Research and Education analyzed U.S. Census data from 1980, 1990, and 2000, they found that the number of housing units per job was falling each decade. The jobs-housing ratio of the U.S. has grown increasingly larger since 1980, growing from 1.3, to 1.36, to 1.45.
>
> The 1.5 ratio often cited recently in California was based on an observation of the California Department of Finance (the ratio of jobs and housing units created in the decade of the 1990s, a decade lagging in housing construction). This 1.5 ratio reported by DOF was descriptive, and not intended to represent a prescriptive standard. California, as a whole, had in 2000 a ratio of jobs to households of 1.28 and a ratio of jobs to housing units of 1.20, based on 14.7 million jobs per the Employment Development Department 11.5 million households, and 12.0 million non-recreational housing units per the U.S. Census Bureau. Thus, the actual California ratios render impossible a 1.5 ratio in every

[109]/ *Ibid*, Map 2.
[110]/ *Ibid*., p. 62.
[111]/ County of San Bernardino, Draft Goals and Policies Report, September 14, 2005, p. A-25.

> county, or even a 1.3 ratio. Since those 1.2 and 1.28 ratios from the 2000 data came from a year that was a boom for jobs but extremely low housing vacancy rates, a desirable ratio would have more housing units to allow people to form households as they would wish, and thus a desirable ratio is probably closer to 1.1 jobs to housing units. Depending on the geographic context, use of target ratios larger than 1.3 may mislead users to underestimate the need for housing.[112]

Although founded on worthy objectives (e.g., reduced VMT, congestion, and mobile source emissions), the concept of a jobs-housing balance may be inherently flawed because it may be based on a number of untenable premises. Presently, there exists no commonly accepted ratio concerning an optimal relationship between the number of jobs and the number of dwelling units. Ratios can only serve to examine both jobs and housing homogeneously, treating all people and all jobs interchangeably. Similarly, ratios assume that people will select employment opportunities close to home and ignores opportunities for longer commuter distances provided by public transit. Additionally, jobs-housing balance assumes the availability of adequate housing choices, including availability of affordable housing, in relative proximity to place of employment. Jobs-housing balance cannot be realistically achieved at a project level and may not be desirous at a project, neighborhood, or community level.

As indicated by the HCD's "California's Inter-Regional Partnership Program – Jobs, Housing and Mobility Strategies," citing a 2004 court case (Defend the Bay v. City of Irvine), the courts have "established precedent for a manner of addressing jobs-housing imbalance issues in environmental impact assessments pursuant to the California Environmental Quality Act. An environmental group challenged a city's approval of a general plan amendment and zoning for a proposed large-scale development. The court upheld the city's analysis, holding that adherence to any particular predetermined ratio was unnecessary, and that balance does not require equivalence, but rather a weighting of pros and cons to achieve an acceptable mix."[113]

2008 Inland Empire Economic Forecast

Population growth in any region is driven by a combination of natural increases (births minus deaths) and net migration. Natural increases are driven largely by demographic factors of ethnicity and age and typically do not change much from year-to-year. Net migration, however, is driven largely by economic opportunities. Counties with a younger population base or a larger immigrant community tend to have higher birth rates and fewer deaths. As indicated in Table 4.2-17 (Contributing Factors to the Population Base – Percent Change [2004-2007]), population growth attributable to natural increases is substantially higher in the Inland Empire that other areas within the region and throughout the State.

Between 1994 and 2004 (with the exception of a relatively small decline from 2001 to 2001), domestic migration into San Bernardino County has risen steadily After 2004, however, domestic migration into San Bernardino County plummeted, reaching negative territory. Immigration has always played an integral role in the nation's economy. Latin America is the largest source of foreign-born residents in the Inland Empire. The region's west-coast proximity to Asia has also affected the number and nature of foreign-born residents. Between 1991 and 2007, net foreign immigration has remained relatively stead in the Inland Empire. In 2007, 22

[112]/ California Department of Housing and Community Development, California's Inter-Regional Partnership Program – Jobs, Housing and Mobility Strategies, June 2005, p. 14.
[113]/ *Ibid*., p. 6.

percent of San Bernardino County's residents were foreign born and over 38 percent of these were naturalized citizens of the United States.

Table 4.2-17
CONTRIBUTING FACTORS TO THE POPULATION BASE – PERCENT CHANGE
(2004-2007)

County	Births	Deaths	Natural Increase
Los Angeles	0.78	-0.60	1.70
Orange	-0.84	-0.60	-0.99
Riverside	18.80	-0.61	30.96
San Bernardino	12.06	-0.61	18.76
San Diego	2.80	-0.61	5.44
California	4.48	-0.61	8.17

Source: Beacon Economics

In January 2008, there were over seven million "baby boomers" (a term used to describe the surge in births after World War II) in California, with approximately 350,000 of those residing in San Bernardino County. As indicated in Table 4.2-18 (Inland Empire Population by Age), the percent of the County's population over 55 years of age has steadily risen since 1990.[114]

Table 4.2-18
INLAND EMPIRE POPULATION BY AGE

Percent of Population	Riverside County			San Bernardino County			California		
	1990	2000	2008	1990	2000	2008	1990	2000	2008
Age 5-20	24.2	27.3	26.3	26.2	29.0	27.0	23.2	24.6	23.8
Age 21-34	24.1	18.3	20.5	25.6	20.0	21.2	25.8	21.1	18.9
Age 35-54	23.1	27.6	27.4	23.8	28.2	27.7	25.2	29.4	29.2
Age 55-64	8.3	7.9	8.7	6.8	7.0	9.3	7.8	8.2	10.7

Source: Beacon Economics

In the Inland Empire, total non-farm employment reached a peak of 1.27 million jobs in September 2006. However, jobs growth in the Inland Empire ground to a halt in September 2006. As reflected in Table 4.2-19 (Inland Empire Employment by Sector), as of September 2008, total non-farm employment declined to approximately 1.25 million workers in the Inland Empire.[115]

With regards to the current economic downturn, as reported by Beacon Economics: "The unemployment rate in the Inland Empire, which rose to 6.4 percent during the recession at the beginning of the century, is expected to reach nearly 12.4 percent before this recession is over. In the third quarter of 2010, the unemployment rate will begin to come down, reaching pre-recession levels by 2013. The construction and financial activities sectors are at the root of the employment declines in the Inland Empire. . .the decline in construction employment has been much more pronounced in the Inland Empire relative to southern California. The southern California region, which consists of Los Angeles, Orange, Imperial, Riverside, San Bernardino, San Diego, and Ventura Counties, saw construction jobs fall by more than 13 percent from its peak in mid-2006. At the same time, construction employment in the Inland Empire has fallen

[114]/ *Op. Cit.*, 2008 Inland Empire Economic Forecast, Volume 3, Number 5, pp. 72-76
[115]/ *Ibid.*, p. 43.

by nearly twice that – roughly a 25 percent reduction since 2006. Though the decline in financial activities and construction are occurring at differing speeds, both can largely be attributed to the bursting of the housing bubble. There is a clear relationship between the housing and construction markets. With housing starts nationwide reaching a 17 year low in August of this year, it is not wonder that construction employment is down more than 24 percent from its peak in the Inland Empire."[116]

Table 4.2-19
INLAND EMPIRE EMPLOYMENT BY SECTOR
(Annual Average, Thousands)

Industry	2005	2006	2007	2008	Change (2007-2008)
Farm	18.3	17.3	16.8	17.1	0.3
Construction	123.3	127.5	112.8	100.0	-12.8
Durable Goods	86.1	86.9	82.5	78.4	-4.1
Non-Durables	35.0	36.5	36.4	35.0	-1.4
Wholesale Trade	49.9	54.1	56.4	56.0	-0.4
Retail	165.7	173.1	175.4	172.4	-3.0
Trade Transport, and Utilities	275.8	291.0	298.5	296.1	-2.5
Information	14.5	15.3	15.2	14.8	-0.4
Financial Activities	49.0	51.6	50.1	47.8	-2.3
Professional and Business	133.2	142.3	145.1	144.7	-0.9
Education and Health Services	119.9	122.1	126.5	129.7	3.2
Leisure and Hospitality	122.6	128.1	131.7	130.9	-0.9
Other	40.8	42.5	42.6	42.7	0.1
Federal Government	18.6	19.3	19.9	20.2	0.2
State Government	27.0	27.4	28.7	29.3	0.6
Local Government	174.8	175.7	177.0	179.4	2.4
Total Non-Farm	1,222.0	1,267.7	1,268.8	1,250.2	-18.6
Total	1,240.3	1,285.0	1,285.6	1,267.3	-18.3

Source: Beacon Economics

In San Bernardino County, between the second quarters of 2007 and 2008, new home closing fell by nearly 33 percent, versus a 38 percent decline for the State. Median minimum sales prices for new homes fell by 14 percent during the January-August 2008 period to $355,000.[117] It is further reported that home prices in both Riverside and San Bernardino have experienced a "precipitous decline" from their peak levels between 2006 and 2007. This trend is expected to continue through the end of 2011 with prices in both counties beginning to increase in the first quarter of 2012. Most of the downturn in home prices will be experienced by the end of 2010 when median home prices are expected to be on the order of $198,000 and $165,000 in Riverside and San Bernardino Counties, respectively.[118]

Historically, demand for new retail space in the Inland Empire has been highly dependent upon continued population growth. Even with median incomes almost 13 percent higher than elsewhere in the United States, retail sales per capita remain weak due to an even higher

[116]/ *Ibid.*, pp. 34-36.
[117]/ *Ibid.*, pp. 56-57.
[118]/ *Ibid.*, p. 37.

relative cost of living. Because retail growth generally reflects population increases, the demand for new retail space is closely aligned with new home sales.[119]

The industrial market in the Inland Empire is largely a national warehouse market oriented towards local ports and distributors. As a consequence of relying on supplying the local retail market, any softening in the retail sector affects the demand for warehouse space. In the long-term, a strong connection to the ports of Long Beach and Los Angeles and reasonable trucking commute distances from Phoenix and Las Vegas will continue to fuel warehouse demand. While demand should bounce back by 2011 or 2012, it is not expected to eclipse 2006 levels for the foreseeable future.[120]

4.2.4 THRESHOLD OF SIGNIFICANCE CRITERIA

As indicated in Section 15131(a) of the State CEQA Guidelines, economic or social effects of a project shall not be treated as significant effects on the environment unless there is a chain of cause and effect resulting in a physical impact. Subject to that provision, presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant population and housing impact if the project or if project-related activities were to:

- Induce substantial[121] population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., extension of roads or other infrastructure).
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.[122]

The terms “substantial number” and “substantial population growth” are neither defined quantitatively nor qualitatively. For the purpose of this EIR, “substantial number” is defined to be mean more than can be readily accommodated based on the local area’s existing housing inventory and vacancy rate. “Substantial population growth” is defined to mean in greater numbers than assumed in regional and local planning projections.

Other standards relative to population and housing have been formulated by other agencies, published in source documents, or reflect acceptable industry standards. As indicated in Section 65580(a) of the CGC, the State has established a housing goal of “decent housing and a suitable living environment for every California family.” In recognition and in furtherance of this goal, the proposed project would normally be judged to produce a significant or potentially significant population and/or housing impact if the project or project-related activities were to:

- Conflict with or impede the attainment of the Statewide housing goal of providing a decent home and suitable living environment for every California household.
- Conflict with or impede the attainment of the housing goals and objectives of the City.

[119]/ *Ibid*., p. 66.
[120]/ *Ibid*., p. 67.
[121]/ Certain terms, such as “substantial,” are neither defined in CEQA nor in the State CEQA Guidelines and require a local determination whether a proposed action would meet or exceed the stated standard.
[122]/ *Op. Cit*., State CEQA Guidelines, Section XII (Population and Housing).

Although localized and regional growth projections are presented in the RCPG, SCAG acknowledges that "[t]he distribution of population, housing, and employment to subregions and cities constitute a forecast that public entities are currently anticipating, and do not imply a regional growth distribution policy intervention. The forecasts are a trend base case forecast used for analytical and modeling purposes, and form the basis of the development of SCAG's functional plans."[123] Although SCAG's projections do not establish a "policy intervention," they serve a role in the formulation of regional plans and policies.

SCAG acknowledges that "[t]he distribution of population, housing, and employment to subregions and cities constitute a forecast that pubic entities are currently anticipating, and do not imply a regional growth distribution policy intervention. The forecasts are a trend base case forecast used for analytical and modeling purposes, and form the basis of the development of SCAG's functional plans."[124] While these projections do not establish a "policy intervention," they serve an important role in the formulation of regional plans and policies and provide a basis for infrastructure planning and resource allocation.

Similarly, the South Coast Air Quality Management District's (SCAQMD) "CEQA Air Quality Handbook" contains a number of additional "secondary" criteria against which the SCAQMD recommends that project-related impacts be examined.[125] As a result, the proposed project would normally be judged to produce a significant population and housing impact if the project or project-related activities were to:

- Exceed the population, housing, and employment projections formulated by the Southern California Association of Governments (SCAG) for the general project area and for the time period projected for the project's effectuation.
- Result in population increases within the regional statistical area that would be in excess of that projected in the "Air Quality Management Plan" (AQMP) and in other than planned locations for the project's build-out year.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or other environmental documents and used as the basis for assessing the potential significance of project-related and cumulative population and/or housing impacts.

4.2.5 Impact Analysis

4.2.5.1 Construction Impacts

Environmental Impact 2-1*. During the build-out period of the proposed project, an estimated 5,588 new on-site construction jobs would be created.*

Preliminary Determination 2-1*. Less-than-significant impact.*

Estimating the number of construction workers associated with the proposed project is, at best, an inexact art. Ultimately, each construction contractor will determine workforce needs and

[123]/ *Op. Cit.*, Regional Comprehensive Plan and Guide, p. 3-5.
[124]/ Southern California Association of Governments, Regional Comprehensive Plan and Guide, March 1996,, p. 3-5.
[125]/ South Coast Air Quality Management District, CEQA Air Quality Handbook, April 1993, pp. 6-2 and 6-3.

providing staffing accordingly. Staffing will be influenced by a variety of factors, including, but not limited to, the availability of skilled labor, the number of competing jobs committed to by the contractor, the actual square footage of individual dwelling units, the complexity of construction, the nature of the contractor-developer contract, the availability of financing, the demands and scheduling needs of the developer, and the number of active projects underway on the site.

A general estimate can, however, be provided. For example, the number of construction trips used in regional air quality models can serve as a basis for approximating the number of workers associated with a construction project. As indicated in the URBEMIS2007 user's guide, construction-worker commute trip generation can be estimated by using the following equations: (1) multi-family residential trips = 0.36 trips/unit x number of units; (2) single-family residential trips = 0.72 trips/unit x number of units; (3) commercial and retail trips = 0.32 trips/1,000 square feet x number of 1,000 square feet; and (4) office and industrial trips = 0.42 trips/1,000 square feet x number of 1,000 square feet.[126]

A variety of residential land-use categories are proposed, including "Single Family Residential 1 (SFR-1) (2-5 du/ac)," "Single Family Residential 2 (SFR-2) (5-8 du/ac)," "Single-Family Residential 3 (SFR-3) (8-14 du/ac)," "Multi-Family Residential (MFR) (14-28 du/ac)," and "High Density Residential (HDR) (25-35 du/ac)." Based on the Applicant's categorization of each residential land-use category, as indicated in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), a total of 3,407 "single-family detached" dwelling units, 3,673 "single-family attached" dwelling units, and 1,325 "multi-family" (i.e., buildings with five or more units) dwelling units could be constructed on the project site.

Assuming, for the purpose of this analysis, that each "building construction worker commute trip" equates to an on-site construction worker, approximately 4,409 new construction jobs would be associated with the proposed project's "single-family" component and 822 new construction jobs would be associated with the proposed project's "multi-family" component. In addition, excluding any additional square footage associate with such other public, semi-public, or private facilities (e.g., schools and churches), infrastructure improvements, and both public, semi-public, and private recreational facilities (e.g., recreational centers and golf course clubhouse) that would be authorized on the project site in accordance with the LCRSP, a total of 849,420 square feet of non-residential development (e.g., retail commercial, office, business park, general warehousing) could be developed on the project site. Assuming, for the purpose of this analysis, that each "building construction worker commute trip" equates to an on-site construction worker, based on whether the "commercial and retail" or "office and industrial" rate is assigned, an estimated 271 to 357 new construction jobs would be associated with the proposed project's authorized non-residential development. In total, an estimated 5,502 to 5,588 new on-site construction jobs would be created by the proposed project.

Unless the project's total development was to advance as a single phase, a scenario which is not likely to materialize, all those jobs would not be created at one time but would be available during some portion of the project's build-out period. Independent of the timing of there occurrence, those on-site jobs would terminate once the project was completed. Because individual workers might work on different phases or within different planning areas, a single worker might fill a number of those jobs. As such, the total number of estimated jobs might actually be less but the time period of individual employment could be extended as builders

[126]/ South Coast Air Quality Management District (Jones & Stokes Associates), Software User's Guide: URBEMIS2007 for Windows, Version 9.2 – Emissions Estimation for Land Use Development Projects, November 2007, p. A-11.

move from one tract to another, taking their labor force with them. Conversely, the actual number of on-site jobs might be greater than projected. The estimated number of construction-related jobs does not include jobs associated with the installation of on-site infrastructure improvements and facilities, school and park construction, the installation of owner-initiated improvements, and/or on-going or periodic maintenance activities. Additionally, this estimate does not include any associated off-site employment associated with the production and assemblage of building materials and other products delivered to the project site.

As reported in a recent analysis commissioned by the CBIA, housing construction activities are an important contributor to the State's economy. Taking into account the full range of economic impacts, including direct, indirect, and induced benefits, new housing construction contributes nearly $68 billion to the State economy per year and creates close to 487,000 jobs Statewide. A little over one half of the economic output (about $37 billion) is directly the result of new housing construction. The balance (about $31 billion) is generated by those sectors which supply goods and services to the residential construction industry, as well as the consumption activities of the employees of the construction industry and its suppliers. For every dollar spent on new construction, another $0.80 in total economic activity is generated. Each job created through residential construction supports an additional 1.2 jobs. Based on that multiplier, the number of new construction-related may be on the order of 12,294 (5,588 + 6,706) jobs.[127,128]

Although the CBIA does not make a distinction between construction and non-construction jobs, the CBIA reports that every dollar spent on new housing construction in California generates approximately $1.95 in total economic activity. Based on those market areas evaluated by the CBIA, the largest beneficial economic and job-creation impacts of new housing construction, inclusive of all total direct, indirect, and induced activities,[129] occur in Riverside – San Bernardino, as measured in total industry output ($5.8 billion) and job creation (57,071 jobs).[130] As indicated in Table 4.2-20 (Regional Economic Output of the New Housing Construction Industry),[131] as estimated by the CBIA, each new housing unit constructed results in the creation of 2.78 total direct, indirect, and induced jobs. The proposed project's 8,407 units would, therefore, result in the creation of approximately 23,370 total direct, indirect, and induced jobs.

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[127]/ In 2008, the Sacramento Regional Research Institute (SRRI) reported that the "multiplier effect of new housing construction shows that, on average, for each additional dollar of construction valuation, the State will see another $0.9 in industry output and for every employee created directly as a result of constructing new housing units, California will gain another 1.0 jobs through indirect and induced activity." Based on that slightly lower ratio, the project's 5,588 construction jobs would generate a total of 11,176 (5,588 + 5,588) total direct, indirect, and induced jobs (Source: SRRI, Update – The Economic Benefits of Housing in California, August 2008, p. 5).

[128]/ Based on the nature of indirect and induced employment, it is not possible to accurately project the extent of the location of any secondary employment opportunities that may be attributable to the proposed project.

[129]/ As defined by the CBIA, "direct benefits" consist of economic activity contained exclusively within the new housing construction sector. This includes all expenditures made by homebuilders and all employees who work directly for builders. "Indirect benefits" defines the creation of additional economic activity which results from linked businesses, suppliers of goods and services, and provision of operating inputs. Examples of this include wholesale trade, where builders purchase lumber, roofing, electrical, plumbing, and other components; motor freight firms which deliver the components to the wholesaler and to the construction site; management and consulting services, engineering and architectural services who participate in the design and planning of housing. "Induced benefits" measure the consumption expenditures of direct and indirect sector employees. Examples include owner-occupied dwellings, State and local government, wholesale trade, doctors and dentists, banking, insurance, and retail.

[130]/ Sacramento Regional Research Institute, The Economic Benefits of California's Housing Industry, December 2002, pp. 4 and 14.

[131]/ *Ibid*., Table 5, p. 15.

Table 4.2-20
REGIONAL ECONOMIC OUTPUT OF THE NEW HOUSING CONSTRUCTION INDUSTRY

Region	Total Regional Economic Output	Regional Employment (Direct, Indirect, Induced)	New Residential Units Build	New Residential Units Build – Regional Employment Ratio
California	$39,895,000,000	358,932	132,156	2.72
Riverside-San Bernardino	$5,823,825,520	57,071	20,552	2.78

Source: Sacramento Regional Research Institute

Based on the recent down-turn in the national, State, and local economies, including unemployment rates, both direct (primary) job creation and the indirect and induced (secondary) economic impacts of new construction activities should be seen as a beneficial impact.

4.2.5.2 Operational Impacts

Environmental Impact 2-2*. Project implementation will increase the City's population and housing inventory and add new employment opportunities within the City. At build-out, an estimated 32,720 individuals may reside on the site in 8,407 dwelling units. Excluding on-site schools, recreational facilities, and any indirect or induced (secondary) jobs, proposed non-residential development may result in an estimated 3,398 primary, on-site employment opportunities.*

Preliminary Determination 2-2*. Less-than-significant impact.*

As proposed, the project would authorize five residential land-use designations, including "Single-Family Residential 1 (SFR-1) (2-5 du/ac)," "Single-Family Residential 2 (SFR-2) (5-8 du/ac)," "Single-Family Residential 3 (SFR-3) (8-14 du/ac)," "Multi-Family Residential (MFR) (14-28 du/ac)," and "High Density Residential (HDR) (25-35 du/ac). Each of these distinct land-use designations would offer home purchasers and renters different housing products choices. As a result, a wide variety of household types and sizes would be anticipated to occupy the 5,476 non-age-restricted dwelling units located in Neighborhoods I, III, and IV. Based on this diversity, households will likely vary in size from single individuals to large and extended families.

In Neighborhood II, the project includes a total of 2,931 age-restricted dwelling units. Residential land-use designations in Neighborhood II includes "Single-Family Residential 1 (SFR-1) (2-5 du/ac)," "Single-Family Residential 2 (SFR-2) (5-8 du/ac)," "Single-Family Residential 3 (SFR-3) (8-14 du/ac)," and "High Density Residential (HDR) (25-35 du/ac)." Seniors will also be presented with a variety of housing types from which to choose. Since all or most of those age-restricted units would not be expected to include children and since some may be occupied by only a single adult, the resulting household size would be expected to be less in an age-restricted dwelling unit than a comparable non-age-restricted dwelling unit.

Estimating the project's resident population upon build-out is an inexact science. The number of individuals per dwelling unit or household may change over time and, although single individuals can live in units with large square footage and large families can live in smaller units, may differ both by product type and during the life of the project. Similarly, vacancy rates can be affected by a variety of factors, including the strength of the local and regional economy and the

availability of other housing choices. Because different agencies have formulated different projections of average household sizes, there does not exist a single multiplier that can be used to yield definitive results. It is, therefore, noted that all population projections are only estimations and are subject to substantial variation base on the assumptions which are utilized. Presented below are a number of population estimates based on different agency projections and other variables.

- **County of San Bernardino Housing Element Background Report**. As indicated in Table 4.2-10 (San Bernardino County – Projected Population Growth Trends 1970-2020), within both the Valley Region and the County as a whole, in 2020, the average household size is projected to be 3.1 individuals (Note that the household size trend is generally downward such that, by 2030, average household sizes may be even less). Assuming that average household size was universally applied to all the dwelling units (independent of product type) within the project boundaries, assuming an unrealistic low vacancy rate of zero percent, a total of 26,062 individuals may ultimately reside within the project boundaries at full build-out. Of those, a substantial percentage of the active-adult residents residing in Neighborhood II (projected to be 9,086 individuals based on the application of that same average household size and absent any distinction by product type) would no longer be part of the active labor force and would not be competing with other wage earners for locally and regionally available jobs.

- **United States Census Bureau**. As reported by the Census Bureau, based on the 2000 Census, the "average household size" in the City was 3.69 persons/household while the "average family size" in the City was 4.01 individuals/family. In addition, the "average household size of owner-occupied units" was 3.74 persons/unit and the "average household size of renter occupied units" was "3.59 persons/unit.[132] The Census Bureau further reported that there were a total of 24,479 "occupied housing units" in the City and that the City's "total population" was 91,873 persons. Those numbers indicate that the average occupied household is comprised of 3.753 persons.[133]

  Assuming an average household size of 3.753 persons, making no distinction between age-restricted and non-age-restricted housing units, owner occupied vs. renter occupied, and housing type (e.g., single-family attached, single-family detached, and multi-family), and including no reduction for vacancy rate, the project's 8,407 dwelling units would produce an on-site population of about 31,552 persons.

- **California Department of Finance**. As indicated in Table 4.2-1 (California Department of Finance – January 2008 Population and Housing Unit Inventory), in January 2008, the DOF estimated that the average household size in the County was about 3.306 persons per household. During that same period, the DOF estimated that the average household size in the City was 3.892 persons per household. If these figures were universally applied to the proposed project's 8,407 dwelling units (independent of the product type), assuming a zero percent vacancy rate, a total of between 27,794 and 32,720 individuals may ultimately reside within the project's boundaries at full build-out.

[132]/ United States Census Bureau, Census 2000, Table DP-1 (Profile of General Demographic Characteristics: 2000), Geographic Area: Rialto City, California, undated, p. 1.

[133]/ *Ibid.*, Table DP-4 (Profile of Selected Housing Characteristics: 2000), Geographic Area: Rialto City, California, undated, p. 4.

- **Fiscal Impact Analyses**. Other project-specific studies have yielded different on-site population estimates, ranging from 24,539 individuals (based on an average household size of 2.92 persons per unit and zero percent vacancy rate)[134] to 32,754 persons (based on an average household size of 3.896 persons per unit and zero percent vacancy rate).[135] For the purpose of CEQA compliance, an on-site population estimate of 32,754 persons is used herein because it likely over-estimates the actual resident population which would result from the project's build-out and, therefore, reflects a potential worst-case scenario.

Although subject to change and refinement based on the proposed land-use flexibility that would be authorized under the LCRSP, the nature of the resulting job-producing land uses, and the demographics of project area residents, a general estimate of the project's jobs-housing balance can be formulated.

From a broad-based scale, non-residential development might generally be considered to range from one new primary job for each 250 square feet of non-residential development to two new primary jobs per every 1,000 square feet of employment-generating land use.[136] Based on a total of 849,420 square feet of commercial and other non-residential uses, excluding the proposed school sites, private recreational facilities (e.g., El Rancho Verde Royal Vista Golf Course), and other public, semi-public, and private facilities that may be constructed on the project site, individuals that are self-employed and working from home, individuals providing on-site services (e.g., gardeners, construction workers, and care givers), and any indirect and/or induced off-site employment, an estimated 3,398 (849,420 ÷ 250) new primary jobs would be created within the project boundaries as a direct result of that non-residential development. Based on those projections, the project's projected operational jobs-housing ratio is estimated to be 0.40 (3,398 jobs/8,407 units) jobs per dwelling unit.

Other project-specific studies have yielded different on-site employment estimates, ranging from 2,058 jobs[137]to 2,460 primary jobs.[138] Direct employment projections should, therefore, be viewed as only an estimate and are subject to substantial variation.

More detailed studies have been conducted to better define the relationship between job creation and the acreage and/or square footage of non-residential development. One such study, prepared to derive employment density factors for use in SCAG's Small Area Allocation Model, estimated employment densities for ten major land-use categories. As defined therein, an "employment density factor" represents the number of employees per square feet of building space and acres of land.[139] Employment density factors derive from two separate variables: (1) employees per acre density factor (derived from SCAG employment database); and a (2) floor-area-ratio (FAR) figure (derived from Assessor's parcel records).

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[134]/ Stoffel & Associates, Analysis of Retail Demand and Opportunities for the Lytle Creek Planned Community, Rialto, CA, September 2007, pp. 93 and 97; Stoffel & Associates, Analysis of Retail Demand and Opportunities for the Lytle Creek Planned Community, Rialto, CA, October 2008 Update, p. 3.

[135]/ Stanley R. Hoffman Associates, Lytle Creek Specific Plan Fiscal Analysis, October 29, 2007, p. 8.

[136]/ These new jobs are the direct (primary) jobs generated. As development becomes larger, there will be additional indirect (secondary) jobs generated as more dollars are funneled into the area's economy. These dollars will "multiply" through the local economy, thus resulting in indirect, secondary job generation.

[137]/ *Op. Cit*., Lytle Creek Specific Plan Fiscal Analysis, p. 8.

[138]/ *Op. Cit*., Analysis of Retail Demand and Opportunities for the Lytle Creek Planned Community, Rialto, CA, p. 93.

[139]/ Southern California Association of Governments (The Natelson Company, Inc.), Employment Density Study Summary Report, October 31, 2001, p. 1.

Although based on a relatively small sampling, presented in Table 4.2-21 (Derivation of Square Feet per Employee based on Average Employees per Acre and Average Floor-Area-Ratio for San Bernardino County)[140] are projected employment generation rates for ten major land-use categories.

Table 4.2-21
DERIVATION OF SQUARE FEET PER EMPLOYEE BASED ON AVERAGE EMPLOYEES PER ACRE AND AVERAGE FLOOR-AREA-RATIO FOR SAN BERNARDINO COUNTY

Land-Use Category	FAR	Employees/Acre	Building Efficiency	Square Feet/Employee
Regional Retail	0.36	9.32	0.80	1,009
Other Retail/Service	0.04	9.98	0.85	124
Low-Rise Office	0.40	16.80	0.90	697
High-Rise Office	-	-	0.90	-
Hotel/Motel	0.82	10.50	-	2,544
R&D/Flex Space	0.33	12.22	0.95	834
Light Manufacturing	0.16	6.92	0.95	705
Heavy Manufacturing	-	5.25	-	-
Warehouse	0.23	6.02	0.95	1,195
Government Offices	0.15	24.11	0.90	188

Source: The Natelson Company, Inc.

As indicated in Table 2-1 (Lytle Creek Ranch Specific Plan Land-Use Plan Summary), a total of 849,420 square feet of commercial, office, business park, light industrial and manufacturing, general warehousing, and other similar uses would be authorized or conditionally authorized under the proposed LCRSP. Assuming that 50 percent of that square footage was allocated to "other retail/services (one employee per each 124 square feet), 25 percent allocated to "low-rise office" (one employee per each 697 square feet), and 25 percent allocated to "light manufacturing" (one employee per each 705 square feet), a total of 4,031 new direct primary jobs would be created on the project site.[141] When that job total is compared to the total square footage of non-residential uses, a ratio of one job per every 210.8 square feet is generated. Because the precise nature of future land uses cannot be determined at this time, a generation factor of one new primary employment per each 250 square feet of commercial and light industrial use is used for comparative purposes. Again, applying the ratio of one direct job for every 250 square feet of commercial, professional, and light industrial use, a total of 3,398 direct jobs would be generated by the proposed project.

The ratio of total (direct, indirect, and induced) effects to direct effects is often called the "economic multiplier." Multipliers represent a quantitative expression of the extent to which some initial, "exogenous" force or change is expected to generate additional effects through the interdependencies that exist in the economy or "endogenous" linkage system. Multipliers are predicated upon a domino theory of economic change. They translate the consequences of change in one variable upon others, taking account of sometimes complicated and roundabout linkages. Multipliers are numerical coefficients that relate an initial change in demand (or employment) to a consequent change in total income (or total employment). Multipliers usually range between 1.0 and 3.0 and vary by the size and complexity of the regional economy, by the

[140]/ *Ibid*., Table 8A, p. 21.
[141]/ The Lead Agency acknowledges that different land-use assumptions would yield different employment estimates.

interaction of industries within the area, and the interactions between the regional economy and other regions. The more inputs that are purchased locally and consumer expenditures made locally, the higher the multiplier. The larger and more highly urbanized the area, the more complex and integrated the economy is likely to be.[142]

Assuming a low-end of the multiplier scale based on the nature of the anticipated direct employment attributable to the proposed project, assuming a multiplier effect of 1.5, the project's estimated 3,398 primary jobs would result in an additional 5,097 indirect and induced jobs, resulting an estimated total of 8,495 direct, indirect, and induced jobs.[143]

Population and jobs growth are the typical by-products of new development. As indicated in the State CEQA Guidelines: "It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment" (14 CCR 15126.2[d]). As a result, considered on their own, there is no "good or bad" value judgment associated with the population and/or jobs growth attributable to the implementation of the LCRSP.

> ***Environmental Impact 2-3****. If not adequately considered in the derivation of existing regional plans, project-related increases in population, housing, and/or employment could impede the attainment of regional objectives by introducing additional unplanned growth which has not sufficiently accounted for in the formulation of the implementation strategies presented in those plans.*
>
> ***Preliminary Determination 2-3****. Less-than-significant impact.*

SCAG's growth estimates constitute trends projections and not an assignment of how or where development will occur throughout the region. Although, from the broadest scale, growth may be perceived as somewhat linear, from a localized perspective, growth may be non-linear, often influenced by outside circumstances, events, and opportunities. As such, the project's consistency or lack of consistency with SCAG growth projections is neither an invalidation of the proposed project nor of the regional planning process itself.

In formulating the growth projections that serve as the basis for the 2008 RTP, SCAG projected Citywide, Countywide, and Census Tract-specific population, household, and employment growth for the 2010 to 2035 planning period.

As indicated in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030 (a time period corresponding with the build-out of the proposed project), the population of the City will increase by 28,996 individuals. When SCAG's population projection for the entire City (28,996) is compared against the population growth solely attributable to the project site (27,794-32,720), the project's percentage contribution (ranging between 95.9 and 112.8 percent) to that Citywide increase appears excessive and, therefore, inconsistent with regional forecasts. However, as indicated in Table 3-4 (Population, Household, and Employment Forecasts for the County of San Bernardino – 2008 Regional Transportation Plan), during that same period, SCAG projects that the population of the County will increase by 775,704 individuals. Since it must be

[142]/ United States Army Corps of Engineers, Los Angeles District and Los Angeles Harbor Department, Final Environmental Impact Statement/Final Environmental Impact Report – Berth 136-147 Container Terminal Project, certified December 6, 2007, p. 7-53.

[143]/ Based on the nature of indirect and induced employment, it is not possible to accurately project the extent of the location of any secondary employment opportunities that may be attributable to the proposed project.

assumed that SCAG's population projections are not based on any jurisdictional reorganizations, such as annexation of County lands, the project's percentage contribution (ranging between 3.9 and 4.2 percent) to that Countywide increase appears fairly minimal.

At the City level, as indicated in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, SCAG projects that 10,121 new households will be created in the City. Excluding all other development that could occur during that time period, the proposed project's 8,407 new dwelling units represents about 83.1 percent of all SCAG-projected new households within the City. However, as indicated in Table 3-4 (Population, Household, and Employment Forecasts for the County of San Bernardino – 2008 Regional Transportation Plan), during that same period, SCAG projects that 277,327 new households will be formed within the County. The project's percentage contribution (3.0 percent) to that Countywide increase is minimal.

As such, with regards to both population and households, because the proposed project consumes a disproportional large percentage of the total anticipated development which is projected to occur Citywide, it can be concluded that either the proposed project was not included in the 2008 RTP or, if included, that the level of development assigned to the project site was substantially less than that now being proposed.

At the City level, as indicated in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, SCAG projects that a total of 14,063 new jobs will be created will be created in the City. Excluding all other development and/or redevelopment that could occur during that time period, the proposed project's 3,398 new primary jobs represents about 24.2 percent of all new employment opportunities projected to occur within the City over that 20-year build-out period. As indicated in Table 3-4 (Population, Household, and Employment Forecasts for the County of San Bernardino – 2008 Regional Transportation Plan), during that same period, SCAG projects that 324,727 new jobs will be created within the County. The project's percentage contribution (1.0 percent) to that Countywide increase is minimal.

It is noted that, as indicated in Table 4.2-11 (Population, Housing, and Employment Forecasts for Census Tracts 27.01 and 27.02 - 2008 Regional Transportation Plan), only minimal population growth has been forecast by SCAG within the two census tracts that comprise the project site (i.e., Census Tracts 27.01 and 27.02). Within those two census tracts, between 2010 and 2030, an increase of only 9,953 persons is projected.[144] Excluding all other development and/or redevelopment that could occur within Census Tracts 27.01 and 27.02 during that time period, assuming an on-site population of 32,720 individuals (based on a zero percent vacancy rate), the project's percentage contribution (279.3 to 328.7 percent) to that census tract-wide increase demonstrates that SCAG did not forecast substantial new residential development in the general vicinity of the project site between 2010 and 2030. This apparent lack of consistency is explained by the fact that SCAG's growth projections are the product of input from local municipalities whose bases for those projections are the local land-use policies which are then in effect.

Similarly, assuming 8,407 units, the number of dwelling units that are proposed on the project site represents about 257.9 percent of all SCAG-projected 3,260 new households within the two

[144]/ As indicated in Section 7.2 ("Existing Zoning Designations" Alternative), existing zoning allows a total of 2,215 dwelling units on the project (within Census Tracts 27.01 and 27.02). As such, SCAG's projected population increase of 9,953 individuals is consistent with those existing entitlements.

Census Tracts. In contrast, assuming 3,398 new primary jobs, the number of new jobs likely to occur on the project site represents about 83.5 percent of the 4,070 new employment opportunities projected to occur within the two census tracts over that 20-year build-out period. As such, with regards to both population and households, because the proposed project consumes a disproportional large percentage of the total anticipated development which is projected to occur in Census Tracts 27.01 and 27.02, it can be concluded that the proposed project was not included in the 2008 RTP. Conversely, if included, the level of development assigned to the project site was substantially less than that now being proposed.

Rather than examining projected population, household, and employment growth throughout the entire County, inclusive of both those areas located within City boundaries and unincorporated County areas, because the project is located in an unincorporated area, SCAG growth forecasts for unincorporated San Bernardino County was also examined.

Once the project site is annexed, growth that was previously projected to occur in County unincorporated areas would no longer be assigned to those area but would be reassigned to the City (i.e., increased growth in the City would translate into reduced growth in unincorporated County areas). SCAG's growth projections for unincorporated County areas are presented in Table 4.2-22 (Population, Household, and Employment Forecasts for Unincorporated San Bernardino County – 2008 Regional Transportation Plan).

Table 4.2-22
POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECASTS FOR UNINCORPORATED SAN BERNARDINO COUNTY 2008 REGIONAL TRANSPORTATION PLAN

Forecast Year	Population (persons)	Households[1]	Individuals per Household	Employment (jobs)	Jobs-Housing Ratio
2005	305,837	92,699	3.30	88,962	0.96
2010	346,523	104,067	3.33	96,959	0.93
2015	380,393	118,933	3.20	103,427	0.87
2020	408,654	131,080	3.12	108,464	0.83
2025	436,081	142,748	3.06	114,355	0.80
2030	462,447	153,669	3.01	120,988	0.79
2035	487,697	163,941	2.98	128,679	0.79
2005-2035 Change	181,860	71,242	(0.32)	39,717	(0.17)
2010-2030[2] Change	115,924	49,602	(0.29)	24,029	(0.14)
Project[3]	≤32,720	8,407	3.89	≤3,398	0.40

Notes:
1. For the purpose of this comparison the terms "household" and "housing units" are assumed to be synonymous.
2. Representing the time period which equates to the project's build-out.
3. Note that "Change + Project" is not presented herein since the proposed project will be annexed into the City and, therefore, no longer a part of unincorporated County.

Source: Southern California Association of Governments

At the unincorporated County level, between 2010 and 2030, SCAG projects that the unincorporated County's population will increase by a total of 115,924 individuals, that a total of 49,602 new households will be established, and that a total of 24,029 new jobs will be created. Excluding all other development and/or redevelopment that could occur within unincorporated County areas during that time period, the proposed project represents about 28.2 percent of the

total population growth assigned by SCAG to unincorporated County areas. Similarly, the number of dwelling units that are proposed on the project site represents about 16.9 percent of all SCAG-projected new households within those areas. The number of new jobs likely to occur on the project site represents about 14.1 percent of all new employment opportunities projected to occur within unincorporated County areas over that 20-year build-out period.

With regards to population, the proposed project consumes a moderate percentage of the total anticipated development projected to occur in unincorporated County areas. The overall percentage of total new households and employment associated with the proposed project, relative to all County unincorporated areas, although of lesser percentage, is disproportionately high relative to the entire unincorporated area and over that entire planning period.

Because the project involves two jurisdictional areas, the project's contribution to population, households, and employment should also be examined in the context of both unincorporated County areas and the City. At the subregional level, as indicated in Table 4.2-23 (Population, Household, and Employment Forecasts for both Unincorporated San Bernardino County and the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, SCAG projects that the population of that combined unincorporated County and incorporated City area will increase by a total of 144,920 individuals, that a total of 59,723 new households will be established, and that a total of 38,092 new jobs will be created.

Excluding all other development and/or redevelopment that could occur within unincorporated County and incorporated City areas during that time period, the proposed project represents about 22.6 percent of the total population growth assigned to the unincorporated County by SCAG. The number of proposed dwelling units represents about 14.1 percent of all SCAG-projected new households within those unincorporated areas. The number of new primary jobs likely to occur on the project site represents about 8.9 percent of all new employment opportunities projected to occur within unincorporated County and incorporated City areas over that 20-year build-out period. Because the project represents less than 25 percent of the projected population, household, and employment growth projected over that time period, the impact is less than significant and no mitigation measures are required or recommended.

Because the project includes the annexation of that portion of the project site presently located in unincorporated County into the City, Table 4.2-23 (Population, Household, and Employment Forecasts for both Unincorporated San Bernardino County and the City of Rialto – 2008 Regional Transportation Plan), growth otherwise anticipated to occur within unincorporated County area would not occur within the corporate boundaries of the City. Because the jurisdictional area of the City would change, the project's contribution to the City's population, household, and employment growth was not likely included in SCAG's forecasts.

As large-scale projects are developed throughout the SCAG region, local agencies routinely update localized growth projections both for local and regional planning purposes. As such, following specific plan approval, if so approved, as part of any subsequent solicitation by SCAG with regards to any periodic update to City-generated growth forecasts, the City provide amended growth forecasts for incorporation into regional transportation plan and other regional planning documents and forecasts as may be subsequently developed by SCAG to reflect the projected population, housing, and employment growth associated with the proposed development during the 2010-2030 time period.

Table 4.2-23
POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECASTS FOR UNINCORPORATED SAN BERNARDINO COUNTY AND THE CITY OF RIALTO 2008 REGIONAL TRANSPORTATION PLAN

Forecast Year	Population (persons)			Households[1] (dwelling units)			Employment (jobs)			Jobs/Housing Ratio		
	County (Unincorp.)	City	Total	County (Unincorp.)	City	Total	County (Unincorp.)	City	Total	County (Unincorp.)	City	Total
2005	305,837	99,334	405,171	92,699	25,202	117,901	88,962	21,815	110,777	0.96	0.87	0.94
2010	346,523	107,849	454,369	104,067	27,519	131,585	96,959	26,492	123,450	0.93	0.96	0.94
2015	380,393	115,846	496,239	118,933	30,550	149,485	103,427	30,295	133,723	0.87	0.99	0.90
2020	408,654	123,079	531,734	131,080	33,029	164,110	108,464	33,237	141,701	0.83	1.01	0.86
2025	436,081	130,098	566,181	142,748	35,411	178,160	114,355	36,676	151,033	0.81	1.04	0.85
2030	462,447	136,846	599,292	153,669	37,638	191,308	120,988	40,555	161,542	0.79	1.08	0.84
2035	487,697	143,310	631,005	163,941	39,735	203,677	128,679	46,580	175,260	0.76	1.17	0.86
2005-2035 Change	181,860	43,976	225,836	71,242	14,533	85,775	39,717	24,765	64,483	-	-	-
2010-2030[2] Change	115,924	28,997	144,920	49,602	10,119	59,723	24,029	14,063	38,092	-	-	
Project	-	≤32,720	≤32,720	-	8,407	8,407	-	≤3,398	≤3,398	-	-	-
Change + Project	115,924	≤61,717	≤177,640	49,602	18,526	68,130	24,029	≤17,461	≤41,490	-	-	
2030 Forecast	462,447	136,846	599,292	153,669	37,638	191,307	120,988	40,555	161,543	0.79	1.08	0.84
Project	-	≤32,720	≤32,720	-	8,407	8,407	-	≤3,398	≤3,398	-	0.40	0.40
2030 + Project	462,447	≤169,566	≤632,012	153,669	46,045	199,714	120,988	≤43,953	≤164,941	0.79	0.96	0.83

Notes:
1. For the purpose of this comparison, the terms "household" and "dwelling units" are assumed to be synonymous. Similarly, no differentiation is made with regards to occupied and unoccupied dwelling units.
2. Representing the time period which equates to the project's projected build-out.

Source: Southern California Association of Governments (July 20, 2009)

Environmental Impact 2-4*. Local land-use decisions can either positively or adversely influence the ability of public agencies to promote the attainment of the State's goal of a suitable living environment and decent housing for all Californians.*

Preliminary Determination 2-4*. Less-than-significant impact.*

As indicated in Section 65580(a) of the CGC: "The availability of housing is of vital Statewide importance, and the early attainment of decent housing and a suitable living environment for every Californian, including farmworkers, is a priority of the highest order." As further indicated in Section 65580(d) therein, both local and State "governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community." In recognition of these policies, the State Legislature declared its intent to assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goal and to require that counties and cities prepare and implement housing elements to move toward the attainment of the State housing goal.

As stipulated under Section 65583 of the CGC, housing elements are required to contain specific information with regards to housing needs, make adequate provisions for existing and projected housing needs, and present an inventory of resources and constraints relevant to the meeting of those needs. In order to evaluate whether the proposed project presents a "resource" or "constraint," a number of required analytical components of an agency's housing element are individually addressed below.

- Inventory of land suitable for residential development, including vacant sites and sites having potential for redevelopment, and an analysis of the relationship of zoning and public facilities and services to these sites (Section 65583[a][3], CGC).

  Through the elimination of existing environmental and development constraints and changes to existing general plan and zoning provisions, the project's implementation will increase the inventory of "land suitable for residential development" and/or increase the intensity and developability of those lands subject to the proposed LCRSP.

- Local efforts to remove government constraints that hinder the locality from meeting its share of the regional housing need in accordance with Section 65584 and from meeting the need for housing for persons with disabilities (Section 65583[a][4], CGC).

  Adoption of the proposed LCRSP and development agreement, in combination with the Applicant's provision of infrastructure improvements, will result in the remove of certain government constraints that impede the provision of new housing opportunities and will promote the expansion of additional housing addressing identifiable regional needs.

- An analysis of opportunities for energy conservation with respect to residential development (Section 65583[a][7], CGC).

  State requirements and "green" building standards require a greater emphasis on energy conservation. Similarly, mitigation measures have been formulated requiring further energy conservation efforts. As such, adoption of the proposed LCRSP will facilitate the provision of suitable housing while, at the same time, prompting energy conservation.

- Identify actions that will be taken to make sites available during the planning period of the general plan with appropriate zoning and development standards and with services and facilities to accommodate that portion of the city's or county's share of the regional housing need for each income level (Section 65583[c][1], CGC).

  Adoption of the proposed LCRSP and development agreement, in combination with the Applicant's provision of infrastructure improvements, will result in the remove of certain government constraints that impede the provision of new housing opportunities and will promote the expansion of additional housing addressing identifiable regional needs.

- Assist in the development of adequate housing to meet the needs of extremely low, very low, low-, and moderate-income households (Section 65583[c][2], CGC).

  While the proposed LCRSP does not explicitly include provisions requiring the provision of housing for any economic segment, by including a range of product types and allowable densities, a diversity of housing products will be providing. As residential densities increase, increased opportunities exist to address the housing needs of a broader economic segment of the population.

- Address and, where appropriate and legally possible, remove governmental constraints to the maintenance, improvement, and development of housing, including housing for all income levels and housing for persons with disabilities (Section 65583[c][3], CGC).

  Adoption of the proposed LCRSP and development agreement, in combination with the Applicant's provision of infrastructure improvements, will result in the remove of certain government constraints that impede the provision of new housing opportunities and promote the expansion of additional housing addressing identifiable regional needs.

Implementation of the proposed project will positively influence the ability of to City to promote the attainment of the State's goal of a suitable living environment and decent housing for all Californians. The project will have a beneficial impact relative to housing supply and availability.

4.2.5.3 Cumulative Impacts

Environmental Impact 2-5*. By increasing the City's housing stock, absence a corresponding and proportional increase in long-term employment opportunities, project implementation, in combination with cumulative development, could contribute to a jobs-housing imbalance.*

Preliminary Determination 2-5*. Less-than-significant impact.*

From a regional perspective, the intent of a jobs-housing discussion is to promote reductions in vehicle miles traveled (VMT) by creating opportunities for residents to find employment close to home and for workers to find housing in proximity to their place of employment. Although job-housing balance is stated as a worthwhile goal, there exists no local policies and no regional policies promulgated by an agency with jurisdiction over the project mandating a specified ratio. As noted in Section 4.1 (Land Use and Planning), the 2004 Compass Blueprint, 2008 RTP, and 2008 RCP are advisory documents and do not constitute a policy intervention.

Since individual development projects are not required to include both residential and job-producing land uses, it is both unreasonable and inappropriate to hold each new project to a strict jobs-housing balance standard. Based on the confines established by traditional general plan and zoning policies, most projects processed by local government contain only a single land use (Euclidean zoning), providing either new housing or new job opportunities on each site. As such, it is more realistic to examine jobs-housing ratios from a regional and non-project-specific perspective.

Based on SCAG's 2008 RTP projections, as indicated in Table 4.2-22 (Population, Household, and Employment Forecasts for Unincorporated San Bernardino County – 2008 Regional Transportation Plan), between 2010 and 2030, representing a time period generally reflecting the build-out period of the LCRSP, the jobs-housing ratio in the unincorporated portion of the County will decrease from 0.93 to 0.79. As a result, the geographic area now comprising unincorporated San Bernardino County will remain "housing rich" and "jobs poor" throughout the 2010-2030 timeframe.

Based on SCAG's 2008 RTP projections, as indicated in Table 4.2-23 (Population, Household, and Employment Forecasts for Unincorporated San Bernardino County and City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, the jobs-housing ratio in the City will decrease from 0.87 to 1.17. As a result, the City will generally transition from "housing rich" to "jobs rich" during that timeframe. When unincorporated County and incorporated City are considered together, between 2010 and 2030, the jobs-housing ratio within that combined area will decrease from 0.94 to 0.86.

Ignoring any indirect and induced employment that may be associated with the proposed project, the project's projected operational jobs-housing ratio is estimated to be 0.40 (3,398 jobs/8,407 units) jobs per dwelling unit. Assuming, for the purpose of analyses, that the proposed project has not been included in SCAG's 2008 RTP growth projections, when the project's projected number of new jobs and housing units are added to the projected 2030 combined County and City forecasts, at project build-out in 2030, the jobs-housing ratio will decrease slightly from 0.84 to 0.83. In contrast, assuming annexation were to occur at project build-out, in 2030, the jobs-housing ratio in the City would decrease from a 1.08 to 0.96.

In 2010, the jobs-housing ratio is the City is projected to be 0.96. In 2030, with the annexation of the project site, the jobs-housing ratio in the City is projected to remain at 0.96. As a result, while the introduction of the proposed project would effectively serve to reverse a 20-year trend within the City whereby more jobs than housing units are introduced over that time period, from a long-term perspective, the project would have no substantial impact when examined from a 2010 and 2030 snapshot.

4.2.6 Recommended Mitigation Measures

- No additional mitigation measures are required or recommended.

4.2.7 Significant Unavoidable Adverse Effects

The approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative population and housing impacts.

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4.3 GEOLOGY AND SOILS[1]

4.3.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- City of Rialto, Hazard Mitigation Plan, Community of City of Rialto, CA, August 29, 2004.
- C.H.J., Incorporated, Update to Slope Stability Investigation, Proposed Amended Reclamation Plan, North and South Quarries, Cemex Lytle Creek Wash Quarry, Rialto Area of San Bernardino County, California Prepared for Cemex, December 29, 2008.
- C.H.J., Incorporated, Summary Report: Site Reconnaissance and Database Review Related to Hazardous Materials – Proposed Lytle Creek Ranch Project, 2,450± Acres, Lytle Creek Area, San Bernardino County, California, Prepared for Lytle Development Company, April 11, 2008.
- Cortner, Steve C., Evaluation for Potential Loss of Mineral Resource Resulting from the Development of Lytle Creek Ranch, City of Rialto, May 2008 (see Appendix III-B).
- GeoSoils, Inc., Addendum: Clarification Letter, EIR Level Geotechnical Review, Lytle Creek Ranch Land Use Plan, City of Rialto, San Bernardino County, California, W.O. 5049-A3.1-SC, July 31, 2008 (see Appendix III-A-B).
- GeoSoils, Inc., Additional Fault Investigation, Planning Area 8, Sycamore Flat Area, July 1, 2008.
- GeoSoils, Inc., EIR Level Geotechnical Review, Lytle Creek Ranch Land Use Plan, City of Rialto, San Bernardino County, California, May 22, 2008 (see Appendix III-A-D).
- GeoSoils, Inc., Addendum No. 2 to "Supplemental Fault and Seismic Investigation, Lytle Creek Ranch, Neighborhood I, Sycamore Canyon Area, Rialto, San Bernardino County, California," dated February 13, 2007; Additional Fault Investigation, Planning Area 8, Sycamore Flat Area, July 1, 2008 (see Appendix III-A-C).
- GeoSoils, Inc., Supplemental Fault and Seismic Investigation, Lytle Creek Ranch, Neighborhood 1, Sycamore Canyon Area, Rialto, San Bernardino County, California, W.O. 5278-A-SC, dated February 13, 2007 (see Appendix III-A-F).
- GeoSoils, Inc., Fault/Seismic Investigation, Lytle Creek Ranch, Neighborhoods II and III (Portions of Planning Areas 24, 54, 55, 56, 58, and 59 and all of Planning Areas 60, 61, and 62), Rialto, San Bernardino County, California, December 28, 2006 (see Appendix III-A-G).
- GeoSoils, Inc., Compilation of Prior GeoSoils, Inc. Fault/Seismic Investigation Data, Preliminary Geotechnical Investigation, and Slope Stability Analysis, Tract No. 15900 (excluding PA-14), The Villages at Lytle Creek, Rialto, San Bernardino County, California, December 4, 2003.
- GeoSoils, Inc., Preliminary Geotechnical Investigation Proposed Master Plan Development, The Villages at Lytle Creek, Lytle Creek Development, San Bernardino County, California, Volumes I-II, October 31, 1994.

[1]/ "Geology and soils" constitutes a broad categorization generally relating to surface and subsurface geology, geotechnical, and seismic considerations, including soils and non-fuel mineral resources. Issues concerning soil contaminants are separately addressed in Section 4.11 (Hazards and Hazardous Materials) herein. Issues of hydrogeology and addressed in Section 4.4 (Hydrology and Water Quality.

- Pacific Soils Engineering, Inc., Updated Geological and Geotechnical EIR Level Review of Documents Pertaining to the Lytle Creek Ranch Land Use Plan, City of Rialto, County of San Bernardino, California, September 3, 2008 (see Appendix III-A-A).

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.3.2 Regulatory and Policy Setting

4.3.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Earthquake Hazards Reduction Act of 1977**. The National Earthquake Hazards Reduction Program (NEHRP), established under the Earthquake Hazards Reduction Act of 1977 (Public Law 95-124), is the federal program established to address the nation's earthquake threat. Under the NEHRP, the Federal Emergency Management Agency (FEMA), a part of the United States Department of Homeland Security, is responsible for supporting program implementation activities, including the development of technical design and construction guidance documents.

  Following the San Fernando earthquake in 1971, the United States Department of Housing and Urban Development published a non-engineering document, entitled "Home Builder's Guide to Earthquake Design." In July 1992, that document was reprinted as a joint FEMA and HUD document (FEMA 232) and subsequently updated in August 1998 and June 2006. The Federal Emergency Management Agency's (FEMA) "Homebuilder's Guide to Earthquake Resistant Design and Construction, FEMA 232"[2] incorporates and references the prescriptive provisions of the 2003 edition of the "International Residential Code" (IRC).[3] In addition, FEMA 232 discusses the significant changes in the 2006 edition of the IRC, including revised seismic design maps.

  The stated purpose of the IRC is to provide "minimum requirements to safeguard the public safety, health, and general welfare, through affordability, structural strength, means of egress facilities, stability, sanitation, light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment."[4]

[2]/ Building Seismic Safety Council, Homebuilder's Guide to Earthquake Resistant Design and Construction, FEMA 232, Federal Emergency Management Agency, June 2006.

[3]/ In 1993, the International Code Council (ICC) was established to develop a single set of comprehensive and coordinated national model construction codes. Prior to that time, the tree organizations that founded the ICC (Building Officials and Code Administrators International, Inc. [BOCAI], International Conference of Building Officials [ICBO], Southern Building Code Congress International Inc. [SBCCI]) each published a set of model building codes that generally were used in distinct regions of the nation. The initial edition of the ICC's "International Building Code" (IBC) and "International Residential Code" (IRC) were published in 2000 and updates were issued in 2003 and 2006. The State of California continues to utilize the "California Building Standards Code" (Title 24, Parts 1 through 12, CCR) and has not formally adopted the IBC or IRC.

[4]/ International Code Council, International Residential Code, 2003.

The IRC designates the level of potential seismic hazard for dwellings by assigning a house to a seismic design category (SDC) based on its location. The IRC's SDCs are "A," "B," "C," "D_0," "D_1," "D_2," and "E," whereby "A" represents the lowest level of seismic risk applicable to residential construction and "E" represents the highest level of risk. Much of southern California area, including the general project vicinity, is located in SDC "D." The IRC mapping correlates the SDC with ground acceleration expected at a location in terms of gravity (g). A value of 100 percent "g" is equal to the vertical acceleration effects of gravity on Earth. As illustrated in FEMA 232, the general project area is depicted as being in an area of 117 percent "g."[5]

- **Mining and Mineral Policy Act**. The Mining and Mineral Policy Act (30 U.S.C. 21[a]) expressed the national policy to foster and encourage private enterprise in: (1) the development of economically sound and stable domestic mining, mineral, metal, and mineral reclamation industries; (2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security, and environmental needs; (3) mining, mineral, and metallurgical research, including the use and recycling of scrap to promote the wise and efficient use of our natural and reclaimable mineral resources; and (4) the study and development of methods for the disposal, control, and reclamation of mineral waste products and the reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities.

- **General Mining Law**. The General Mining Law of May 10, 1872 (30 U.S.C. 22-54 and 611-615) is the basis for appropriation of hardrock mineral resources from public lands. In accordance therewith, all public lands that are not specifically withdrawn from mineral entry are open and available for mining claim location, exploration, and development. Federal regulations implementing the General Mining Law are found in Title 43 of the Code of Federal Regulations in Groups 3700 and 3800. The Secretary of Interior is granted the authority to withdraw lands for mineral entry (43 CFR 2300.0-5[a]). Mineral withdrawal is a tool available to land management agencies to withhold lands from the location of mining claims in order to protect other resource values in an area.

  The Materials Act of 1947 (30 U.S.C. 601-604) removes petrified wood, common varieties of sand, stone, gravel, pumice, pumicite, cinders, and some clay from location and leasing. These materials may be acquired by purchase only and are referred to as salable minerals. Under the Multiple Use Mining Act of 1955 (30 U.S.C. 611-615) no deposit of common varieties of sand, stone, gravel, pumice, pumicite, or cinders and no deposit of petrified wood shall be deemed a valuable mineral deposit within the meaning of the mining laws of the United States so as to give effective validity to any mining claim hereafter located under such mining laws.

4.3.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the proposed project's regulatory setting.

[5]/ *Op. Cit.*, Homebuilder's Guide to Earthquake Resistant Design and Construction, FEMA 232 pp. 5-6, Figure 1-1.

- **Surface Mining and Reclamation Act**.[6] The Surface Mining and Reclamation Act of 1975 (SMARA), codified in Section 2710 *et seq*. in Chapter 9 of Division 2 of the PRC, mandated the initiation, by the State Geologist, of a Mineral Land Classification System in order to help identify and protect mineral resources in areas within the State subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Construction aggregate was selected by the State Mining Geology Board (SMGB) to be the initial commodity targeted for classification because of its importance to society, its unique economic characteristics, and the imminent threat that continuing urbanization poses to that resource.

  Mineral lands are mapped according to jurisdictional boundaries, mapping all mineral commodities at one time in the area (including aggregate, common clay, and dimension stone). Priority is given to areas where future mineral resource extraction could be precluded by "incompatible land uses" (14 CCR 3675) or to mineral resources likely to be mined during the 50-year period following their classification.

  The State Geologist subsequently developed the mineral resource zone (MRZ) nomenclature and criteria. In accordance therewith, the State Geologist has classified mineral areas as one of four MRZs. Those major classifications include: (1) "MRZ-1" (Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence); (2) "MRZ-2" (Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists); (3) "MRZ-3" (Areas containing mineral deposits the significance of which cannot be evaluated from available data); (4) "MRZ-4" (Areas where available information is inadequate for assignment to any other MRZ zone); and (5) "SZ" (Areas containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone).[7] Classification of mineral lands by the State Geologist is based solely on geologic factors and does not consider land use. Those lands that are classified as "MRZ-2" represent areas containing identified mineral resources. Lands classified as "MRZ-3" include areas of undetermined mineral resource significance.[8]

  As presented in Figure 4.3-1 (California Mineral Land Classification System Diagram), the California Mineral Land Classification System is a modification of a mineral resource classification system developed by the United States Bureau of Mines and USGS that represents the relationship between knowledge of mineral deposits and their economic characteristics (grade and size). The nomenclature used serves to communicate mineral potential information in activities, such as mineral land classification, and usage of these terms are incorporated into the criteria developed for assigning mineral resource zones. The horizontal axis of the California Mineral Land Classification System Diagram represents the degree of knowledge about mineral deposits while the vertical axis represents economic characteristics.[9]

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[6]/ Federal regulations addressing mineral resources, including the relationship between federal and State requirements, are codified, in part, in Title 30 (Mineral Resources) in the Code of Federal Regulations (CFR).

[7]/ California Department of Conservation, Division of Mines and Geology and State Mining and Geology Board, California Surface Mining and Reclamation Policies and Procedures, Guidelines for Classification and Designation of Mineral Resources, 1998, p. 3.

[8]/ California State Mining and Geology Board, California, California Division of Mines and Geology, Special Publication 51, Third Edition, January 2000, p. 3.

[9]/ *Op. Cit*. Guidelines for Classification and Designation of Mineral Lands, p. 3.

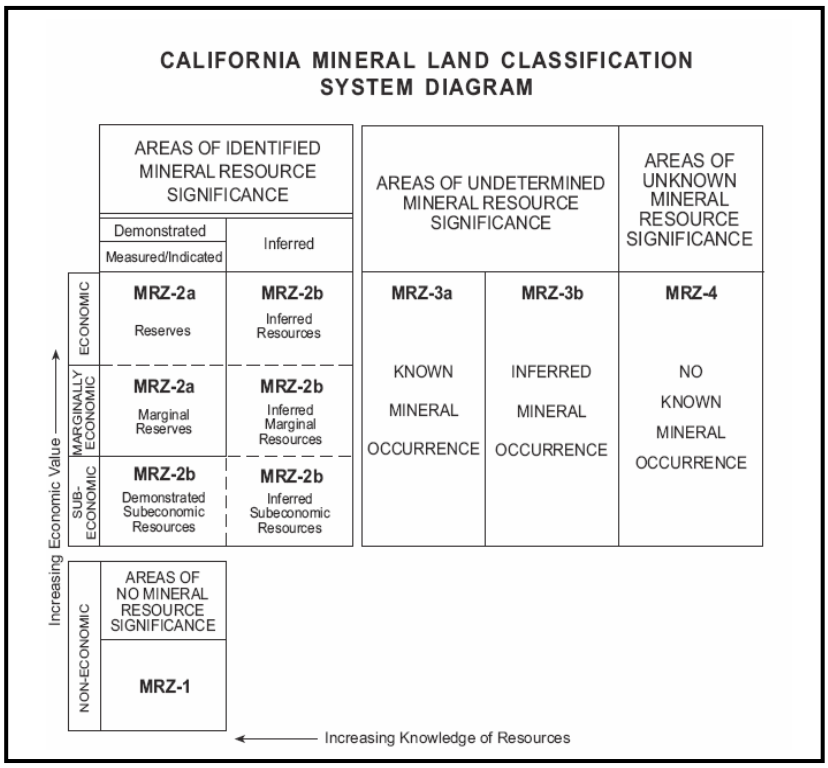


Figure 4.3-1
CALIFORNIA MINERAL LAND CLASSIFICATION SYSTEM DIAGRAM
Source: State Mining and Geology Board

As illustrated in Figure 4.3-2 (Mineral Resource Classification Map – Aggregate Resources Only) and as further shown in Figure 4.3-3 (Contour Map Showing General Thickness of Holocene Alluvium) and Figure 4.3-4 (Generalized Geologic Cross Section – Lytle Creek Wash),[10] with the exception of the Sycamore Flat and Sycamore Canyon areas, which are designated "MRZ-3," the project site is located within a State-designated "MRZ-2" zone.

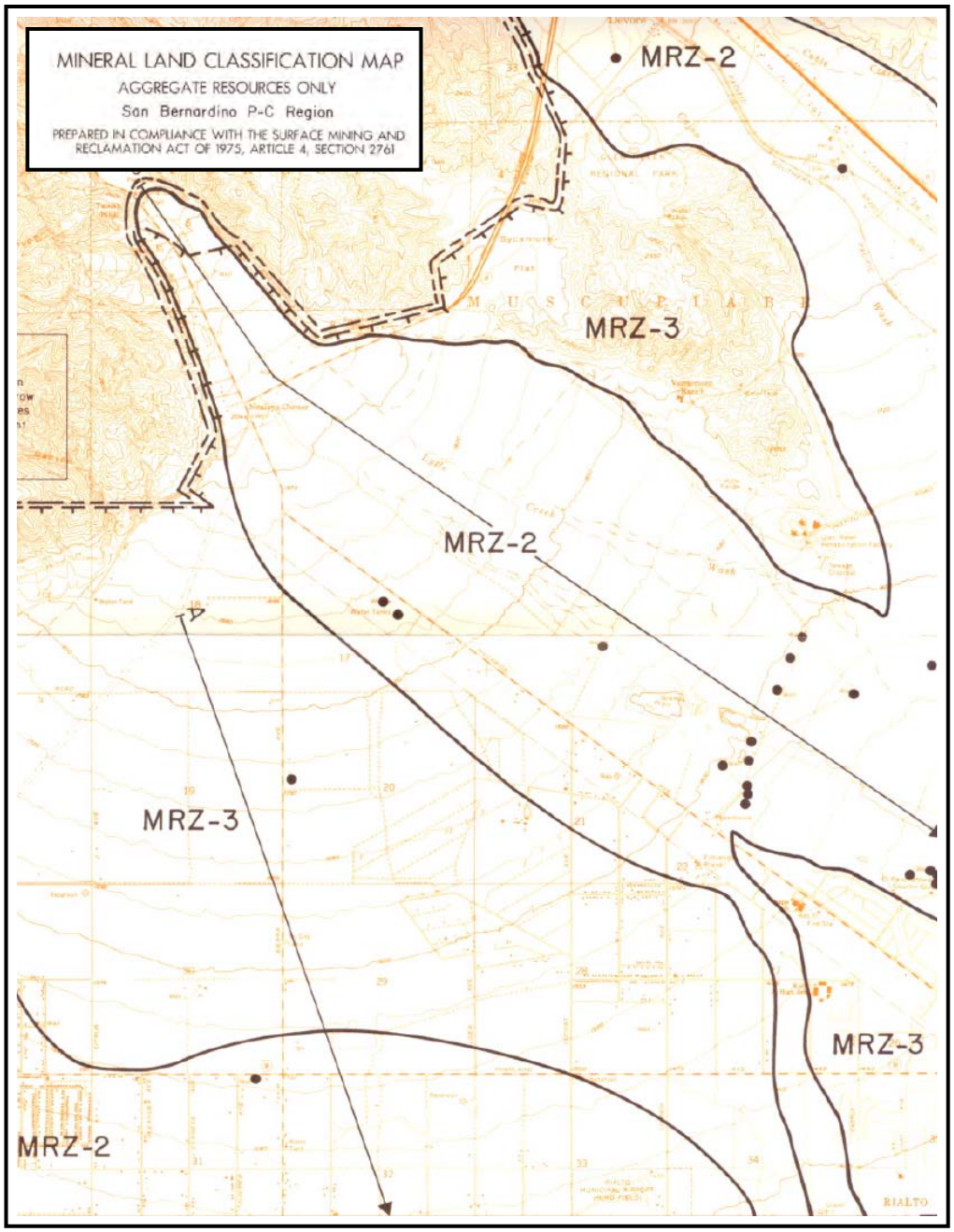
The State specifically utilizes the "sector concept"[11] in the California Department of Conservation, Division of Mines and Geology's (DMG) 1987 "Mineral Land Classification of the Greater Los Angeles Area, Special Report 143, Part VII" (SR 143 VII Report) that identifies areas within the broad classification of MRZ-2 that are non-urbanized and judged to be somewhat uniform in geological and mineral make up and in which construction aggregate resources can be estimated with some degree of certainty.[12] As indicated therein, the project site is located within the San Bernardino Production-Consumption Region (SBPC Region or San Bernardino P-C Region). The SBPC Region is comprised of "nine major MRZ-2 areas, divided into 127 smaller areas, with existing land uses that are compatible with mining, qualify as sectors. Together they cover 64 square miles and contain a total of 10.5 billion tons of aggregate."[13]

[10]/ California Department of Conservation, Division of Mines and Geology, Mineral Land Classification of the Greater Los Angeles Are, Special Report 143, Part VII, 1987, Plates 7.2, 7.39, and 7.41.

[11]/ The "sector concept" was developed to organize the volume calculations of aggregate resources which identify areas within the classification of MRZ-2 that is non-urbanized and judged to be somewhat uniform in geological and mineral make up and which construction aggregate can be estimated with some degree of certainty.

[12]/ *Op. Cit.,* Mineral Land Classification of the Greater Los Angeles Are, Special Report 143, Part VII, p. 22.

[13]/ *Ibid.*, p. xii.



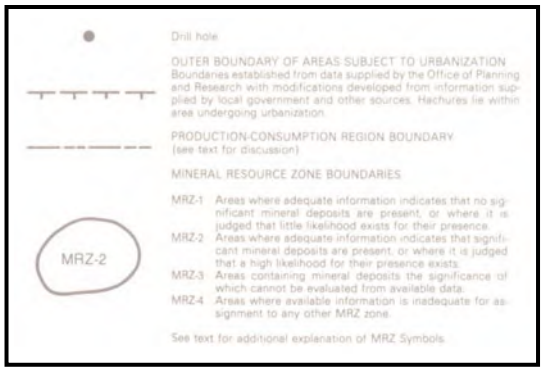
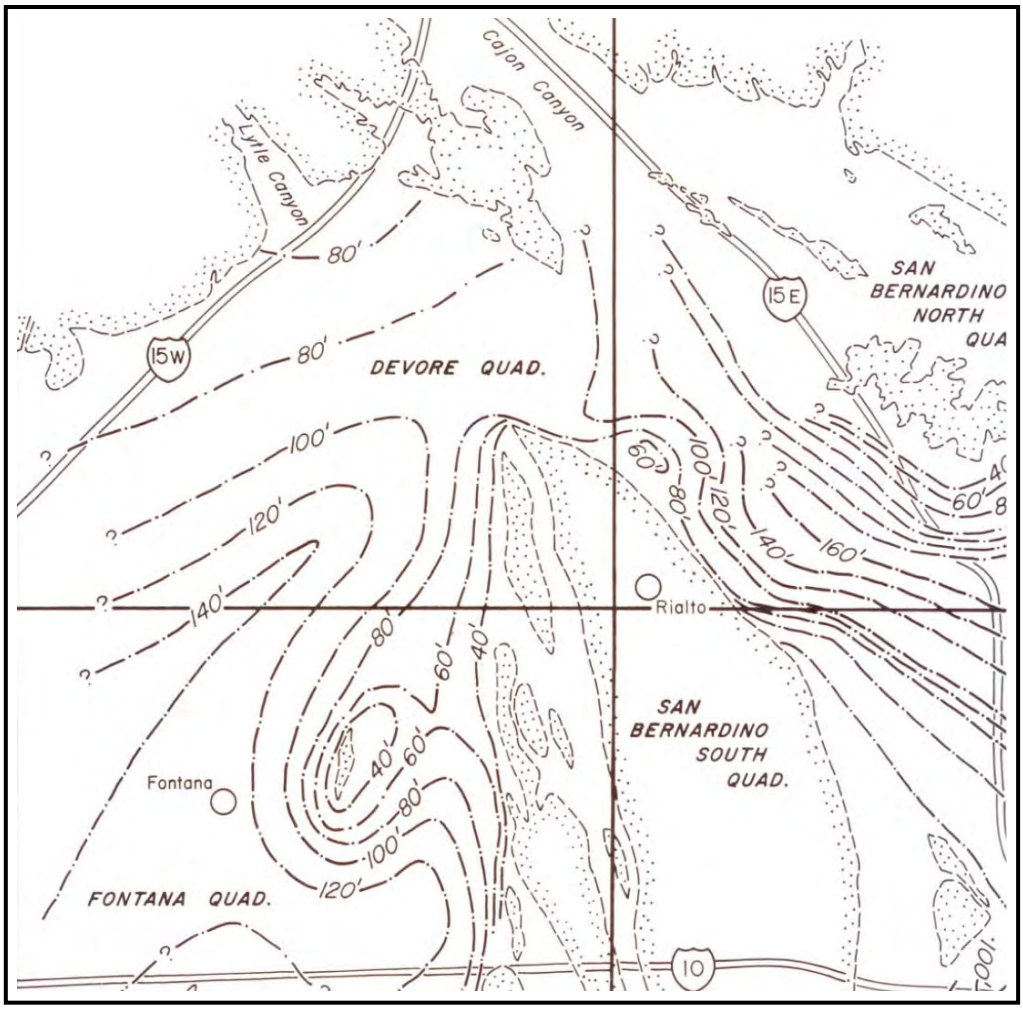


Figure 4.3-2
MINERAL RESOURCE CLASSIFICATION MAP AGGREGATE RESOURCES ONLY
Source: California Department of Conservation



CONTOUR MAP SHOWING GENERAL THICKNESS OF HOLOCENE ALLUVIUM IN THE SAN BERNARDINO VALLEY AREA BASED ON INTERPRETATION OF WELL LOG DATA

—160'— CONTOUR OF EQUAL THICKNESS OF HOLOCENE ALLUVIUM

EXPOSURE OF OLDER UNITS (STIPPLED)

Figure 4.3-3
CONTOUR MAP SHOWING GENERAL THICKNESS OF HOLOCENE ALLUVIUM
Source: California Department of Conservation

This project lies within an area depicted as "Sector B (Lytle Creek Wash)." "Sector B" encompasses the active channel of the Lytle Creek Wash about 5 miles upstream from the mouth of the Lytle Creek Wash at Glen Helen to its confluence with the Santa Ana River. The entire sector includes about 10.7 square miles. The SR 143 VII Report represents that the depth of suitable material ranges from 90 feet in the northern part of the sector to 50 feet in the southern sector. Approximately 970 million tons of resource is believed to lie beneath "Sector B," of which about 120 million tons are reserves.[14,15]

[14]/ *Ibid*., p. 24.

[15]/ The DMG categorizes aggregate materials in "reserves" (aggregate materials where there is a valid permit to excavate and remove those materials) or "resources" (the total amount of [un-permitted] available aggregate within the area, including any reserves).

Under the provisions of SMARA and its procedures manual, where land is classified as "MRZ-2," before permitting a use that could threaten the potential to extract minerals, the local lead agency may require an evaluation of the area to determine whether mineral deposits of Statewide or areawide significance exist.[16]

As further indicated in SR 143 VII Report, the project site is located to the north of "Sector A (Lytle Creek Alluvial Fan)" and west of "Sector C (Cajon Wash)." "Sector A" (Lytle Creek Alluvial Fan) covers the non-urbanized portions of the Lyle Creek fan that are classified as MRZ-2, exclusive of the Lytle Creek Wash which drains across the eastern margin of the fan. The portion of the fan classified MRZ-2 extends from a few miles south of the mouth of Lytle Creek Canyon to the Santa Ana River to the southeast. The non-urbanized part of this totals nearly 11.7 square miles. There are 1.8 billion tons of resource in "Sector A," of which about 8 million tons are reserve. "Sector C" covers about 7.4 miles and extends from the confluence of Cajon and Lytle Creeks to about 8 miles upstream. Over 1.1 billon tons of resource are calculated to underlie "Sector C."[17]

Section 3550.8 (Construction Aggregate Resources, San Bernardino Region) in Title 14, Division 2, Chapter 8, Subchapter 1 (Surface Mining and Reclamation Practices) of the CCR (State Mining and Geology Board Reclamation Regulations) states, in part, that the "construction aggregate deposits in the following areas are designated as being of "regional significance"[18]: Sector A – Eighteen parcels on Lytle Creek Fan in and around the City of Fontana. The larger parcels of this sector are north of Fontana; several smaller parcels are scattered to the east and south of Fontana to the Santa Ana River. Sector B – Thirteen parcels covering the unurbanized portions of Lytle Creek Wash from north of Freeway 15, west to the downtown area of the City of San Bernardino. Sector C – Eight parcels along the Cajon Creek Wash from the bend in the wash south to Lost Lake, southward to the confluence of Cajon Creek and Lytle Creek."

The status of mineral lands previously designated to be of Statewide or regional significance may be terminated, either partially or wholly, by the SMGB on a finding that the designation status is no longer necessary or appropriate. Such an action is a rulemaking procedure that must be accomplished in compliance with the provisions of the Administrative Procedures Act, codified in Sections 11340 *et seq.*, of the CGC.

Aggregate resource areas (ARAs) are areas classified as MRZ-2 for construction aggregate that have current land uses which are similar to those areas which have been mined in the past. The purpose of determining ARAs is to provide a semi-quantified estimate of aggregate resources which are likely to be available to satisfy society's need for those resources during the 50-year period following an area's classification. The estimate provides the context for communities to plan for future aggregate needs in their land use policies. As indicated by the DMG, "the establishment of ARAs in no way infringes on the authority of local governments to make land use decisions."[19]

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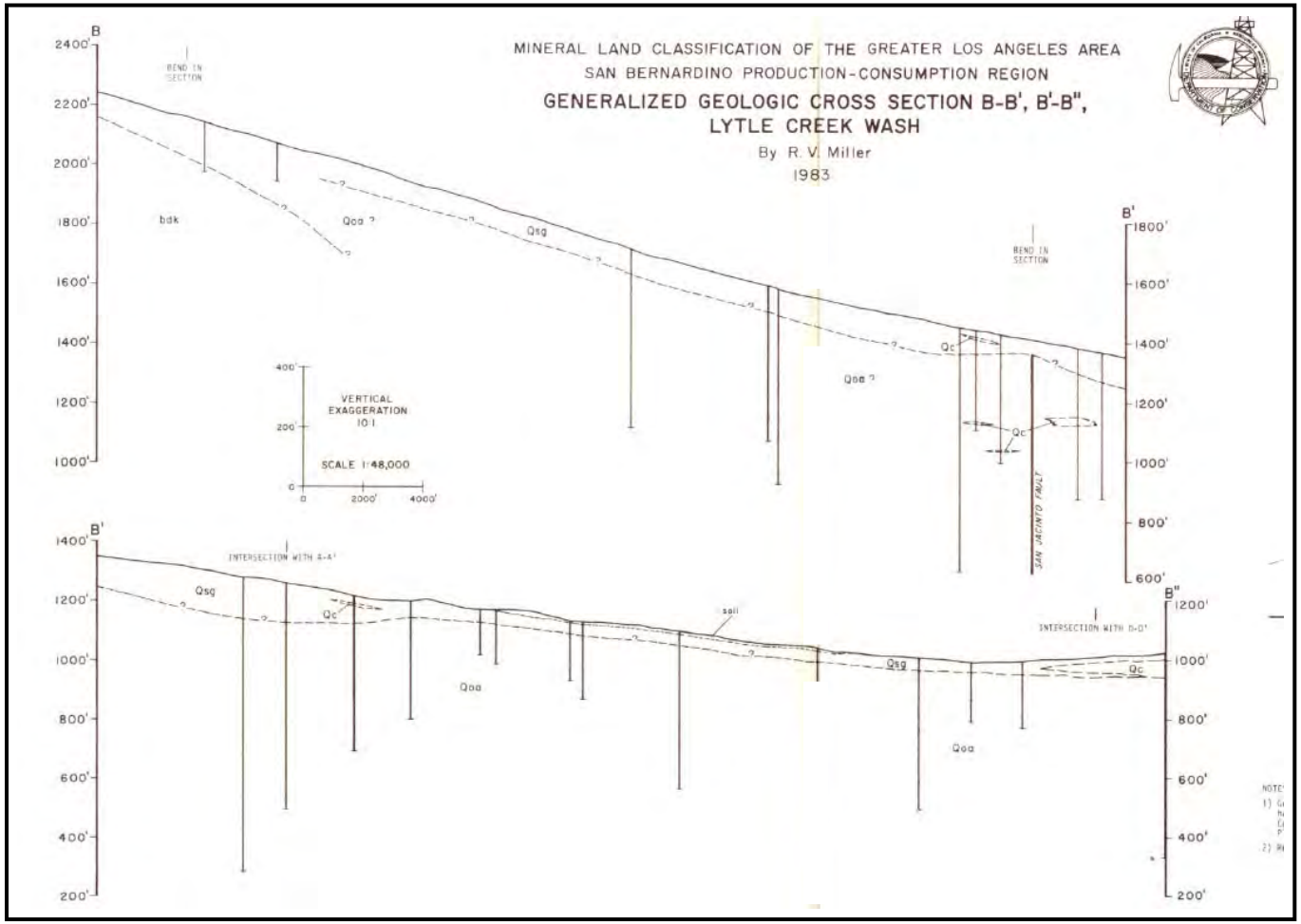
[16]/ *Op. Cit.*, Special Publication 51, p. 10.

[17]/ *Op. Cit.,* Mineral Land Classification of the Greater Los Angeles Area, Special Report 143, Part VII, pp. 23-25.

[18]/ As defined in Section 2726 of SMARA, an "areas of regional significance" means "an area designated by the Board pursuant to Section 2790 which is known to contain deposits of minerals, the extraction of which is judged to be of prime importance in meeting future needs for minerals in a particular region of the state within which the minerals are located and which, if prematurely developed for alternative incompatible land uses, could result in the permanent loss of minerals that are of more than local significance."

[19]/ *Ibid*, p. 6.



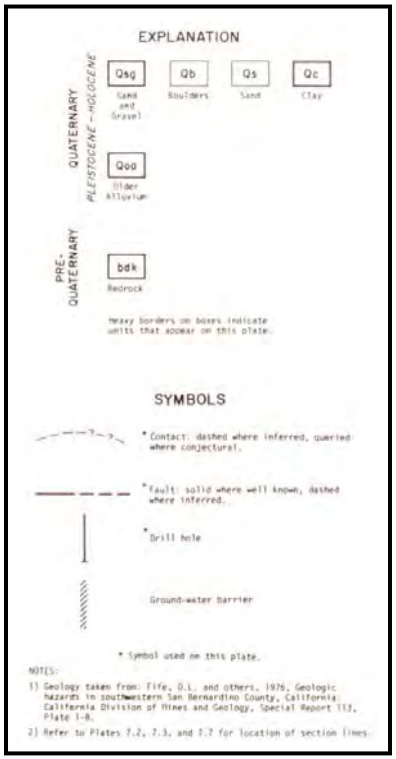


Figure 4.3-4
GENERALIZED GEOLOGIC CROSS SECTION – LYTLE CREEK WASH
Source: California Department of Conservation

Specific land uses are generally considered "incompatible" with mining and have been excluded from ARAs. MRZs containing land uses other than the following will be considered for inclusion as an ARA: (1) economic exclusions, including (a) residential areas and areas committed to residential development, such as approved tracts, (b) commercial areas with land improvements (buildings), (c) industrial areas (buildings and adjacent needed storage and parking), (d) major public or private engineering projects and (e) small areas isolated by urbanization (generally less than 40 acres); and (2) social exclusions, including (a) cemeteries, (b) public parks, developed historical sites and structures, and public recreation areas of all types, (c) public or private schools, institutions, hospitals, and prisons, and (d) military bases and reservations.[20]

In May 1979, the State Board of Mining and Geology adopted special guidelines for managing mineral resources, with the following goals: (1) Mineral lands classified MRZ-2 or designated as areas of Statewide or of regional significance should be protected from preclusive and "incompatible land uses" (14 CCR 3675) so that the mineral resources within these lands and areas are available when needed; and (2) Surface mining within these classified lands and designated areas should be controlled to assure that: (A) Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses; (B) The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, aesthetic enjoyment, and other environmental factors; and (C) Residual hazards to the public health and safety are eliminated.[21]

As required under Section 2762(d) and (e) and 2763(a) and (b) of SMARA, if the State Geologist has classified an area as containing significant mineral resources and the lead agency has designated that area in its general plan as having important minerals to be protected, then prior to permitting a use which would "threaten the potential to extract minerals"[22] in that area, the lead agency shall, in conjunction with any environmental documentation, prepare a statement specifying its reasons for permitting the proposed use and shall forward a copy of that statement to the SMGB for review.

The SMGB has designated the aggregate resource located on and beneath the project site as "regionally significant."[23] Section 2726 of SMARA define an "area of regional significant" as "an area designated by the board pursuant to Section 2790 which is known to contain a deposit of minerals, the extraction of which is judged to be of prime importance in meeting future needs for minerals in a particular region of the State within which the minerals are located and which, if prematurely developed for alternative incompatible land uses, could result in the permanent loss of minerals that are of more

[20]/ *Ibid*, p. 7.

[21]/ State of California, Governor's Office of Planning and Research, 1990 General Plan Guidelines, 1990, Chapter IV (Special General Plan Considerations) (http://ceres.ca.gov/planning/genplan/gp_chapter6.html).

[22]/ Because SMARA does not define what type of land-use applications would "threaten the potential" for mineral extraction, it is not possible to identify all the projects that might fall within the ambit of this requirement. Based on SMARA's legislative history and its provisions as a whole, the Legislature likely intended that term to include at least those projects proposed on, adjacent to, or near the classified or designated areas that would, without mitigation, be incompatible with mining (Source: Cole, Derek, Public Law Journal, An Official Publication of the State Bar of California Public Law Section, Vol. 29, No. 2, Spring/Summer 2006, p. 4).

[23]/ Cortner, Steve C., Evaluation for Potential Loss of Mineral Resource Resulting from the Development of Lytle Creek Ranch, City of Rialto, May 2008, p. 5.

than local significance."[24] As specified in Section 3675, "compatible land uses" are defined as those which are "inherently compatible with mining and/or that require a minimum public or private investment in structures, land improvements, and which may allow mining because of the relative economic value of the land and its improvements. Examples of such uses may include, but shall not be limited to, very low density residential, geographically extensive but low impact industrial, recreational, agricultural, silvicultural, grazing, and open space. As further defined therein, "Incompatible land use" are those which are "inherently incompatible with mining and/or that require public or private investment in structures, land improvements, and landscaping and that may prevent mining because of the greater economic value of the land and its improvements. Examples of such uses may include, but shall not be limited to, high density residential, low density residential with high unit value, public facilities, geographically limited but impact intensive industrial, and commercial" (14 CCR 3675).

As specified in Section 2763 of SMARA: "(a) Upon the request of an operator or other interested person and payment by the requesting person of the estimated cost of processing the request, the lead agency having jurisdiction shall amend its general plan, or prepare a new specific plan or amend any applicable specific plan, that shall, with respect to the continuation of the existing surface mining operation for which the request is made, plan for future land uses in the vicinity of, and access routes serving, the surface mining operation in light of the importance of the minerals to their market region as a whole, and not just their importance to the lead agency's area of jurisdiction. (b) Lead agency land use decisions involving areas designated as being of Statewide significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of the mineral resources to the State and nation as a whole."[25]

As specified in Section 2764(b): "In adopting amendments to the general plan, or adopting or amending a specific plan, the lead agency shall make written legislative findings as to whether the future land uses and particular access routes will be compatible or incompatible with the continuation of the surface mining operation, and if they are found to be incompatible, the findings shall include a statement of the reasons why they are to be provided for, notwithstanding the importance of the minerals to their market region as a whole or their previously designation by the board, as the case may be."

[24]/ As indicated in Section 2790 of SMARA: "After receipt of mineral information from the State Geologist pursuant to subdivision (c) of Section 2761, the board may by regulation adopted after a public hearing designate specific geographic areas of the state as areas of statewide or regional significance and specify the boundaries thereof. Such designation shall be included as a part of the state policy and shall indicate the reason for which the particular area designated is of significance to the state or region, the adverse effects that might result from premature development of incompatible land uses, the advantages that might be achieved from extraction of the minerals of the area, and the specific goals and policies to protect against the premature incompatible development of the area."

[25]/ Section 2735 of SMARA defines "surface mining operations" as "all, or any part of, the process involved in the mining of minerals on mined lands by removing overburden and mining directly from the mineral deposits, open-pit mining of minerals naturally exposed, mining by the auger method, dredging and quarrying, or surface work incident to an underground mine. The definition also specifically includes the "production and disposal of mining waste" and prospecting and exploration activities.

- **Seismic Hazards Mapping Act**. Prompted by damaging earthquakes in northern and southern California in 1990, the State Legislature passed the Seismic Hazards Mapping Act (SHMA), codified in Sections 2690 through 2699.6 in Division 2, Chapter 7.8 of the PRC, which became operative on April 1, 1991. SHMA was adopted for the purpose of protecting the public from the effects of strong ground shaking, liquefaction, landslides and other ground failure, and other hazards attributable to earthquakes. Under SHMA, the DMG[26] was directed to delineate the various "seismic hazard zones" throughout the State. As specified under Section 2696(a) therein, the "State Geologist shall compile maps identifying seismic hazard zones, consistent with the requirements of Section 2695. The maps shall be compiled in accordance with a time schedule developed by the director and based upon the provisions of Section 2695 and the level of funding available to implement this chapter." The project site is located in the United States Geologic Survey (USGS) Devore 7.5-Minute Topographic Quadrangle. Seismic hazard zone maps encompassing the project site have not yet been prepared for that quadrangle by the State Geologist.

  The SMGB's "Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication No. 117"[27] (Special Publication 117) provides guidelines for evaluating and mitigating seismic hazards (other than surface fault rupture) and for recommending mitigation measures as required under Section 2695(a) of the PRC.[28] As specified therein: "The fact that a site lies outside a mapped zone of required investigation does not necessarily mean that the site is free from seismic or other geologic hazards, regardless of the information shown on the Seismic Hazard Zone Maps. The zones do not always include landslide or lateral spread runout areas. Project sites that are outside of any zone may be affected by ground failure runout from adjacent or nearby sites. Finally, neither the information on the Seismic Hazard Zone Maps, nor in any technical reports that describe how the maps were prepared nor what data were used is sufficient to serve as a substitute for the required site-investigation reports called for in the act."[29]

- **Alquist-Priolo Earthquake Fault Zoning Act**. Following the 1971 San Fernando earthquake, the State Legislature passed the Alquist-Priolo Earthquake Fault Zoning Act (APEFZA), formerly called the Alquist-Priolo Special Studies Zone Act, as codified in Section 2621 *et seq*. in Chapter 7.5 of Division 2 of the PRC. The APEFZA, which became effective in 1973, was adopted to "provide policies and criteria to assist cities, counties, and State agencies in the exercise of their responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults."[30] As defined therein, an "active fault" is one along which surface displacement has occurred within Holocene time (during the past 11,000 years).

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[26]/ Now the California Geological Survey (CGS).

[27]/ State Mining and Geology Board, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication No. 117, March 13, 1997, revised September 11, 2008.

[28]/ As defined in Section 2693(c) of the PRC, "mitigation" means those measures that are consistent with established practice and that will reduce seismic risk to acceptable levels." As further defined in Section 3721(a) therein, "acceptable level" means that level that provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of the project."

[29]/ *Op. Cit*., Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication No. 117, p. 14.

[30]/ Section 2621.5(a), Chapter 7.5, Division 2, PRC.

The purpose of the APEFZA is to regulate land development near active faults in an effort to mitigate the hazard of surface fault rupture. The law requires the State Geologist to establish regulatory zones, known as "earthquake fault zones,"[31] around the surface traces of active faults and to issue appropriate maps. Earthquake fault zones are regulatory zones around active faults. The zones are defined by turning points connected by straight lines. Most of the turning points are identified by roads, drainages, and other features on the ground. The zones vary in width, but average about one-quarter mile wide.[32] Under the APEFZA, local agencies must regulate activities within those zones, as defined by an appropriate setback from the fault trace.

As specified, in Section 2623: "(a) The approval of a project by a city or county shall be in accordance with policies and criteria established by the State Mining and Geology Board and the findings of the State Geologist. . .Cities and counties shall require, prior to the approval of a project, a geologic report defining and delineating any hazard of surface fault rupture. If the city or county finds that no undue hazard of that kind exists, the geologic report on the hazard may be waived, with the approval of the State Geologist. (b) After a report has been approved or a waiver granted, subsequent geologic reports shall not be required, provided that new geologic data warranting further investigation is not recorded." The criteria and policies established by the State Mining and Geology Board (SMGB) are codified in Sections 3600-3603 in Title 14 of the CCR.

As illustrated in Figure 4.3-5 (Earthquake Fault Zones - Devore and San Bernardino North 7.5-Minute Topographic Quadrangles), the APEFZA maps for the Devore and San Bernardino North 7.5-minute quadrangles identifies a number of on-site and near-site State-designated Alquist-Priolo earthquake fault zones.

- **Field Act**. In response to the 1933 Long Beach earthquake, the Legislature gave the State the authority to approve public school construction plans and inspect new school construction and existing schools for safety. The Field Act, codified in Sections 17280-17317 and 81130-81149 of the California Education Code (CEC), is administered by the Division of the State Architect (DSA), within the State Department of General Services. According to Title 24, Part 1 of the California Building Standards Code: "School buildings constructed pursuant to these regulations are expected to resist earthquake forces generated by major earthquakes of the intensity and severity of the strongest experienced without catastrophic collapse, but may experience some repairable architectural and structural damage."

- **Uniform Building Code**. The UBC is published by the International Conference of Building Officials (ICBO), now the International Code Council (ICC), one of three model code groups in the country, and is used by most agencies in southern California as the basis for their building codes. The "Uniform Building Code" (UBC) defines criteria to be used in construction of structures based on the level of seismic activity in the region.

[31]/ Earthquake fault zones are regulatory zones that encompass surface traces of active faults that have a potential for future surface rupture. Areas that are so designated contain active faults that may pose a risk of surface rupture to existing or future structures. If a property is undeveloped, a fault study may be required before the parcel can be subdivided or before most structures can be permitted. If a property is developed, the APEFZA requires that all real estate transactions within the earthquake fault zone must contain a disclosure of those potential hazards by the seller to prospective buyers.

[32]/ California Department of Conservation, Division of Mines and Geology, Fault-Rupture Hazard Zones in California, Special Publication 42, Revised 1997, Supplements 1 and 2 added in 1999, p. 6.

The ICBO (ICC) has subdivided the United States into six seismic regions. The project site is located in UBC Seismic Zone 4. As indicated in the UBC, "[t]he building official may require a geotechnical investigation in accordance with Section 1804.2 and 1804.5 when, during the course of investigation, all of the following conditions are discovered, the report shall address the potential for liquefaction: (1) Shallow groundwater, 50 feet (15,240 mm) or less. (2) Unconsolidated sandy alluvium. (3) Seismic Zones 3 and 4."

The most effective single element in mitigating earthquake losses to buildings is the consistent application of a modern set of design and construction standards, such as those incorporated in modern building codes. The codes are updated regularly to include the most effective design and construction measures that have been found by testing and research or observed in recent earthquakes to reduce building damage and losses. Local government building departments using a relatively modern code, such as the 1997 UBC, regulate the vast majority of buildings. For new buildings, state and local governments enforce the "California Building Standards Code" (CBSC) that includes earthquake safety provisions from the 1997 UBC with enhancements for hospitals, public schools, and essential services buildings.[33]

- **California Building Standards Code**. Title 24 of the CCR is a compilation of three types of building standards from three different origins: (1) standards that have been adopted by State agencies without change from building standards contained in national model codes; (2) standards that have been adopted and adapted from the national model code standards to meet California conditions; and (3) sstandards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns. In January 2007, the California Building Standards Commission (CSC) adopted the 2007 CBSC, consisting of the twelve parts of Title 24.[34] The 2007 CBSC applies Statewide on January 1, 2008, whether adopted at the local level or not. When local government develops a code adoption ordinance, it is permissible to make amendments by ordinance to the 2007 CBSC for more restrictive requirements, as permitted under Sections 17958, 17958.5, and 18941.5 of the Health and Safety Code (H&SC).[35]

  As specified in Section 15.08.060 (Adoption by Reference) in Title 15 (Building and Construction) of the City Municipal Code, the City has adopted the "'Uniform Building Code,' Volumes 1, 2, and 3, 1997 Edition, as amended and/or modified by the provisions of the 2001 California Building Code of the California Building Standards Code including Appendix Chapter 12, Division IIA, Appendix Chapter 15, Appendix Chapter 31, Division III, Appendix Chapter 34, Division III" for the purpose of establishing rules and regulations for specified building, installation, occupancy, and use requirements and for the protection of public health and safety.

[33]/ *Op. Cit*., State of California Multi-Hazard Mitigation Plan, p. 80.

[34]/ The provisions of Title 24 (2007 edition) include requirements for the structural, plumbing, electrical, and mechanical systems of buildings and for fire and life safety, energy conservation, and accessibility in buildings. Title 24 is organized into separate parts, with each part given a separate name reflecting its subject. The current edition of Title 24 includes: (1) Part 1 (California Building Standards Administrative Code); (2) Part 2, Volume 1 and 2 (California Building Code); (3) Part 3 (California Electrical Code); (4) Part 4 (California Mechanical Code); (5) Part 5 (California Plumbing Code); (6) Part 6 (California Energy Code); (7) Part 7 (currently vacant); (8) Part 8 (State Historical Building Code); (9) Part 9 (California Fire Code); (1) Part 10 (California Existing Building Code); (11) Part 11 (California Green Building Standards Code); and (12) Part 12 (California Reference Standards Code).

[35]/ The local agency making more restrictive amendments must make a finding based on local geological, topographical, or climatic conditions. The findings, along with the amendment, must be adopted by local ordinance and filed with the CSC before it is effective or operative.

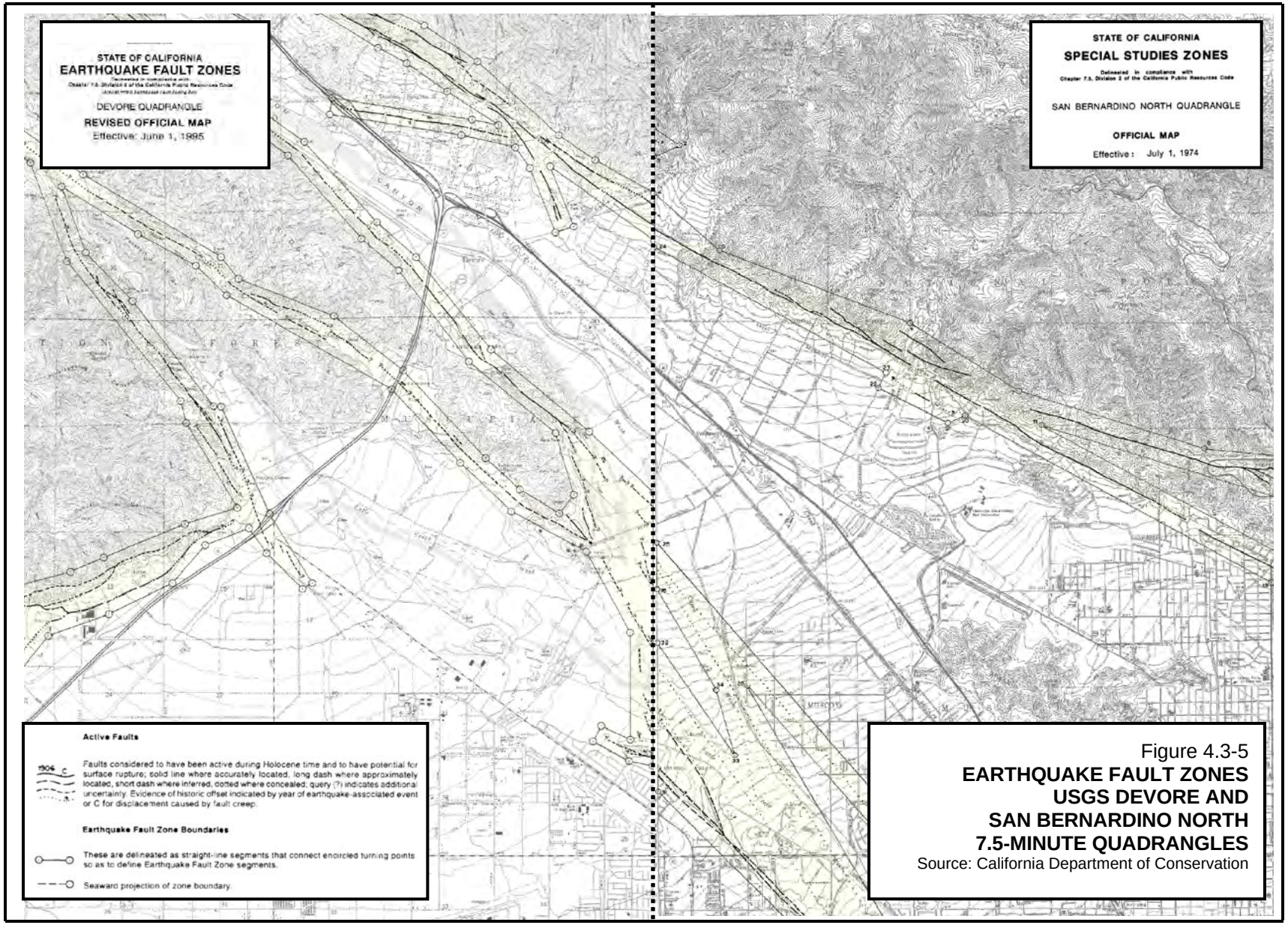

Figure 4.3-5
EARTHQUAKE FAULT ZONES
USGS DEVORE AND
SAN BERNARDINO NORTH
7.5-MINUTE QUADRANGLES
Source: California Department of Conservation

- **California Vehicle Code**. As required under Section 23114 of the California Vehicle Code (CVC), certain State-mandated provisions apply to all trucks that haul excavated or grade materials. As indicated, in part, therein, no vehicle shall be driven or moved on any highway unless the vehicle is so constructed, covered, or loaded as to prevent any of its contents or load from dropping, sifting, leaking, blowing, spilling, or otherwise escaping from the vehicle. Aggregate material shall only be carried in the cargo area of a vehicle and the cargo area shall not contain any holes, cracks, or openings through which that material may escape. Every vehicle used to transport aggregate materials shall be equipped with properly functioning seals on any openings used to empty the load, splash flaps behind every tire or set of tires, and center flaps at a location to the rear of each bottom dump release gate. Additionally, no vehicle shall transport any aggregate material upon a highway unless the material is covered.

4.3.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **San Bernardino County General Plan**. The County General Plan distinguishes between natural hazards (e.g., geology, flood, fire, wind and erosion) and natural resources (e.g. minerals). With regards to natural hazards, the County General Plan acknowledges that County residents are exposed to a number of geologic hazards, including seismic activity (e.g., fault rupture, ground shaking, liquefaction, seismically-generated subsidence, seiche, and dam inundation), landslides and mudslides, non-seismic subsidence, erosion, and volcanic activity. Other geologic hazards include collapsible, expansive, and sulfate-reactive soils (controlled under current building and safety practices). Natural hazards are identified on the County's hazard overlay maps.[36]

  The maps containing information useful to an understand of existing site conditions are presented, in part, in Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlay Map), Figure 4.1-8 (San Bernardino County General Plan – Geologic Hazard Overlay Map), Figure 4.1-9 (San Bernardino County General Plan – Portion of the Biotic Resources Overlay Map), and Figure 4.1-10 (San Bernardino County General Plan – Open Space Plan/Resources Overlay). As illustrated, certain hazards or suspected hazards have been identified on or near the project site.

  As a planning tool, the County General Plan includes a "Land Use Compatibility Chart for Special Studies Zones", a "Land Use Compatibility Chart in Liquefaction Potential Zones" and a "Land Use Compatibility Chart in Landslide Susceptibility Zones" in order to facilitate the siting of certain types of land uses in proximity to those areas. Those matrices are presented in Table 4.3-1 (Land-Use Compatibility Chart in Fault Hazard Zones), Table 4.3-2 (Land-Use Compatibility Chart in Liquefaction Potential Zones), and Table 4.3-3 (Land-Use Compatibility Chart in Landslide Susceptibility Zones).

[36]/ *Op. Cit*., County of San Bernardino 2007 General Plan, p. I-6.

Table 4.3-1
LAND-USE COMPATIBILITY CHART IN FAULT HAZARD ZONES

Land Use	Compatibility in Special Studies Zones or County Fault Hazard Zones
Critical. Nuclear-related systems; major dams; explosives or hazardous materials/manufacturing, handing, or storage; hospitals and other emergency medical facilities; specific hazardous waste facility.	Restricted
Essential. Police, fire and communication systems; emergency operations centers; electric power inter-tie systems; power plants; small dams; utility substations; sewerage treatment plants; waterworks; local gas and electric distribution lines; aqueducts; major pipelines; major highways, bridges and tunnels; ambulance services; public assembly sites with 300 or more capacity; schools.	Restricted
High Occupancy. Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations.	Generally Unsuitable
Normal-Low Risk. Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels, motels; light industry; warehousing; parks.	Provisionally Suitable
Restricted. Restricted unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated.	
Generally Unsuitable. Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated.	
Provisionally Suitable. Requires site investigation to confirm suitability; may require some modification of facility design or siting.	

Source: County of San Bernardino, 2007 General Plan Table S-2.

In addition, the County General Plan FEIR indicates that earthquake faults impose life threatening geologic hazards and that the probability of a great earthquake on the San Andreas fault is very high, especially within the Valley Region.[37] The majority of County residents in this area would be subjected to the full range of seismically-induced hazards. In recognition of Countywide hazards, a number of policies and programs are presented in the County General Plan.

In the context of the proposed project, those natural hazards policies and actions presented in the County General Plan that appear most closely related to the unincorporated County portion of the project site, if processing were to occur through the County, are presented below.

- Goal S7. The County will minimize exposure to hazards and structural damage from geologic and seismic conditions.
    - ◊ Policy S7.1. Strive to mitigate the risks from geologic hazards through a combination of engineering, construction, land use, and development standards.

[37]/ *Op. Cit.*, Final Program Environmental Impact Report, San Bernardino County 2007 General Plan Program, SCH No. 200510138. p. IV-73.

Table 4.3-2
LAND-USE COMPATIBILITY CHART IN LIQUEFACTION POTENTIAL ZONES

Land Use	Degree of Compatibility in Liquefaction Potential Zones		
	High	**Medium-High**	**Medium**
Critical. Nuclear-related systems; major dams; explosives or hazardous materials/manufacturing, handing, or storage; hospitals and other emergency medical facilities; specific hazardous waste facility.	Restricted[1]	Restricted	Generally Unsuitable[2]
Essential. Police, fire and communication systems; emergency operations centers; electric power inter-tie systems; power plants; small dams; utility substations; sewerage treatment plants; waterworks; local gas and electric distribution lines; aqueducts; major pipelines; major highways, bridges and tunnels; ambulance services; public assembly sites with 300 or more capacity; schools.	Restricted	Restricted	Generally Unsuitable
High Occupancy. Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations.	Restricted	Generally Unsuitable	Provisionally Suitable[3]
Normal-Low Risk. Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels, motels; light industry; warehousing; parks.	Restricted	Generally Unsuitable	Provisionally Suitable

Notes:
1. Restricted - Restricted unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated.
2. Generally Unsuitable - Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated.
3. Provisionally Suitable - Requires site investigation to confirm suitability; may require some modification of facility design or siting.

Source: County of San Bernardino, 2007 General Plan Table S-3

Programs. (1) Consider the formation of Geologic Hazard Abatement Districts as authorized by Public Resources Code Section 26500 *et seq*., where existing or proposed development is threatened by such hazards and prevention, mitigation, abatement or control of a geologic hazard is deemed feasible. (2) Require sites to be developed and all structures designed in accordance with recommendations contained in any required geotechnical or geologic reports, through conditioning, construction plans and field inspections. (3) Require that all recommended mitigation measures be clearly indicated on all grading and construction plans. (4)

Require all facilities to meet appropriate geologic hazard specifications as determined by the County Geologist for discretionary and ministerial authorizations. (5) Because of the potential for displacement along faults not classified as active, the County will reserve the right to require site-specific geotechnical analysis and mitigation for development located contiguous to potentially active faults, if deemed necessary by the County Geologist.

◊ Policy S7.2. Minimize the risk of potential seismic disaster in areas where inadequate structures exist.

Programs. (1) Have a structural hazards identification and abatement program through the Division of Building and Safety with priority given to the identification and abatement of hazards in critical, essential, and high-occupancy land uses; in structures located within areas of severe geologic hazard; and in structures built prior to enactment of applicable local or state earthquake design standards. (2) Support regional or statewide programs providing funding or technical assistance to local governments to allow accurate identification of existing structural hazards in private development and providing assistance to public and private sectors to facilitate and to minimize the social and economic costs of abatement.

◊ Policy S7.3. Coordinate with local, regional, state, federal, and other private agencies to provide adequate protection against seismic hazards to County residents.

Programs. (1) Continue to work with public utilities, school districts, railroads, the state Department of Transportation (Caltrans), and other agencies supplying critical public services to ensure that they have incorporated structural safety and other measures to be adequately protected from seismic hazards for both existing and proposed facilities. (2) Coordinate with utility companies to institute orderly programs of installing cut-off devices on utility lines, starting with the lines that appear to be most vulnerable and those that serve the most people. Adequate emergency water supplies will be established and maintained in areas dependent upon water lines that cross active fault zones.

◊ Policy S7.4.Design areas identified by the Alquist-Priolo Special Studies Zone Act (Public Resource Code, Division 2, Chapter 7.5) on the Hazard Overlay Maps to protect occupants and structures from high level of risk caused by ground rupture during earthquakes.

Programs. (1) Apply the definitions, provisions and mapping of the Alquist-Priolo Special Studies Zone Act. (2) Apply the Land Use Compatibility Chart in Earthquake Fault Zones when reviewing all discretionary and ministerial applications. (3) Withhold public financing from buildings within the Studies Zone where there is a confirmed fault trace unless it can be established that there is no potential for surface fault displacement or ground rupture which would injure the public investment or fulfillment of its purpose. (4) Do not create new lots within

the Earthquake Fault Zone unless an appropriate geologic investigation establishes sufficient and suitable land area for development according to existing land use designations and other applicable County ordinances. Reassess the fault investigation exemption for single family one- and two-story residential construction within the zone. (5) Plan transportation facilities (i.e., roads, freeways, rail, rapid transit) and utility systems to cross active fault traces a minimum number of times and to be designed to accommodate fault displacement without major damage that would cause long term and unacceptable disruption of service. Utility lines shall be equipped with such mechanisms as flexible units, valving, redundant lines or auto valves to shut of flows in the event of fault rupture.

◊ Policy S7.5. Minimize damage caused by liquefaction, which can cause devastating structural damage and a high potential for saturation exists when the groundwater level is within the upper 50 feet of alluvial material.

Programs. (1) Require that each site located within the Liquefaction Hazard Overlay be evaluated by a licensed geologist prior to design, land disturbance or construction, for soil type, history of the water table's fluctuation and adequacy of the structural engineering to withstand the effects of liquefaction. (2) Apply the Land Use Compatibility Chart for Liquefaction Potential Zones, when reviewing all discretionary and ministerial actions. (3) Evaluate potential areas of liquefaction susceptibility that are not currently identified on the Geologic Hazard Overlay. Add areas to the Geologic Hazard Overlay based on the evaluation of susceptibility.

◊ Policy S7.6. Because of the risk to life and property resulting from landslide, especially in the San Bernardino and San Gabriel Mountains where landslide potential is high, the County shall:

Programs. (1) Require that a stability analysis be required in Landslide Hazard areas designated "Generally Susceptible" and "Most Susceptible" on the Hazards Overlay Maps and where required by the County Geologist. (2) Require site development and construction comply with soil and geologic investigation report recommendations. (3) Apply the Land Use Compatibility Chart in Landslide Susceptibility Zones when reviewing all discretionary and ministerial applications. (4) Fund and prepare a land use plan that is in conformance with the Land Use Compatibility Chart in Landslide Susceptibility Zones in designated high landslide hazard areas as they are identified. (5) Restrict avoidable alteration of the land that is likely to increase the hazard within areas of demonstrated or potential landslide hazard, including concentrations of water through drainage or septic systems, removal of vegetative cover, steepening of slopes, and undercutting the base of a slope. (6) Restrict grading to minimal amounts necessary to provide access and require grading permits to have an approved site plan that conforms to the recommendations of any required geologic investigation.[38]

[38]/ *Ibid*., pp. VII-23 through VIII-27.

Table 4.3-3
LAND-USE COMPATIBILITY CHART IN LANDSLIDE SUSCEPTIBILITY ZONES

Land Use	Degree of Compatibility in Landslide Susceptibility Zones			
	Least Susceptible	**Marginally Susceptible**	**Generally Susceptible**	**Most Susceptible**
Critical Nuclear-related systems; major dams; explosives or hazardous materials/manufacturing, handing, or storage; hospitals and other emergency medical facilities; specific hazardous waste facility.	Most Compatible	Marginally Compatible	Least Compatible	Least Compatible
Essential Police, fire and communication systems; emergency operations centers; electric power inter-tie systems; power plants; small dams; utility substations; sewerage treatment plants; waterworks; local gas and electric distribution lines; aqueducts; major pipelines; major highways, bridges and tunnels; ambulance services; public assembly sites with 300 or more capacity; schools.	Most Compatible	Marginally Compatible	Least Compatible	Least Compatible
High Occupancy Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations.	Most Compatible	Generally Compatible	Marginally Compatible	Least Compatible
Normal-Low Risk Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels, motels; light industry; warehousing; parks.	Most Compatible	Most Compatible	Generally Compatible	Marginally Compatible
Most Compatible Acceptable; however, if specific concerns are identifies, a slope stability analysis may be required.				+
Generally Compatible Requires a slope stability analysis to confirm suitability; may require some modification of facility design or siting.				+
Marginally Compatible Restricted unless site investigation demonstrates that site is suitable or that hazard will be adequately mitigated.				+
Least Compatible Restricted unless alternative sites are not available or feasible and it is demonstrated through a slope stability analysis that, although mitigation may be difficult, hazards will be adequately mitigated.				
Notes: A slope analysis shall include either: (a) A slope stability report by a private consultant, or (b) Staff review of slope instability areas shown on Seismic/Geologic Maps or other in-house data, or staff field check. If proposed structures appear to be threatened by moderate or high slope instability, then the project would be conditioned.				

Source: County of San Bernardino, County of San Bernardino 2007 General Plan, Table S-4.

With regards to minerals, a number of goals, policies, and actions are presented in the County General Plan. In the context of the proposed project, the mineral goal, policies, and programs that appear most closely related to the unincorporated County portion of the project site, if processing were to occur through the County, are presented below.

- Goal CO7. The County will protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment.

  - ◊ Policy CO7.1. Because areas of the County contain valuable mineral resources, the County shall establish and implement conditions, criteria, and standards that are designed to protect the access to, and economic use of, these resources, provided that the mineral extraction does not result in significant adverse environmental effects and that open space uses have been considered for the area once mining operations cease. The County shall: (a) Solicit, coordinate, and acknowledge lands designated by the State Mining and Geology Board and classified by the state Geologist. (b) Incorporate the mineral classification or designation information, including the maps, when they are completed by the State Mining and Geology Board and the Division of Mines and Geology, including new and updated information. (c) Recognize and protect areas within San Bernardino County that show or have proven to have significant mineral resources and protect their access. (d) Maintain and coordinate files and records to be kept with the Land Use Services Department.

  - ◊ Policy CO7.2. For consistency with the state Mineral Resource Zone (MRZ) designations the County shall establish a system that identifies mineral potential and economically viable reserves. (a) MRZ-1: Adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This designation will be applied where well-developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is nil or slight. (b) MRZ-2: Adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists. This designation will be applied to known mineral deposits or where well developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.

  - ◊ Policy CO7.3. The County shall require that mining operators/owners provide buffers between mineral resources (including access routes) and abutting incompatible land uses. New mineral and non-mineral development in these zones will be designed and reviewed according to the compatibility criteria specified in this policy.

- ◊ Policy CO7.4. The County shall review land development and mining proposals near potentially incompatible land uses with the goal of achieving land use compatibility between potentially incompatible uses.

- ◊ Policy CO7.5. The County shall protect existing mining access routes by giving them priority over proposed alterations to the land, or by accommodating the mining operations with as good or better alternate access, provided the alternate access does not adversely impact proposed open space areas or trail alignment.

- ◊ Policy CO7.6. The County shall provide for the monitoring of mining operations for compliance with the established operating guidelines, conditions of approval and the reclamation plan.[39]

- Goal ED7. The County will conserve mineral resources for extractive industries.[40]

  - ◊ Policy ED7.1. Inventory the major mineral resources in the County and estimate the value of production to the local economy.[41]

- **San Bernardino County Development Code**. As illustrated in Figure 4.1-8 (San Bernardino County General Plan – Geologic Hazard Overlay Zone), portions of the site are located in a County-designated generalized liquefaction susceptibility and earthquake fault zones overlay district. As specified in Section 82.15.010 (Purpose): "The Geologic Hazards (GH) Overlay established by Sections 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is created to provide greater public safety by establishing investigation requirements for areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow/mud flow, rockfall, liquefaction, seiche, and adverse soil conditions." Section 82.15.030 (Professional Reports) requires: "Except as provided for areas of adverse soil conditions, a detailed geologic study prepared by a California Registered Professional Geologist shall be submitted with all land use application and development permits proposed with the GH Overlay, that would lead to the construction of roads or structures or the subdivision of land."

  Section 82.15.040 (Development Standards) of the County Development Code outlines specific development standards that shall be met when a land use proposed within a geologic hazard overlay district. As specified therein, those standards include: (1) a structure for human occupancy shall be located 50 feet or farther from any active earthquake fault trace (lesser setbacks may be applicable in certain situations); (2) a structure used for critical facilities[42] shall be located 150 feet or farther form any active earthquake fault trace, as indicated in the County General Plan; (3) utility lines and streets shall not be placed within the construction setback area of a hazardous fault, except for crossings which can be made perpendicular to the fault trace or as recommended by the project geologist and approved by the County Geologist; and (4) the use of development restricted areas as recreation and open space is encouraged.

[39]/ *Ibid*., pp V-31 through V- 32.
[40]/ *Ibid*., Economic Development Element, p IX- 11.
[41]/ *Ibid*., Economic Development Element, p IX- 11.
[42]/ Critical facilities include dams, reservoirs, fuel storage facilities, power plants, nuclear reactors, police and fire stations, schools, hospitals, rest homes, nursing homes, and emergency communication facilities.

As specified in Section 82.17.010 (Purpose) of the County Development Code, the Mineral Resources (MR) Overlay, as established by Sections 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays), is created with the following intent and objectives. (a) Intent. (1) The extraction of mineral resources is essential to the economic well being of the County and the needs of the society. (2) Certain privately owned land areas of the County contain significant amounts of mineral resources. MR Overlays are created to protect these resources for present and future extractions. Since mineral extraction must take place on the site where they naturally occur, special controls are needed to minimize conflicts with other land uses. The overlay functions as a "holding district" since the land will be redesignated and reclaimed for other land uses when mining operations cease. The district will insure that land disturbances are minimized through regulations and through the prohibition of any other uses that are incompatible with mining. (3) Once the mining activity ceases, the mined lands shall be reclaimed for new uses in order to prevent or minimize adverse effects on the environment and to protect the public health, safety and welfare.

Pursuant to Section 82.17.040 (Development Standards) of the County Development Code: “MR Overlays shall be free from any land use that is incompatible with mining activity” and “[n]on-mining projects located within the MR Overlay may be approved only if the following finding is made in the affirmative: Even though the project may otherwise be determined to be incompatible with mineral resource protection policies, conditions of approval shall be applied to minimize potential conflicts with these policies.” “Mineral resource overlay” maps for San Bernardino County have not yet been prepared.

4.3.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project’s regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. The City General Plan acknowledges that the City is located in a “seismically active region” and that a “significant seismic event will affect the planning area.”[43] From a Citywide perspective, the major faults located within the City and its SOI include the San Jacinto, Glen Helen, and Lytle Creek faults. Other faults affecting the City include the Cucamonga-Sierra Madre, the Whittier-Elsinore, and the Rialto-Colton fault systems. The San Jacinto, Glen Helen, and Lytle Creek faults are part of the San Jacinto fault system, which is an extension of the San Andreas fault system. The City General Plan further indicates that the San Jacinto fault zone (including the Glen Helen and Lytle Creek Faults) is one of the most active in southern California.

  As illustrated in Figure 4.3-6 (City of Rialto General Plan – Local Seismicity), the San Jacinto fault system has been designed as one of the State’s Alquist-Priolo Special Studies (Fault-Rupture Hazard) Zones. The City General Plan also notes that, although liquefaction is unlikely to occur in most parts of the City, liquefaction is a “concern” both

[43]/ *Op. Cit*., City of Rialto General Plan, Safety Element, p. XII-2.

in the Lytle Creek Wash area where there are sandy soils and a high water table and in areas near the Santa Ana River.[44]

With regards to geology and soils, as presented in the Conservation and Safety Elements, those City policies that would appear most closely related to the proposed project and to the project site are presented below.

- Goal 1.1. Minimize hazards to public health, safety, and welfare resulting from natural and man-made hazards.[45]

- Goal 2.1. Minimize hazards to public health, safety, and welfare resulting from geotechnical hazards.

  - ◊ Policy 2.1.1. The City shall require geotechnical investigations by a certified engineering geologist and registered civil engineer for all grading and construction proposed within any area which may be subject to severe seismic hazards.

  - ◊ Policy 2.1.3. The City shall require construction to be in conformance with the Uniform Building Code, specifically Chapter 23 as it provides for earthquake-resistant design, and Chapter 70 as it provides for grading and excavation.

- Goal 2.2. Encourage urbanization only in those areas without significant risk to life and property.

  - ◊ Policy 2.2.1. Development within Alquist-Priolo Special Studies Zones will be subject to the restrictions and requirements of the Special Studies Zones Act.[46]

  - ◊ Policy 3.1.2. Require operators of all grading, mining and construction sites to cover or moisten soils, or use soil binders, so that wind driven soil erosion is minimal. An erosion control plan shall be submitted and approved prior to the commencement of grading and construction of all new development.[47]

As illustrated in Figure 4.3-7 (City of Rialto General Plan – Mineral Resource Sectors), the SMGB has mapped eight resource sectors within the City, identified as areas containing regionally significant mineral resources, representing approximately 12 percent of the land area of the City and its SOI. As indicated therein, excluding the Sycamore Flat and Sycamore Canyon areas, a substantial portion of the project site located to the south of the I-15 Freeway is designated "Sector B-5."[48]

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[44]/ *Ibid*., pp. XII-2 and XII-5.
[45]/ *Ibid*., p. XII-1.
[46]/ *Ibid*., p. XII-5.
[47]/ *Ibid*., Conservation Element, p. X-4.
[48]/ As described by CDM: "Sector B includes the present course of Lytle Creek from about 5 miles upstream of the mouth of Lytle Creek Canyon to the Santa Ana River, an area of about 10.7 square miles. . .the depth of suitable quality aggregate material is about 90 feet thick in the northern or upstream part of the wash and thins to about 50 feet in the southern portion. The following assumptions were made for calculating the resources for Sector

With regards to mineral resources, those City policies that would appear most closely related to the proposed project and to the project site are presented below.

- Goal 4.1. Maximize the public's benefits in the reclamation of mineral extraction areas.[49]

- Goal 4.1. Eliminate all negative impacts of mining activities on the citizens of Rialto while complying with the provisions of the California Mining and Reclamation Act of 1975.

  - ◊ Policy 4.1.2. Compile and maintain maps and descriptions of potential mineral resources as a basis for land use policy and regulation and compatibility with State designated mineral resource sectors.

  - ◊ Policy 4.1.3. Permit plant nurseries, recreational open space and other temporary uses in State designated mineral resource sectors prior to and pending their development for mineral extraction.

  - ◊ Policy 4.1.6. Establish buffer zones of compatible uses adjacent to mineral extraction areas, such uses may include industry.

  - ◊ Policy 4.1.10. Require planting or other visual buffers to screen mining machines, stock piles, vehicles and other mining related facilities from visible residential areas.[50]

None of the above cited policies explicitly mandate or otherwise direct the City to either "protect" (14 CCR 2762[d] and 2763[a]) State-identified resources or restrict development activities that may be proposed thereupon. The absence of such explicit policies is neither inconsistent with nor in violation of SMARA.

Applicable or potentially applicable geology and soils policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. As specified in Section 18.74.030 (Application Requirements) in Chapter 18.74 (Alquist-Priolo Act Special Studies Zone) of the City Municipal Code, all applications for a permit for a real estate development or for a structure for human occupancy that lies within a special studies zone, as shown on the maps prepared by the State Geologist pursuant to the Alquist-Priolo Special Studies Zones Act, shall be accompanied by a geologist's report.

B: (1) The material is assumed to have a waste factor of from 2-10 percent based on the operation of the three plants in this area. (2) The in-place density of the resource is assumed to be 0.063 short tons of sand and gravel per cubic foot (14.9 ft3 per ton). (3) The pit-slope walls will be calculated at a 1:1 gradient for non-permitted resources and will conform to use-permit requirements in the calculation of resources. Based on the above assumptions, approximately 970 million tons of resources are believed to lie beneath Sector B. Of this, about 120 million tons are reserves" (Source: California Department of Conservation, Division of Mines and Geology, Mineral Land Classification of the Greater Los Angeles Area, Special Report 143, Part VII, 1987, p. 24).

[49]/ *Op. Cit*., City of Rialto General Plan, Open Space and Recreation, P. VII-4.

[50]/ *Op. Cit*., City of Rialto General Plan, Safety Element, pp. X-5 and X-7.

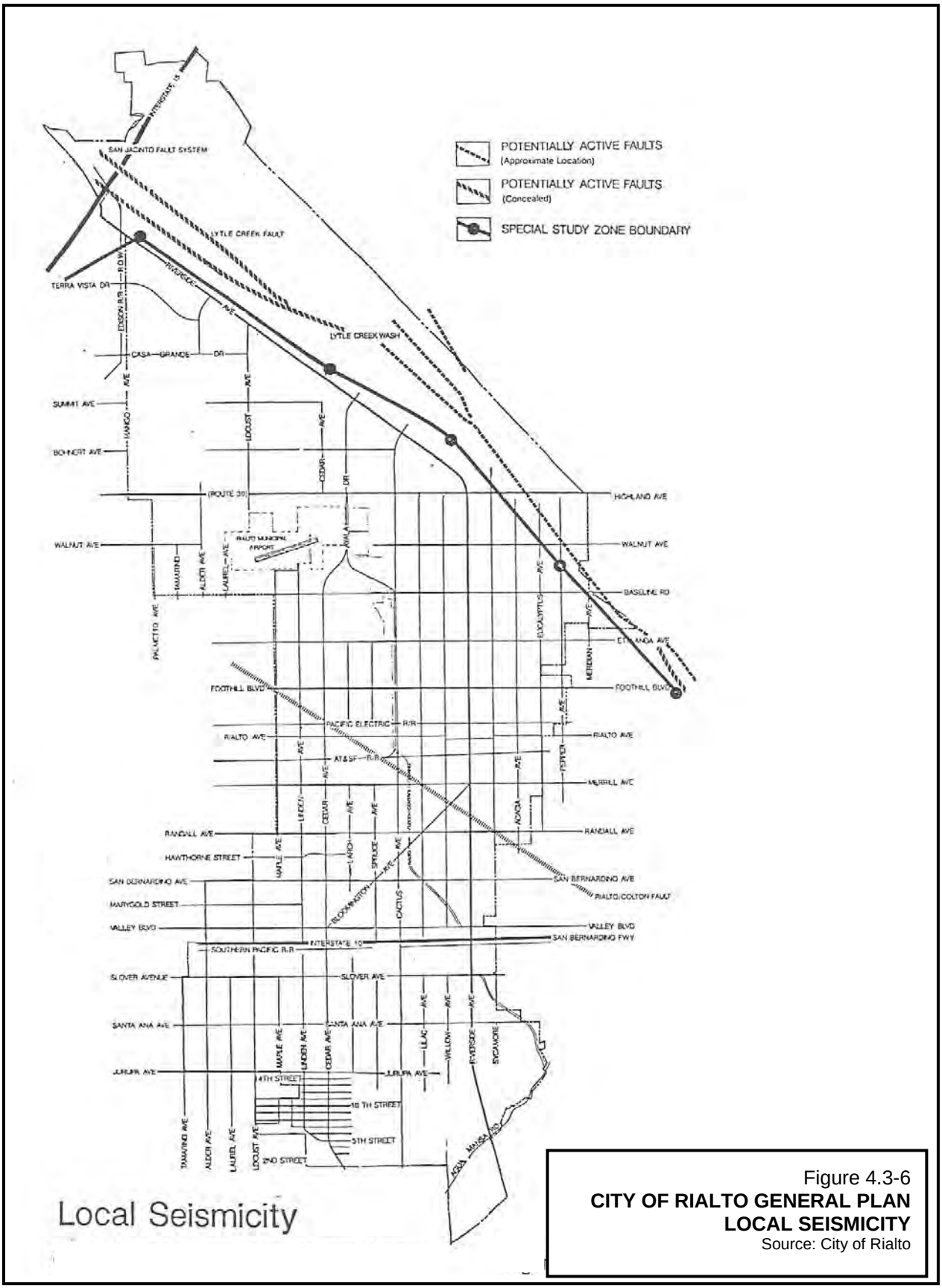

Figure 4.3-6
CITY OF RIALTO GENERAL PLAN LOCAL SEISMICITY
Source: City of Rialto

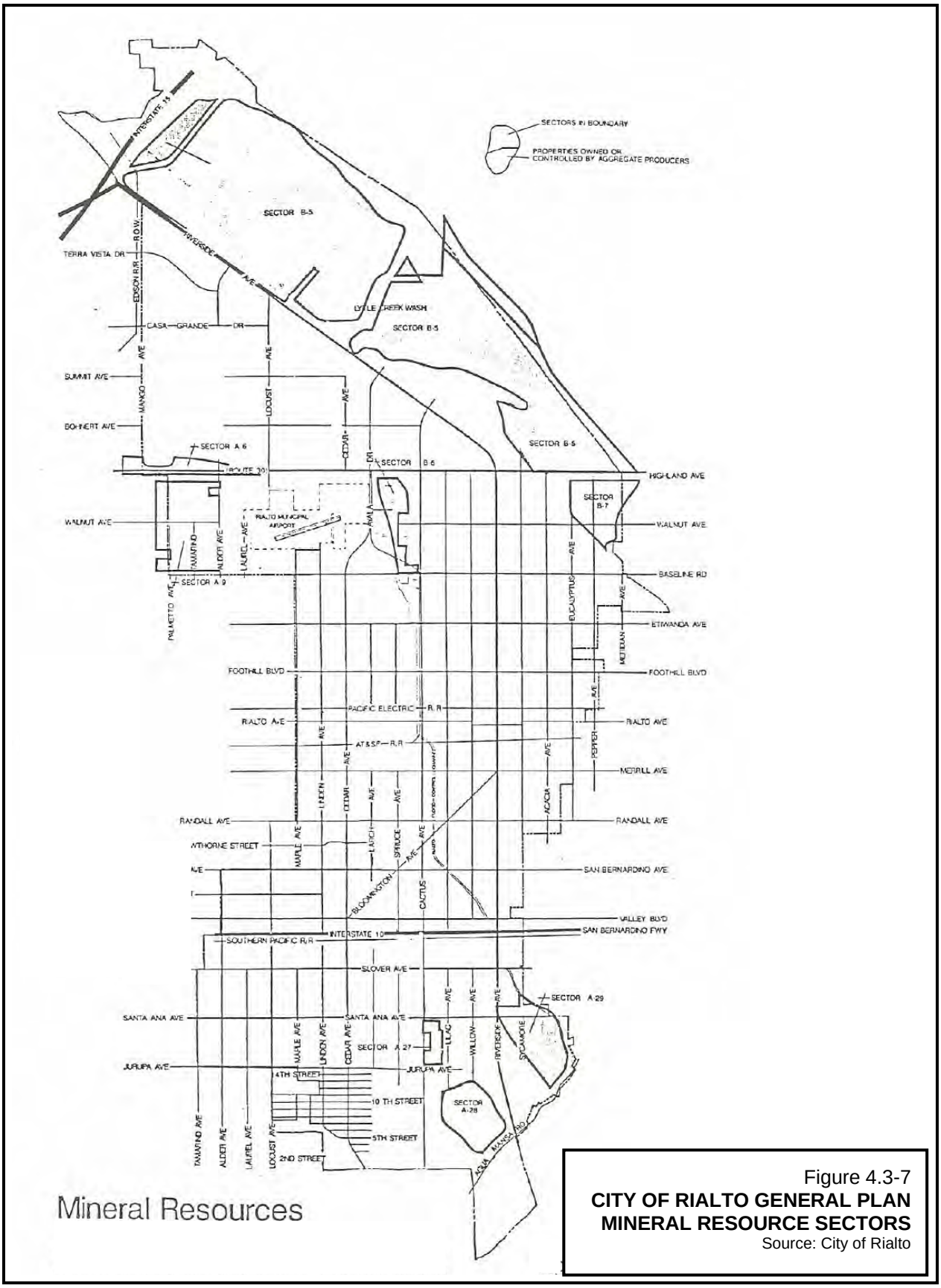

Figure 4.3-7
CITY OF RIALTO GENERAL PLAN MINERAL RESOURCE SECTORS
Source: City of Rialto

Pursuant to Section 18.74.030(D), after a geologic report has been approved or waived, further geologic reports shall not be required for subsequent phases of the project, including building permits, unless new geologic data is recorded that warrants further investigation.

Pursuant to Section 18.74.060 (Permit Not to Allow Violation of Certain Regulations), within every special studies zone delineated on the maps issued by the State Geologist, no permit or approval shall be granted for any project if the permit or approval would allow or require a structure used for human occupancy to be constructed or placed in violation of the requirements of the act or the policies and criteria of the State Mining and Geology Board adopted pursuant to the act. As indicated in Section 18.74.070 (Geologic Report - Completion or Waiver Required), no application for a permit shall be considered as complete for filing and the time limitations for processing a permit shall not begin to run until the geologic report required by the act has been accepted as complete or until a waiver has been approved.

As specified in Section 17.40.010 (Grading and Erosion Control Required) in Chapter 17.40 (Grading and Erosion Control) of the City Municipal Code, every subdivision map shall be conditioned on compliance with City requirements for grading and erosion control, including the prevention of sedimentation or damage to off-site property.

With regards to surface mining and reclamation, as specified in Section 18.76.010 (Purpose and Intent) in Chapter 18.76 (Surface Mining and Land Reclamation) in the City Municipal Code, the City "recognizes that the extraction of minerals is essential to the continued economic well-being of the City and to the needs of society and that the reclamation of mined land is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety. The City also recognizes that surface mining takes place in diverse areas where the geologic, topographic, climatic, biological and social conditions are significantly different and that reclamation operations and the specifications therefore may vary accordingly. It is the purpose and intent of the City to ensure the continued availability of important mineral resources, while regulating surface mining operations as required by California's Surface Mining and Reclamation Act of 1975, as amended, hereinafter referred to as 'SMARA,' Public Resources Code Section 2207, and State Mining and Geology Board regulations for surface mining and reclamation practice, to ensure that: (A) Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses. (B) The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment. (C) Residual hazards to the public health and safety are eliminated."

Multi-Jurisdictional Hazard Mitigation Plan. On October 30, 2000, the Disaster Mitigation Act of 2000 (Public Law 106-390) (DMA) was signed into law, amending the Robert T. Stafford Disaster Assistance and Emergency Relief Act of 1988.[51] Among

[51]/ As stipulated therein: "As a condition of receipt of an increased federal share for hazard mitigation measures under subsection (e), a state, local, or tribal government shall develop and submit for approval to the President a mitigation plan that outlines processes for identifying the natural hazards, risks, and vulnerabilities of the area under jurisdiction of the government. . .Each mitigation plan developed by a local or tribal government shall (1) describe actions to mitigate hazards, risks, and vulnerabilities identified under the plan; and (2) establish a strategy to implement those actions." If, at the time of the declaration of a major disaster, a State has in effect an approved

other things, this legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses and is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities. The DMA requires that cities, counties, and special districts have a local hazard mitigation plan to be eligible to receive Federal Emergency Management Agency (FEMA) hazard mitigation funds. DMA further stipulates that communities have an all hazards mitigation plan in place by November 1, 2004 in order to qualify for future funding under FEMA's Hazard Mitigation Grant Program (HMGP).[52]

In response to this legislation, the State, the County, and the City each adopted hazard mitigation plans for those areas within their respective jurisdictions.[53] The County HMP and the City's "Hazard Mitigation Plan – Community of City of Rialto, CA" serve as integrated documents. These plans are not elements of either jurisdiction's general plan but are separate assessments of the range of hazards affecting those agencies. As stipulated in the City's "Hazard Mitigation Plan - Community of City of Rialto, CA": "The goal of mitigation is to reduce the future impacts of a hazard including property damage, disruption to local and regional economics, and the amount of public and private funds spent to assist with recovery. However, mitigation should be based on risk assessment. A risk assessment is measuring the potential loss from a hazard event by assessing the vulnerability of buildings, infrastructure and people. It identifies the characteristics and potential consequences of hazards, how much of the community could be affected by a hazard, and the impact on community assets. A risk assessment consists of three components: hazard identification, vulnerability analysis and risk analysis. Technically, these are three different items, but the terms are sometimes used interchangeably. The following table represents the Critical Priority Risk Index for each hazard facing the community."[54,55]

Hazard	Probability	Magnitude/ Severity	Warning Time	Duration	Priority Risk Index
Earthquakes	High Likely	Critical	Less than 6 hours	Less than 6 hours	3.4
Wildfires	Possible	Limited	Less than 6 hours	Less than 6 hours	2.2
Flooding	Possible	Limited	24+ Hours	Less than 6 hours	1.75

mitigation plan, the President may increase to 20 percent the maximum percentage specified in Section 404(a) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5172).

[52]/ United States Government Printing Office, Federal Register, Volume 67, Number 38, February 26, 2002, pp. 8844-8854.

[53]/ Governor's Office of Emergency Services, State of California Multi-Hazard Mitigation Plan, September 2004; County of San Bernardino, Office of Emergency Services, Multi-Jurisdictional Hazard Mitigation Plan, April 5, 2005; City of Rialto, Hazard Mitigation Plan – Community of City of Rialto, CA, August 29, 2004.

[54]/ City of Rialto, Hazard Mitigation Plan – Community of City of Rialto, CA, August 29, 2004, Section 4.

[55]/ A tool for prioritizing hazards is the Calculated Priority Risk Index (CPRI) (www.mitigationplan.com). The CPRI is utilized in the "Hazard Mitigation Plan – Community of City of Rialto" in order to evaluate each of the hazards identified therein based on their probability of occurrence, severity, warning time, and duration. This tool provides a means of assessing each hazard as compared to other hazards. To determine the CPRI, a value of 1-4 is assigned to each of the following categories: probability, magnitude/severity, warning time, duration of event. The following formula calculates the CPRI value: CPRI = probability x 0.45 + magnitude/severity x 0.30 + warning time x 0.15 + duration of event x 0.10.

With regards to earthquake hazards, the City's hazard mitigation plan recognizes that "Rialto is a community that has an extreme proximity to both the San Andreas and San Jacinto faults. In the event of a significant earthquake along those fault areas in the San Bernardino Valley will critically impact the City of Rialto and surrounding areas."[56]

4.3.3 Environmental Setting

4.3.3.1 Regional Setting

National Seismic Hazard Maps

The 2008 United States Geological Survey (USGS) "National Seismic Hazard Maps," revised every six years, display earthquake ground motions for various probability levels across the United States and are applied in seismic provisions of building codes, insurance rate structures, risk assessments, and other public policy. The most recent maps (2008), updating those published in 2002, incorporate new findings on earthquake ground shaking, faults, seismicity, and geodesy. The "National Seismic Hazard Maps represent our [USGS] assessment of the 'best available science' in earthquake hazards evaluation for the United States."[57]

With regards to the western United States (WUS), the USGS "incorporated two types of fault sources (Type A and B) into the seismic hazard maps for the WUS. Type-A faults are well-known faults that are defined using published information on fault geometry, earthquake sequences, slip rates, and dates of previous earthquakes. In California, major strands of the San Andreas fault system including the Calavares, Hayward-Rodgers Creek, San Jacinto, and Elsinore fault zones, the Garlock fault zone, and the Cascadia subduction zone are modeled as Type-A faults. Detailed, fault-specific models are developed for each Type-A fault. The models include characteristic earthquake on single segments, multisegment ruptures, and earthquakes that are shifted uniformly along the fault. Type-B faults are characterized by published information on slip rates and fault geometry."[58]

Among the most significant changes in the 2008 model was the revision of previously described "segments" of the southern San Andreas fault into 10 segments: the Parkfield, Cholame, Carrizo, Big Bend, Mojave north, Mojave south, San Bernardino North, San Bernardino South, San Gorgonio-Garnet Hill, and Coachella. The project site is located in the area of the San Bernardino North segment of the San Andreas fault. These sections are defined by changes in trend, slip rate, style of faulting, or amount of displacement in past earthquakes. Sections were also revised on the San Jacinto and Elsinore faults. Slip rates were changed on sections of the San Andreas and San Jacinto faults based on recent geologic and geodetic studies suggesting that a larger part of the total slip may follow the San Jacinto rather than the southern San Andreas fault. Because there is significant uncertainty in how much of the total slip is on the San Andreas as opposed to the San Jacinto, alternative deformation models were developed to span the range of potential slip rates on the San Andreas and San Jacinto faults.

The revised slip rates (in particular the decreased slip rate on the section of the San Andreas fault through the San Gorgonio Pass) have major effects on the potential for large earthquakes

[56]/ *Ibid*., Section 4.1.1.
[57]/ Peterson, Mark D., Frankel, Arthur D., *et al.*, Documentation for the 2008 Update of the United States National Seismic Hazard Maps, Open File Report 2008-1128, United States Geological Survey, 2008, p. 1.
[58]/ *Ibid*., p. 33.

to rupture multiple sections of the San Andreas fault. In addition to the revised slip rates, all of the Type-A faults in southern California now have modified earthquake recurrence models based on paleoseimic data.[59]

To produce the "National Seismic Hazard Maps," the USGS calculated the hazard at several spectral accelerations (SA) and peak horizontal ground acceleration (PGA), based on uniform firm-rock conditions (defined as a site with an average shear wave velocity of 760 m/s in the upper 30 meters of the crust). The hazard at 2-percent probability of exceedance in 50 years in the WUS is controlled by major faults and is typically a factor of 1.5 to 2.0 higher than the 10 percent in 50 years values in coastal California and 2.0 to 3.5 across the rest of the WUS. As indicated in the 2008 "National Seismic Hazards Maps, Figure 4.3-8 (Portion of Map of 1-Hertz Spectral Acceleration for 2-Percent Probability of Exceedance in 50 Years in Standard Gravity) and Figure 4.3-9 (Portion of Map of Peak Ground Acceleration for 2-Year Probability of Exceedance in 50 Years in Standard Gravity) shows the 2-percent probability of exceedance in 50 years for the 0.2 and 1-second (1-s) SA and PGA, representing the hazard values typically used in building codes.[60]

Geology and Seismicity

California sits on the boundary between two of the earth's tectonic plates. Most of the State (east of the San Andreas fault) is on the North American Plate. Monterey, Santa Barbara, Los Angeles, and San Diego are on the Pacific Plate. The Pacific Plate is moving north-westward relative to the North American Plate at a rate of about 5 centimeters per year. In California, this motion occurs primarily along the north to northwest-trending, right-lateral San Andreas fault. In southern California, the San Andreas fault has a more westerly trend than elsewhere along its length. Contraction along this segment of the fault, known as the "big bend," is thought to have resulted in the formation of the Transverse Ranges.[61] The Transverse Ranges Geomorphic Province is named because of the east-west alignment of the mountain ranges which is in contrast to the majority of the mountain ranges in North America which trend roughtly north-south. Unlike most of the other ranges in California, the Transverse Ranges lies along an east-west axis and is characterized by major mountain ranges with intervening alleviated, broad synclinal valleys and narrow stream canyons.

The topography of the general project area is illustrated in Figure 4.3-10 (General Project Area Topography). A generalized geological map of the southern California area, as prepared by the California Geologic Survey[62] (CGS), is presented in Figure 4.3-11 (Generalized Geologic Map

[59]/ *Ibid*., pp. 33-34.

[60]/ *Ibid*., Figures 34 and 38, pp. 47 and 51.

[61]/ California's geomorphic provinces are naturally defined geologic regions that display a distinct landscape or landform. Each region displays unique, defining features based on geology, faults, topographic relief and climate. California is divided up into the following eleven Geomorphic Provinces: The Sierra Nevadas, Cascade Range, Coast Ranges, Transverse Ranges, Peninsular Ranges, Klamath Mountains, Great Valley, Basin and Range, Modoc Plateau, Mojave Desert, and Colorado Desert. The Transverse Ranges are a complex series of mountain ranges and valleys distinguished by an anomalous dominant east-west trend, contrasting to the NW-SE direction of the Coast Ranges and Peninsular Ranges. Structural trends (NW-SE and NE-SW) subordinate to a major east-west direction, significant in the formation of important oil field structures. The Cenozoic sedimentary section is one of the thickest in the world. The western limit of the province is the island group of San Miguel, Santa Rosa, and Santa Cruz. The eastern limit, within the Mojave Desert, includes the San Bernardino Mountains on the east side of the San Andreas Fault.

[62]/ Although the "official name" for the division remains the Division of Mines and Geology (DMG), in January 2002 the California Department of Conservation's Director (Darryl Young) established its pseudonym as the California Geological Survey (CGS).

of the Southern California Area) illustrating the general distribution, relationship, and composition of earth materials and structural features of the earth within the general project area. A generalized geologic map of the San Bernardino area, as prepared by the USGS, is presented in Figure 4.3-12 (Generalized Geologic Map of the San Bernardino Area).[63] Unconsolidated material that fills the basins include river-channel deposits and younger alluvium of Holocene age and older alluvium of Pleistocene age. Undifferentiated deposits of younger and older alluvium are present near Redlands and north of Perris Hill. Sedimentary rocks of Quaternary and Tertiary age crop out in the badlands mostly as the San Timoteo Formation and north of the San Andreas fault, mostly as Potato Sandstone. A basement complex of Precambrian to Tertiary igneous and metamorphic rocks underlies the basin fill and crop out in the surrounding mountain ranges. The San Bernardino area, which is located along the San Andreas fault zone, contains numerous sub-parallel faults, including the San Andreas and San Jacinto faults. The area is tectonically active as indicated by numerous, nearby earthquakes.[64]

The project site is located near the northern boundary of the Peninsular Ranges Geomorphic Province,[65] near the southerly edge of the Central Transverse Ranges Geomorphic Province.[66] As illustrated in Figure 4.3-13 (Index Map Showing San Bernardino Basin and Vicinity),[67] the project site is located south of the eastern San Gabriel Mountains and west of the San Bernardino Mountains in an area known as the San Bernardino basin. The San Bernardino basin is a strike-slip basin centered over a right-bend in the San Jacinto fault zone as it joins with the San Andreas fault to the northeast in Cajon Pass.

The San Andreas fault is the "most rapidly slipping fault and the only known source of a M-8 earthquake in southern California."[68] Figure 4.3-14 (30-Year Conditional Probability of an Earthquake Greater than M6.7 Rupturing the Southern San Andreas Fault) shows the 30-year conditional probability of M>6.7 on each section of the San Andreas fault. Colors indicate the different size ruptures that are expected to occur

[63]/ United States Geological Survey, Hydrology, Description of Computer Models, and Evaluation of Selected Water-Management Alternatives in the San Bernardino Area, California, Open-File Report 2005-1278, 2006, Figure 5, p. 10.

[64]/ *Ibid.*, p. 7.

[65]/ The Peninsular Ranges are a series of ranges is separated by longitudinal valleys, trending NW-SE, subparallel to faults branching from the San Andreas Fault. The trend of topography is similar to the Coast Ranges, but the geology is more like the Sierra Nevada, with granitic rock intruding the older metamorphic rocks. The Peninsular Ranges extend into lower California and are bound on the east by the Colorado Desert. The Los Angeles Basin, and the island group (Santa Catalina, Santa Barbara, and the distinctly terraced San Clemente and San Nicolas islands), together with the surrounding continental shelf (cut by deep submarine fault troughs) are included in this province (Source: California Geologic Survey, California Geomorphic Provinces Note 36, revised December 2002).

[66]/ The Transverse Ranges area an east-west trending series of steep mountain ranges and valleys. The east-west structure of the Transverse Ranges is oblique to the normal northwest trend of coastal California, hence the name "Transverse." The province extends offshore to include San Miguel, Santa Rosa, and Santa Cruz Islands. Its eastern extension, the San Bernardino Mountains, has been displaced to the south along the San Andreas Fault. Intense north-south compression is squeezing the Transverse Ranges. As a result, this is one of the most rapidly rising regions on earth (Source: California Geologic Survey, California Geomorphic Provinces Note 36, revised December 2002).

[67]/ Anderson, Megan L., Roberts, Carter W., and Jachens, Robert C., Principal Facts for Gravity Stations in the Vicinity of San Bernardino, Southern California, Open-File Report 00-193, United States Department of the Interior, United States Geological Survey, 2000, Figure 1, p. 26.

[68]/ United States Geological Survey, Appendix E: Overview of the Southern San Andreas Fault Model, Open File Report 2007-1437E, 2008, p. 1.

As reported by the USGS: "California's 35 million people live among some of the most active earthquake faults in the United States."[69] As reported by the USGS, "a M≥6.7 earthquake is virtually assured in California during the next 30 years (99.7% probability of occurrence). Larger events are less likely. . .Dividing the State into two approximately equal areas, we find the 30-year probability of a larger earthquake to be higher in the southern half: a M≥6.7 earthquake has a 97% chance of occurring in southern California in 30 years, compared to a 93% probability in northern California, and the odds of a M≥7.5 event are doubled (37% vs. 15%)."[70]

Seismic hazards in California are high in many areas, as manifested by the number of large earthquakes that have occurred during historic time. Earthquakes large enough to cause moderate damage to structures (those of a moment magnitude [M] 5.5 or larger) occur three to four times a year. An average of once every two to three years, a strong earthquake (M6.0 to 6.9) strikes somewhere in California. An earthquake of this size, such as the 1983 Coalinga (M6.5), 1987 Whittier Narrows (M6.0), 1994 Northridge (M6.7), and 2003 San Simeon (M6.5) earthquakes, is capable of causing major damage if the epicenter is near a densely populated area. Major earthquakes (M7.0 to 7.9) occur in California about once every ten years. Research coordinated by the Southern California Earthquake Center in 1995 concluded that there is an 80-90 percent probability that an earthquake of M7.0 or greater will hit southern California before 2024.[71]

In 2008, the USGS concluded that the "most dangerous fault is the southern part of the San Andreas, which has a 59% probability of generating a M≥6.7 earthquake in the next 30 years. . .Calculations are quite sensitive to parameter choices on individual faults; while the mean calculated probability on the southern San Andreas fault is 59%, we find that the value could reasonably be anywhere between 22% and 94%. . .The southern San Andreas has the highest probabilities for all magnitudes up to about 8.0, above which the northern San Andreas probabilities become comparable."[72]

Two recent major earthquakes, the 1992 Landers Earthquake (M7.3) and the 1999 Hector Mine Earthquake (M7.1) caused extensive surface fault rupture but relatively little damage because they occurred in lightly populated areas of the Mojave Desert. In contrast, earthquakes of smaller magnitude, but in densely populated areas, such as the 1989 Loma Prieta Earthquake (M6.9), have caused extensive damage over large areas. The two largest earthquakes in California, the 1857 Fort Tejon Earthquake and the famous 1906 San Francisco Earthquake were similar in magnitude (M7.8 and M7.9) and resulted from movement along the San Andreas fault. Earthquakes of this size can cause more extensive damage over a larger area than the M7.1 to M7.4 earthquakes that have struck California in recent decades.[73]

Many of these earthquakes occurred in a belt of seismicity located within about 50 kilometers (km) of the San Andreas fault zone. Moderate to large earthquakes have not only occurred on strike-slip faults associated with the broad San Andreas fault system but also along reverse faults that either rupture the surface or to some depth beneath the surface as "blind thrusts." The Los Angeles area is located near several faults and blind thrusts that have slip rates

[69]/ United States Geological Survey and California Geological Survey, 2007 Working Group on California Earthquake Probability, The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF2), United States Geological Survey Open-File Report 2007-1437 and California Geological Survey Special Report 203, 2008, p. 1.

[70]/ *Ibid*., p. 5.

[71]/ *Op. Cit*., State of California Multi-Hazard Mitigation Plan, p. 73.

[72]/ *Op. Cit*., The Uniform California Earthquake Rupture Forecast, Version 2, United States Geological Survey Open-File Report 2007-1437 and California Geological Survey Special Report 203, pp. 5,6, and 71.

[73]/ *Ibid*., p. 71.

between one and three millimeters/year (mm/yr) and is located about 50 km from the section of the San Andreas fault system that has a slip rate between 25 and 35 mm/yr.[74]

The San Jacinto fault is the most seismically "active" fault (i.e., movement within the Holocene epoch or last 11,000± years) in southern California, with significant earthquakes (>M5.5), including surface rupturing earthquakes in 1968 (M6.6 Borrego Mountain earthquake) and 1987 (M6.6 Superstition Hills and M6.2 Elmore Ranch earthquakes), and numerous smaller shocks within each of its main sections. This dextral fault zone branches off from the San Andreas near Cajon Pass and extends southeastward through the Peninsular Ranges for about 240 km into southwestern Imperial Valley. The San Jacinto fault is believed to be the most active strand of the San Andreas system in southern California, but is relatively young, with only about 24 km of total dextral offset. The fault zone may be divided into four principal sections: the Claremont, Clark, Coyote Creek, and Superstition sections which are separated by major discontinuities. The fault zone is further subdivided for seismic-hazard modeling purposes into from 5 to as many as 20 segments by various authors. The principal faults within the zone overlap in a right-stepping fashion, with a major overlap (50 km in length) occurring between the Clark fault and Coyote Creek fault. Slip rates in the northern half of the fault system are around 12 mm/yr and around 4 mm/yr for faults in the southern half where strands overlap or are sub-parallel.[75] Should habitable structures be proposed within areas inside an Alquist-Priolo zone, structural setbacks from the faulting would be warranted.[76]

The Cucamonga fault zone, which marks the southern boundary of the San Gabriel Mountains, is part of the Sierra Madre fault zone. The Sierra Madre-Cucamonga fault system is a "thrust" fault (i.e., the sides are being pushed towards each other). The San Andreas and San Jacinto faults are "strike-slip" faults (i.e., the two sides are moving in opposite directions, horizontally, along the fault plane).

The northern edge of the Los Angeles metropolitan region is bordered by the Sierra Madre-Cucamonga thrust fault system which produced the M6.7 1971 San Fernando earthquake and may generate events up to M7.5. A large earthquake along the northern region of the San Jacinto fault could trigger a cascading rupture of the Sierra Madre-Cucamonga system, potentially causing an earthquake of M7.5 to M7.8.[77]

Fourteen kilometers of continuous, shallow seismic reflection data acquired through the urbanized San Bernardino Valley, California, have revealed numerous faults between the San Jacinto and San Andreas faults as well as a complex pattern of downdropped and uplifted blocks. More than 1.4 km of apparent vertical displacement on the basement is observed across the San Jacinto fault at this location. These data also indicate that the Loma Linda fault, an active splay of the San Jacinto fault zone, continues northeastward at least 4.5 km beyond its last mapped location on the southern edge of the valley and to within at least 2 km of downtown San Bernardino. Previously undetected faults within the valley northeast of the San Jacinto fault

[74]/ Peterson, Mark D., *et al*., Probabilistic Seismic Hazard Assessment for the State of California, California, Open-File Report 96-08, Department of Conservation, Division of Mines and Geology, 1996.

[75]/ United States Geological Survey, Earthquake Hazards Program, Complete Report for San Jacinto Fault, San Bernardino Valley Section (Class A), No. 125a, United States Geological Survey Website (http://gldims.cr.usgs.gov/webapps/cfusion/Sites/qfault/qf_web_disp.cfm?qfault_or=2504&ims_cf_cd=cf&disp_cd=C).

[76]/ *Op. Cit*., Compilation of Prior GeoSoils, Inc. Fault/Seismic Investigation Data, Preliminary Geotechnical Investigation, and Slope Stability Analysis, Tract No. 15900, The Villages at Lytle Creek, Rialto, San Bernardino County, California, p. 28.

[77]/ Anderson, Craig, Aagaard, Brad, and Hudnut, Ken, Fault Interactions and Large Complex Earthquakes in the Los Angeles Area, Science Magazine, Volume 302, December 12, 2003, pp. 1946-1949.

are also imaged, including the inferred western extension of the Banning fault and several unnamed faults. The Rialto-Colton fault is imaged southwest of the San Jacinto fault. The seismic data image the top of the crystalline basement complex across 70 percent of the profile length, and show that the basement has an overall dip of roughly 10 degrees (°) southwest (SW) between Perris Hill and the San Jacinto fault. Gravity data corroborate the interpreted location of the San Jacinto fault and better constrain the basin depth along the seismic profile to be as deep as 1.7 km. Gravity data also corroborate the fault locations and the general dip of the basement surface. The basin geometry delineated by these data was used to generate modeled ground motions that show peak horizontal amplifications of 2-3 above bedrock response, which is consistent with recorded earthquake data in the valley.[78]

The ICBO has published maps that are used in conjunction with the 1997 UBC (Tables 16-S and 16-T) for determining engineering factors for new construction in California. This book was prepared by the DMG in cooperation with the Structural Engineers Association of California's (SEAOC) Seismology Committee. In California, the known active surface faults are classified in the 1997 Uniform Building Code as "Class A, "Class B," and "Class C" faults. A "Class A" fault is the most destructive and a "Class C" fault is the least destructive. The slip rate and maximum magnitude of earthquakes associated with a fault are the basis for the categories. Class A faults exhibit magnitudes of 7.0 or greater and slip rates of at least 5 millimeters per year. "Class B" faults fall in the magnitude 6.5 to 7.0 range with slip rates varying depending on maximum magnitude. Only the "Class A" and "Class B" faults are included in the probabilistic maps. The applicable map book page, presented in Figure 4.3-15 (Active Fault Near-Source Zones)[79], illustrates the proximity of the San Andreas fault ("Class A") and the Cucamonga and San Jacinto faults ("Class B"). The near-source zones have been mapped considering the dip angle of the faults in accordance with the 1997 UBC (Footnote 3 of Tables 16-S and 16-T). The shaded areas indicated points within two kilometers of known active fault-source zones. As illustrated, portions of Neighborhoods I and III and all of Neighborhood IV are located with a "Class A" zone. Portions of Neighborhoods II and III are located within a "Class B" fault zone.

The California Seismic Safety Commission (SSC) has developed earthquake shaking potential maps for a number of areas, including the Los Angeles metropolitan area. The SSC map encompassing the project site is presented in Figure 4.3-16 (Earthquake Shaking Potential Map - Los Angeles Metropolitan Region). The shaking hazard map shows the level of ground motion that has a 1 chance in 475 of being exceeded each year, which is equal to a 10 percent probability of being exceeded in 50 years. The shaking hazard map does not include hazards from ground deformation, such as liquefaction, landslides, or surface fault ruptures.

The California Geological Survey (CGS) has developed probabilistic ground shaking (peak ground acceleration, 10 percent probability of being exceeded in 50 years assuming a uniform soft rock site condition) contour maps for California. The corresponding probabilistic seismic hazard for the general project area is depicted in Figure 4.3-17 (Probabilistic Seismic Hazard – Peak Ground Shaking).[80] As illustrate therein, the acceleration at 10 percent in 50 years is greater than 0.7g.[81]

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[78]/ Stephenson, William J. *et al*., Delineation of Faulting and Basin Geometry Beneath Urbanized San Bernardino Valley, California, from Seismic Reflection And Gravity Data, Paper 144, Geologic Society of America, GSA Annual Meeting November 5-8, 2001.

[79]/ International Conference of Building Officials, Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada, February 1998, Plate O-32.

[80]/ Probabilistic methods of seismic risk determination attempt to account for uncertainties in recurrence intervals, sizes, and locations of hypothetical earthquakes and are increasingly used for engineering analyses. Probabilistic analyses thus provides levels of hypothetical free-field ground acceleration for a finite exposure period.

Ground motions (10 percent probability of being exceeded in 50 years) are expressed as a fraction of the acceleration due to gravity. Three values of ground motion, peak ground acceleration (Pga), spectral acceleration (Sa) at short (0.2 second), and moderately long (1.0 second) periods, are shown in Figure 4-3-18 (Probabilistic Seismic Hazard – Peak Ground Motion) and Table 4.3-4 (Peak Ground Motion). Ground motion values are modified by the local site soil conditions. Each ground motion value is shown for three different site conditions: firm rock (conditions on the boundary between Site Categories B and C as defined by the building code), soft rock (Site Category C) and alluvium (Site Category D).

Table 4.3-4
PEAK GROUND MOTION

Ground Motion	Firm Rock	Soft Rock	Alluvium
Pga	0.965	0.965	0.965
Sa 0.2 sec	2.304	2.304	2.304
Sa 1.0 sec	0.925	1.046	1.207

Source: California Geological Survey

Mineral Resources

As indicated in a recent article in the "Public Law Journal, An Official Publication of the State Bar of California Public Law Section": "Mineral resources are essential to our standard of living. They are involved in, or make up, almost everything we do or use. Aggregate is a prime example, it supplies the raw material for every type of construction, including highways, roads, houses, hospitals, schools, and public buildings. Yet, as essential as it is, aggregated is also in diminishing supply. Due to urban development, the ability to exploit many high value aggregate lands has already been forever lost. Indeed, as one report notes: 'Aggregate mineral resources that would have been adequate to meet the needs of [the San Francisco, Los Angeles, and San Diego metropolitan regions] for thousands of years have been urbanized to the extent that the remaining available supplies in some regions are not sufficient only for a few decades.'"[82]

There are two primary sources of natural aggregate: (1) exposed or near-surface igneous, metamorphic, and sedimentary bedrock that can be crushed; and (2) deposits of sand and gravel that may be used directly or crushed and sized to meet specifications. In any particular area, the availability of bedrock suitable for crushing is a function of the geologic history of the area. Deposits of sand and gravel are primarily surficial deposits formed by the erosion, transportation by water and ice and deposition of bedrock fragments. Consequently, most sand and gravel deposits are Tertiary or Quaternary in age and are most common in glaciated areas, alluvial basins, and along rivers and streams.

The distribution of potential sources of natural aggregate in the United States is closely tied to physiography and the type of bedrock that occurs in an area. The Unites States can be divided into 12 regions (western mountain ranges, alluvial basins, Columbia Plateau, Colorado Plateau

For example, a commonly accepted level of risk is the statistical chance that a certain acceleration will have a ten percent probability of being exceeded within a 50-year period.

[81]/ Acceleration is the rate of change of velocity, felt as a force by objects, measured in g's, where 1.0 g is the acceleration of gravity.

[82]/ Cole, Derek, "Significant Mineral Resources" – What are they and how do they Affect Local Land Use Regulation, Public Law Journal, An Official Publication of the State Bar of California Public Law Section, Vol. 29, No. 2, Spring/Summer 2006, pp. 1 and 3.

and Wyoming basin, High Plains, nonglaciated central region, glaciated central region, Piedmont Blue Ridge region, glaciated northeastern and Superior uplands, Atlantic and Gulf coastal plains, Hawaiian Islands, and Alaska), wherein each region has similar types of natural aggregate resources within its boundaries. In California, aggregate resources are primarily associated with alluvial basins. The region has alternating basins or valleys and mountain ranges. The summits of the mountains commonly consist of bare or thinly covered bedrock. The mountain ranges are commonly underlain with granitic, metamorphic, and consolidated sedimentary rocks. The basins are generally filled with thick unconsolidated fluvial material with alluvial fans along the margin.

Alluvial fans are most common in and characteristic of regions with arid and semiarid climate. In arid regions, the material in these fans is derived from erosion of the adjacent mountains, then transported by infrequent but torrential floods down steep-gradient streams toward the basins. Once reaching lowland areas, the sudden change in gradient combined with infiltration of water creates a loss of carrying power which causes the streams to deposit their sediment load as alluvial fans. Generally, the coarsest material is deposited adjacent to the mountains. The material commonly gets progressively finer toward the center of the basins. In time, the fans formed by adjacent streams coalesce to form continuous, thick bahada deposits.[83]

The CGS notes: "Aggregate (sand and gravel, crushed stone) is currently the most important mineral resource consumed in California. It is the foundation of the modern construction industry. Land use that precludes mining of this resource is a problem in many urbanizing areas of the state. The cost of aggregate rises significantly when it has to be mined and transported from increasingly greater distances from its point of use."[84]

Construction aggregate is the largest non-fuel mineral commodity produced in California and plays a major role in the State's economy. Demand for aggregate is expected to increase as the State's population continues to grow and infrastructure systems are maintained and improved. Between 2001 and 2005, permitted aggregate resources decreased by about 2.5 billion tons. Decreases were caused by changes in permitted resource calculations, aggregate consumption, and mine closure. Areas throughout the State are experiencing shortages in local permitted aggregate resources and are required to transport aggregate longer distances. The shortage of portland concrete cement (PCC) grade sand in the San Diego and San Francisco areas has driven up prices, making importation of sand from Mexico and Canada competitive.

Figure 4.3-19 (California Department of Conservation - Aggregate Availability in California [Map Sheet 52]) presents a portion of the "Aggregate Availability" map (1:1,100,000 scale) prepared by the California Department of Conservation (CDC).[85] Map Sheet 52 is a Statewide updated summary comparing the forecasted 50-year (January 1, 2006 through December 2055) demand for construction aggregate to the currently permitted construction aggregate resources for the aggregate consumption areas in California. Aggregate production areas are shown on the map as black triangles. The relative size of each symbol corresponds to the amount of yearly production for each mine or group of mines. The purple and blue pie diagrams show 50-year

[83]/ Knepper, D.H. Jr., Langer, W.H., and Miller, S.H., Remote Sensing and Airborne Geophysics in the Assessment of Natural Aggregate Resources, Open File Report 94-158, United Sates Department of the Interior, United States Geological Survey, 1994, pp. iv, II-5, III-1, and III-5.

[84]/ California Geological Survey, Using Satellites to Help Conserve Aggregate Resources in California (http://www.consrv.ca.gov/CGS/minerals/mlc/nasa/nasa.htm).

[85]/ Kohler, Susan L., Aggregate Availability in California, Fifty-Year Aggregate Demand Compared to Permitted Aggregate Resources, California Department of Conservation, Map Sheet 52, July 2002.

aggregate demand compared to current permitted aggregate resources for each aggregate resource area. The actual 50-year demand tonnage is shown on the map located next to the pie diagram. Red halos around the pie diagrams represent aggregated study areas with less than 10 years of permitted aggregate resources remaining. As illustrated, a substantial portion of the projected 50-year aggregate resource demand in the San Bernardino, Claremont-Upland, San Gabriel Valley, and Orange County resource areas will be met by existing permitted resources.

Of California's 31 aggregate consumption areas,[86] the CDC concluded: (1) 4.3 billion tons of permitted resources exist throughout the State; (2) in the next 50 years, California will need 13.5 billion tons of aggregate; (3) about 32 percent of the total projected 50-year aggregate demand is currently permitted; and (4) only six percent of the total aggregate resources are currently permitted.[87] In 2004, the USGS found that the State consumed 221,400,000 metric tons of sand, gravel, and crushed rock.[88] With a population of 36,200,000 people, the State consumed 6.12 tons per capita, close to the CDC's estimated average consumption rate for aggregate of 7 tons/year/capita.[89]

In 2004, California's non-fuel raw mineral production was valued at $3.76 billion, representing an increase of nearly ten percent from 2003. For the sixth consecutive year, the State led the nation in non-fuel mineral production value, of which California accounted for more than eight percent of the United States total. Industrial minerals accounted for nearly 99 percent of California's non-fuel mineral value.

In 2004, California continued as the leading construction sand and gravel producing state, accounting for more than 13 percent of the commodity's total United States mine production and nearly 19.5 percent of the nation's total value for that commodity. Construction sand and gravel was, by value, the State's leading non-fuel mineral, accounting for approximately 34 percent of the State's total non-fuel mineral production value. Cement (Portland and masonry) was the second leading non-fuel mineral, followed by boron minerals, crushed stone, diatomite, and soda ash. These six commodities accounted for nearly 94 percent of the State's total industrial mineral value. Stone and sand and gravel are imported by ship and barge from Canada and Mexico to the ports in San Francisco and San Diego. California imported about 1.8 million metric tons (Mt) of sand and gravel in 2004.[90]

The USGS[91] reports that "[c]onstruction sand and gravel valued at $7.9 billion was produced by an estimated 3,800 companies from about 6,000 operations in 50 states. Leading producing states, in order of decreasing tonnage, were California, Arizona, Texas, Michigan, Minnesota, Nevada, Ohio, Washington, Colorado, and Wisconsin, which together accounted for about 54% of the total tonnage. It is estimated that about 49% of the 1.28 billion tons of construction sand and gravel produced in 2006 was for unspecified uses. Of the remaining total, about 45% was used as construction aggregates; 22% for road base and coverings and road stabilization; 14% as construction fill; 12% as asphaltic concrete aggregates and other bituminous mixtures; 2%

[86]/ The projects' site is located within the San Bernardino Production-Consumption Region.

[87]/ California Department of Conservation, Map Sheet 52, Aggregate Availability in California, California Geological Survey, 2006, pp. 19-20.

[88]/ United States Geological Survey, Mineral Yearbook 2004, 2005, Table 3b and 5b.

[89]/ *Op. Cit*., Aggregate Availability in California, Fifty-Year Aggregate Demand Compared to Permitted Aggregate Resources, California Department of Conservation, Map Sheet 52, p. 16.

[90]/ United States Geological Survey and California Geological Survey, United States Geological Survey Minerals Yearbook - 2004, Volume II, The Mineral Industry of California, pp. 7.1 and 7.2.

[91]/ The USGS is the sole federal government provider of scientific information and objective assessments on mineral resources, production, consumption, and environmental effects.

for plaster and gunite sands; 1% for concrete products, such as blocks, bricks, and pipes; and the remaining 4% for filtration, railroad ballast, roofing granules, snow and ice control, and other miscellaneous uses."[92] As further indicated by the USGS, the "construction sand and gravel industry continues to be concerned with safety, health, and environmental regulations. Movement of sand and gravel operations away from densely populated centers is expected to continue where local zoning, environmental, and land development regulations discourage sand and gravel operations. Consequently, shortages of construction sand and gravel in urban and industrialized areas also are expected to increase."[93]

In order to assist in locating quarry locations, the California Department of Transportation (Caltrans) has prepared a series of maps illustrating the location of existing rock and stone and sand and gravel operations. Caltrans makes no representation that these maps are either current or complete. Portions of the Caltrans' maps are presented in Figure 4.3-20 (California Department of Transportation – Quarry Location Maps). As illustrated, there presently exist a number of active sand and gravel mining activities in the general project area.

United States Geological Survey Geology Maps

The United States Geological Survey (USGS) has prepared a number of geological maps that include the project site, including a topographic map surveyed in 1893-1894 and dated October 1898 (Figure 4.2-21). As illustrated, in part, in Figure 4.2-22 (Preliminary Geology Map – San Bernardino 30' x 60' Quadrangle)[94] and Figure 4.2-23 (Geology Map – San Bernardino and Santa Ana 30' x 60' Quadrangles),[95] the project site is located within those areas depicted in both the USGS' San Bernardino 30' x 60' Quadrangle (1:100,000 scale) and the USGS' San Bernardino and Santa Ana 30' x 60' Quadrangles (1:250,000 scale). Those quadrangles serve as a compilation of information presented in a series of more detailed geologic map (1:24,000 scale), including the Devore and San Bernardino North 7.5-Minute Quadrangles. Portions of those 7.5-minute quadrangles are presented in Figure 4.3-24 (Geology Map - Devore 7.5-Minute Quadrangle)[96] and in Figure 4.3-25 (Geology Map - San Bernardino North 7.5-Minute Quadrangle).[97] Although the information presented in those geology maps is not generally suitable for site-specific geologic evaluations, they do provide a regional geologic framework. General geologic information for those 7.5-minute quadrangles is presented below.

- **Devore 7.5-Minute Quadrangle**. This quadrangle straddles part of the boundary between two major physiographic provinces, the Transverse Ranges Province to the north and the Peninsular Ranges Province to the south. The north half of the quadrangle includes the eastern San Gabriel Mountains and a small part of the western San Bernardino Mountains, both within the east-central part of the Transverse Ranges

[92]/ United States Geological Survey, Mineral Commodity Summaries 2007, January 2007, Sand and Gravel (Construction), p. 138.

[93]/ United States Geological Survey, Mineral Commodity Summaries, January 2006, Sand and Gravel (Construction), p. 143.

[94]/ Morton, Douglas M. and Miller, Fred K., Preliminary Geologic Map of the San Bernardino 30' x 60' Quadrangle, California, Open-File Report 03-293, United States Geological Survey, 2003.

[95]/ Morton, Douglas M. and Miller, Fred K., Geology Map of the San Bernardino and Santa Ana 30' x 60' Quadrangles, Open File Report 2006-1217, Version 1.0, 2006.

[96]/ Morton, D.M. and Matti, J.C., Geologic Map of the Devore 7.5' Quadrangle, San Bernardino County, California, Open-File Report OF 01-173, United States Geological Survey, 2001; Morton, D.M. and Matti, J.C., Geologic Map of the Devore 7.5-Minute Quadrangle, San Bernardino County, California, Open-File Report 90-695, United States Geological Survey, 1991.

[97]/ Miller, F.K. and Matti, J.C., Geologic Map of the San Bernardino North 7.5' Quadrangle, San Bernardino County, California, Open-File Report OF 01-131, United States Geological Survey, 2001.

Province. South of the Cucamonga and San Andreas fault zones, the extensive alleviated area lies within the upper Santa Ana River Valley and represents the northernmost part of the Peninsular Ranges Province.

There are numerous active faults within the quadrangle, including right-lateral, strike-slip faults of the San Andreas fault system, which dominate the younger structural elements and separate the San Gabriel from the San Bernardino Mountains. The active San Jacinto Fault zone projects toward the quadrangle from the southeast but its location is poorly constrained not only within the quadrangle but for at least several kilometers to the southeast. As a result, the interrelation between the San Jacinto fault, the Glen Helen fault, and the probable easternmost part of the San Gabriel fault is interpretive.

Thrust faults of the Cucamonga fault zone along the south margin of the San Gabriel Mountains represent the rejuvenated eastern end of a major old fault zone that bounds the south side of the western and central Transverse Ranges. Rejuvenation of this old fault zone, including the Cucamonga fault zone, is apparently in response to compression in the eastern San Gabriel Mountains, resulting from initiation of right-lateral slip on the San Jacinto Fault zone in the Peninsular Ranges. The Cucamonga fault zone consists of a one-kilometer wide zone of northward dipping thrust fault. Most splays of this fault dip north 25-35 degrees.

The structural grain within the San Gabriel Mountains, as defined by basement rocks, is generally east striking. Within the Devore quadrangle, these basement rocks include Paleozoic schist, quartzite, and marble metasdedimentary sequence, which occur as discontinuous lenses and septa within Cretaceous granitic rocks. Most of the granitic rocks are a tonalitic composition and much of them are mylonitic. South of the granitic rocks is a complex assemblage of Proterozoic metamorphic rocks, at least part of which is metasedimentary. The assemblage was metamorphosed to upper amphibolite and lower granulite grade and subsequently rematamorphosed to a lower metamorphic grade and is intensely deformed by mylonitization characterized by an east-striking, north-dipping foliation and pronounced lineation that plunges shallowly east and west.

East of Lytle Creek and west of the San Andreas fault zone, the predominant basement lithology is Mesozoic Schist, which consists mostly of greenschist grade metabasalt and metagraywacke. Intruding the Pelona Schist, between Lytle Creek and Cajon Canyon, is the granodiorite of Telegraph Peak of Oligocene age. East of the San Andreas fault in the San Bernardino Mountains, basement rocks consist of amphibolite grade gneiss and schist intermixed with concordant and discordant tonalite rock and pegmatite.

Tertiary conglomaerte and sandstone occurs in the Cucamonga fault zone and a zone 200-700 meters wide between strands of the San Andreas fault zone and localized thrust faults northeast of the San Andreas fault. Most of the conglomerate and sandstone within the Cucamonga fault zone is overturned forming the north limb of an overturned syncline. Clasts in the conglomerate are not derived from any of the basement rocks in the eastern San Gabriel Mountains. Clasts in the conglomerate and sandstone northeast of the San Andreas fault zone do not appear to be locally derived. The south half of the quadrangle is dominated by the large symmetrical alluvial-fan emanating from the canyon at Lytle Creek and by the complex braided stream sediments of Lytle and Cajon Creeks.

The San Andreas fault is restricted to a relatively narrow zone marked by a pronounced scarp that is well exposed near the east margin of the Devore quadrangle. Two poorly exposed, closely spaced, north-dipping thrust faults northeast of the San Andreas fault have dips that appear to range from 55 degrees to horizontal. The shallower dips probably are the result of rotation of initially steeper fault surfaces by downhill surface creep. Between the San Andreas and Glen Helen fault zones, there are several faults that have north-facing scarps, the largest of which are the east-striking Peters fault and the northwest-striking Tokay Hill fault. The Tokay Hill fault is at least, in part, a reverse fault. Scarps along both faults are youthful appearing. The Glen Helen fault zone, west of Cajon Creek, is well defined by a pronounced scarp from the area north of the I-15 Freeway, south through Glen Helen Regional Park. The large fault zone along Meyers Canyon, between Penstock and Lower Lytle Ridges, is probably the eastward extension of the San Gabriel fault zone that is deformed into a northwest orientation due to compression in the eastern San Gabriel Mountains.

At the south end of Sycamore Flat, this fault zone consists of three discreet faults distributed over a width of about 300 meters. About 2.5 km northwest of Sycamore Flat, it consists of an approximately 300-meter wide shear zone. At the north end of Penstock Ridge, the fault zone is bifurcated into four stands which, at the northwest corner of the Devore quadrangle, are distributed over a width of about one kilometer. From the northern part of Sycamore Flat, for a distance of nearly five kilometer northwestward, a northeast-dipping reverse fault is located along the east side of the probable San Gabriel fault zone. The youthful reverse fault has locally placed the Oligocene granodiorite of Telegraph Peak over detritus derived from the granodiorite.

The Lytle Creek fault, which is commonly considered the western splay of the San Jacinto fault zone, is located on the west side of Lytle Creek. Lateral displacement on the Lytle Creek fault has offset parts of the old Lytle Creek channel (this offset gravel-filled channel is best seen at Texas Hill, near the mouth of Lytle Creek were the gravel was hydraulic mined for gold in the 1890's).[98]

- **San Bernardino North 7.5-Minute Quadrangle**. This geologic map covers a part of the southwestern San Bernardino Mountains and the northwestern San Bernardino basin. Granitic and metamorphic rocks underlie most of the mountain area and a complex array of Quaternary deposits fill the basin. These two areas are separated by strands of the seismically active San Andreas fault.

  In the southwestern part, Cajon Creek carries sediments from both the San Bernardino and San Gabriel Mountains and Lytle Creek heads in the eastern San Gabriel Mountains. Limited bedrock areas showing through the Quaternary sediments of the basin consist exclusively of Mesozoic Pelona Schist locally intruded by Tertiary dikes. Youthful-appearing fault scarps discontinuously mark the traces of the San Andreas fault along the southern edge of the San Bernardino Mountains. Young and old high-angle faults cut bedrocks units within the San Bernardino Mountains and the buried, seismically-active San Jacinto fault traverses the southwestern part of the quadrangle.[99]

[98]/ *Op. Cit*., Geologic Map of the Devore 7.5' Quadrangle, San Bernardino County, California, Open-File Report OF 01-173, United States Geological Survey, pp. 8-10.

[99]/ *Op. Cit*., Geologic Map of the San Bernardino North 7.5' Quadrangle, San Bernardino County, California, Open-File Report OF 01-131, 2001, Abstract.

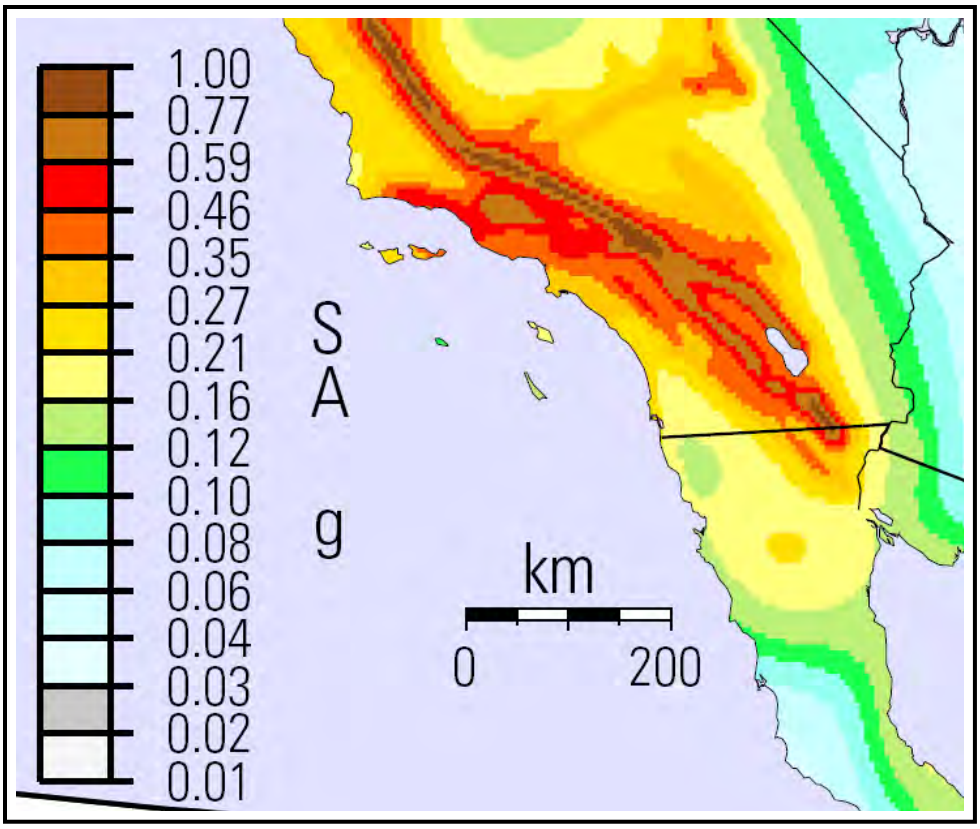


Figure 4.3-8
PORTION OF MAP OF 1-HERTZ SPECTRAL ACCELERATION FOR 2-PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS IN STANDARD GRAVITY
Source: United States Geological Survey

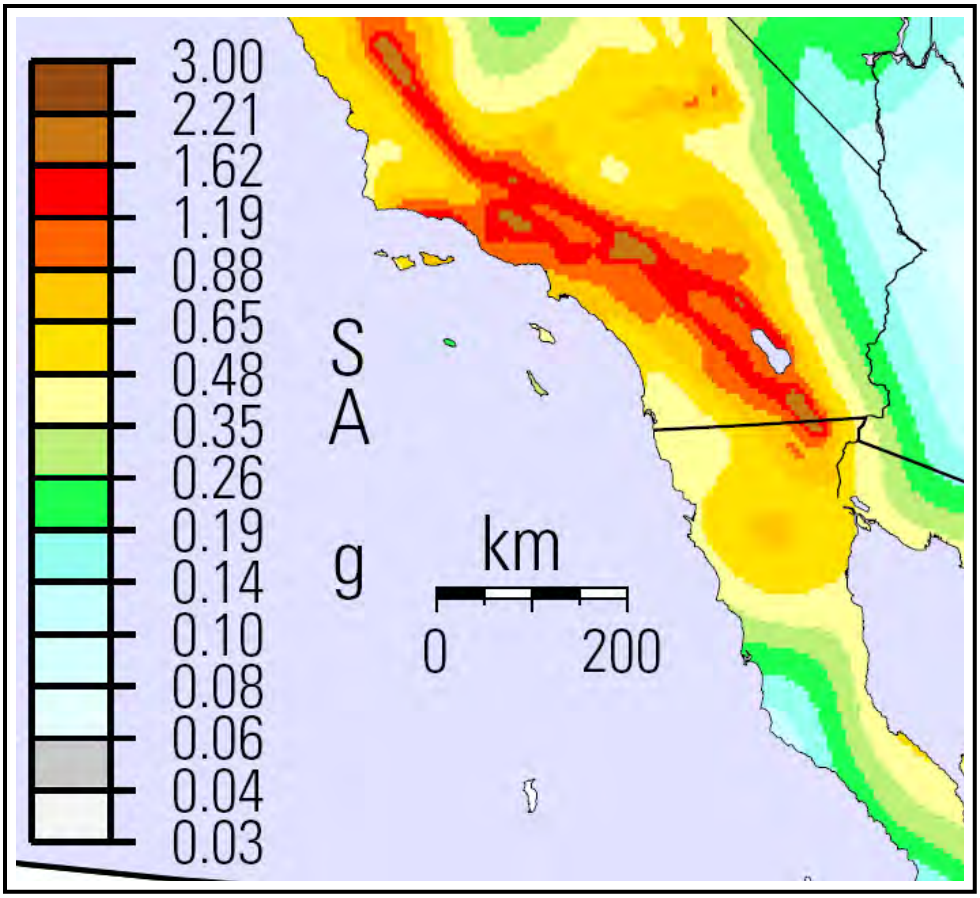


Figure 4.3-9
PORTION OF MAP OF PEAK GROUND ACCELERATION FOR 2-YEAR PROBABILITY OF EXCEEDANCE IN 50 YEARS IN STANDARD GRAVITY
Source: United States Geological Survey

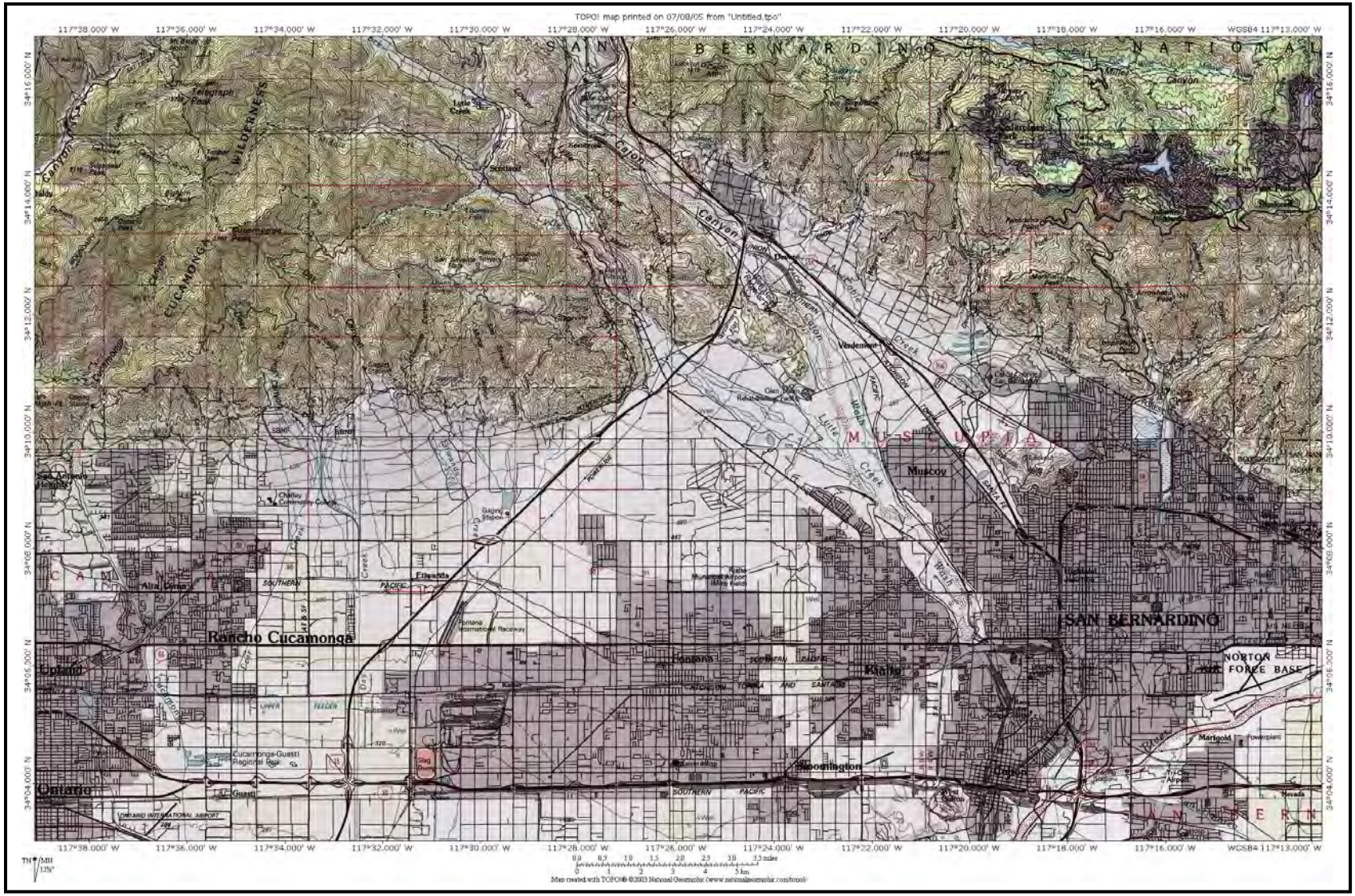


Figure 4.3-10
GENERAL PROJECT AREA TOPOGRAPHY
Source: Topo!

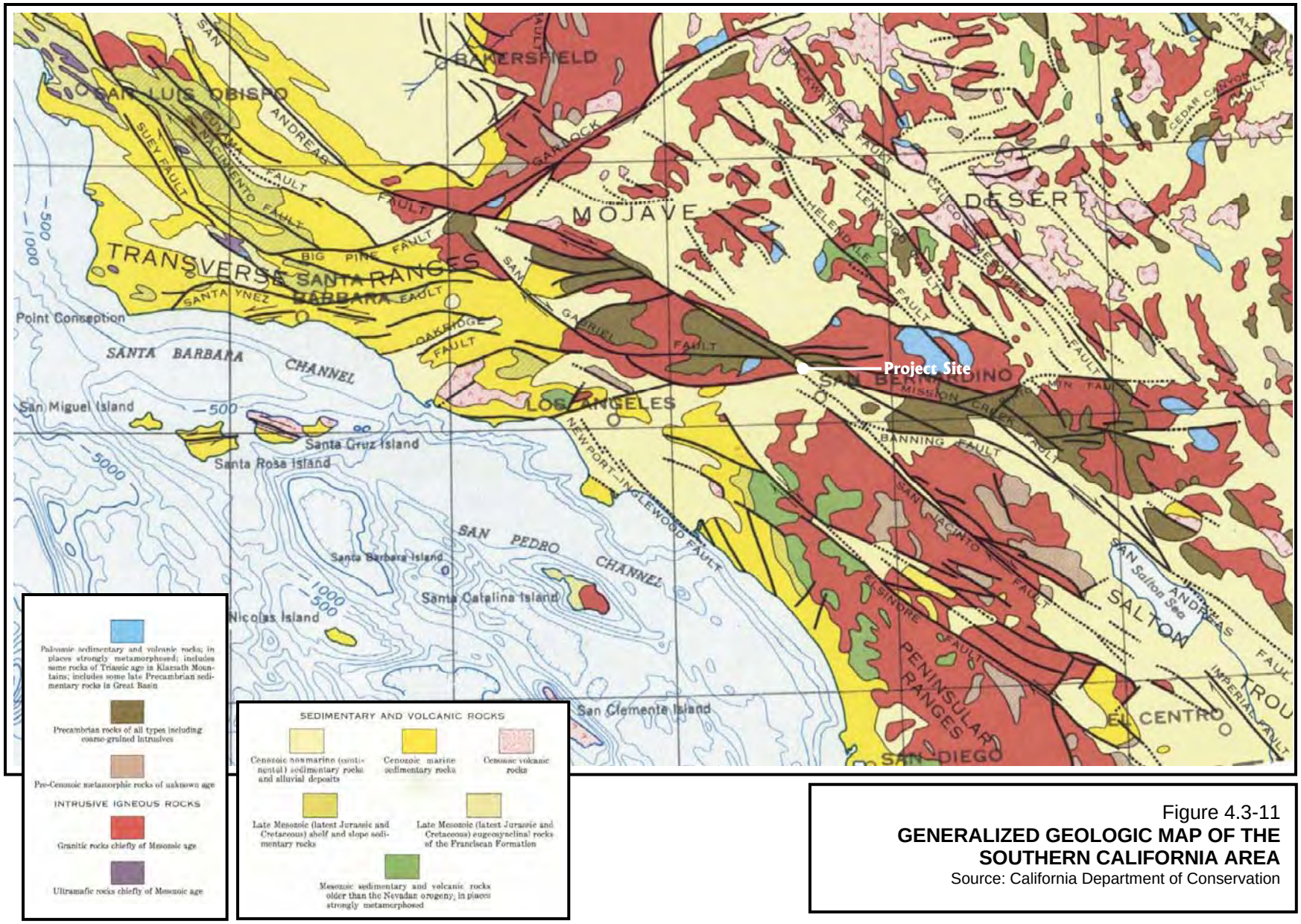
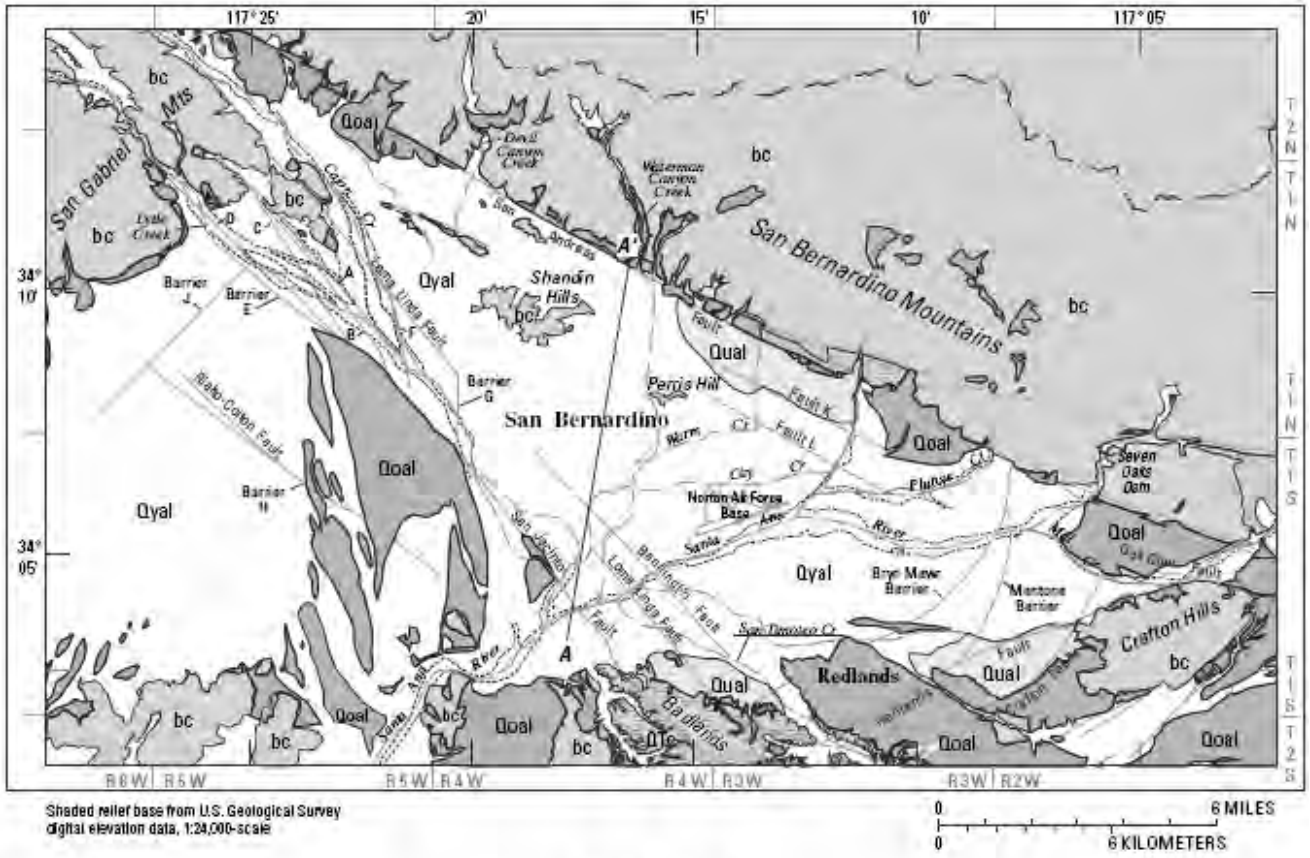


Figure 4.3-11
GENERALIZED GEOLOGIC MAP OF THE SOUTHERN CALIFORNIA AREA
Source: California Department of Conservation



EXPLANATION

GEOLOGIC UNITS

Quaternary

- Qrc — River-channel deposits
- Qyal — Younger alluvium
- Qual — Undifferentiated younger and older alluvium
- Qoal — Older alluvium

Quaternary and Tertiary

- QTc — Sedimentary rocks

Tertiary and Pre-Tertiary

- bc — Basement complex of igneous and metamorphic rocks

MAP UNITS

- Fault / Barrier J — **Fault or ground-water barrier** – May be concealed or approximately located
- **Geologic contact**
- A —— A' — **Line of section** – See figures 23, 24, 37
- **Boundary of Santa Ana River drainage basin**

Figure 4.3-12
GENERALIZED GEOLOGIC MAP OF THE SAN BERNARDINO AREA
Source: United States Geological Survey

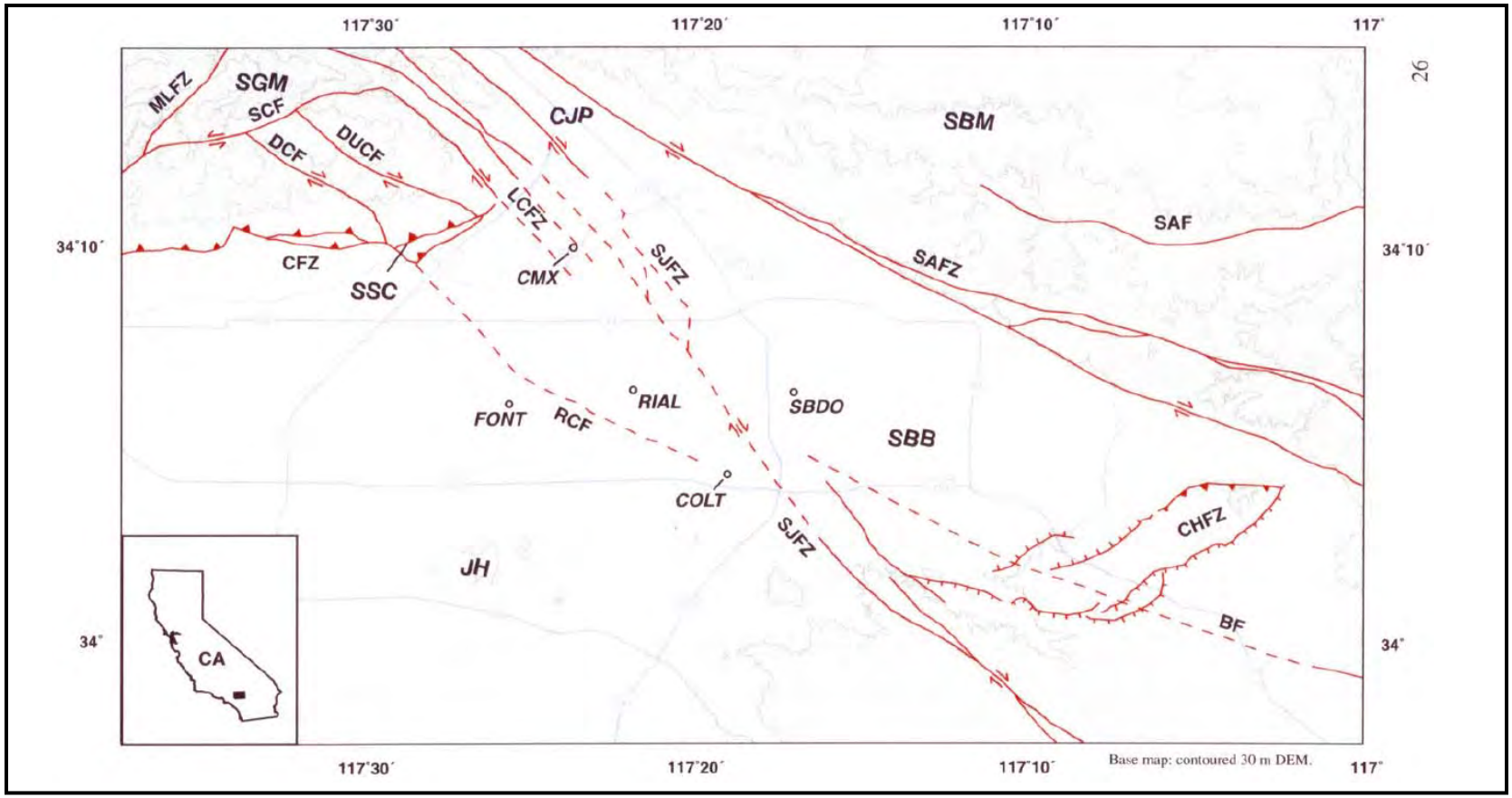


Figure 1. Index map showing San Bernardino basin and vicinity, California. BF, Banning fault; CFZ, Cucamonga fault zone; CHFZ, Crafton Hills fault zone; COLT, Colton; CJP, Cajon Pass; CMX, Cemex Materials Corp.; DCF, Day Canyon fault; DUCF, Duncan Canyon fault; FONT, Fontana; JH, Jurupa Hills; LCFZ, Lytle Creek fault zone; MLFZ, Middle Fork Lytle Creek fault zone; RCF, Rialto-Colton fault; RIAL, Rialto; SAF, Santa Ana fault; SAFZ, San Andreas fault zone; SBB, San Bernardino Basin; SBDO, San Bernardino; SBM, San Bernardino Mountains; SCF, Stoddard Canyon fault; SGM, San Gabriel Mountains; SJFZ, San Jacinto fault zone; SSC, San Sevine Canyon. Fault locations are from the following studies: RCF, this study; MLFZ, Morton and others, 1990; DCF/ DUCF, Morton, 1976; all other faults, Matti and Morton, 1993.

Fault based on geologic mapping

Inferred fault based on geologic or geophysical mapping

Road

Figure 4.3-13
INDEX MAP SHOWING SAN BERNARDINO BASIN AND VICINITY
Source: United State Geological Survey

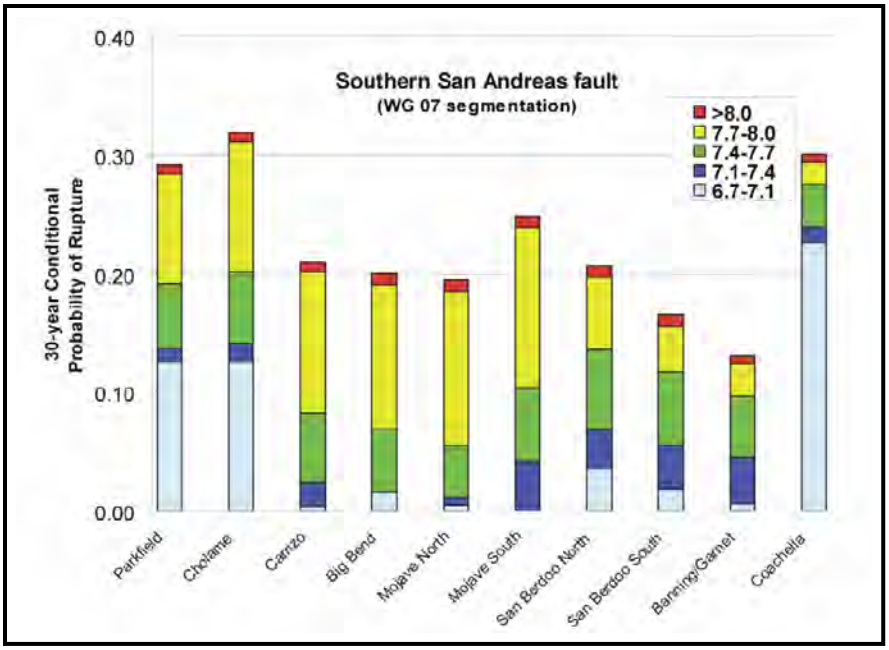
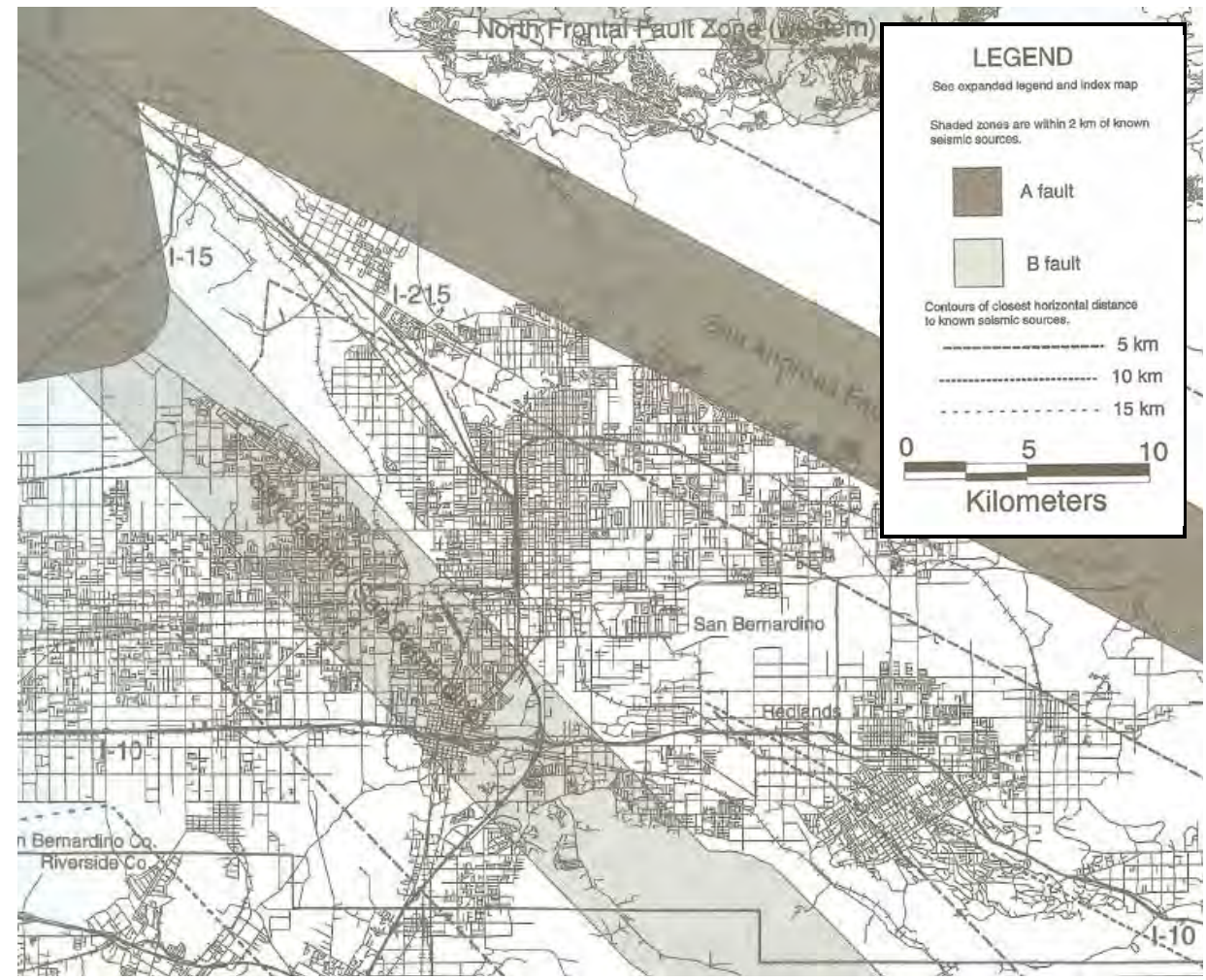


Figure 4.3-14
30-YEAR CONDITIONAL PROBABILITY OF AN EARTHQUAKE GREATER THAN M6.7 RUPTURING THE SOUTHERN SAN ANDREAS FAULT
Source: United States Geological Survey

Figure 4.3-15
ACTIVE FAULT NEAR-SOURCE ZONES
Source: International Conference of Building Officials



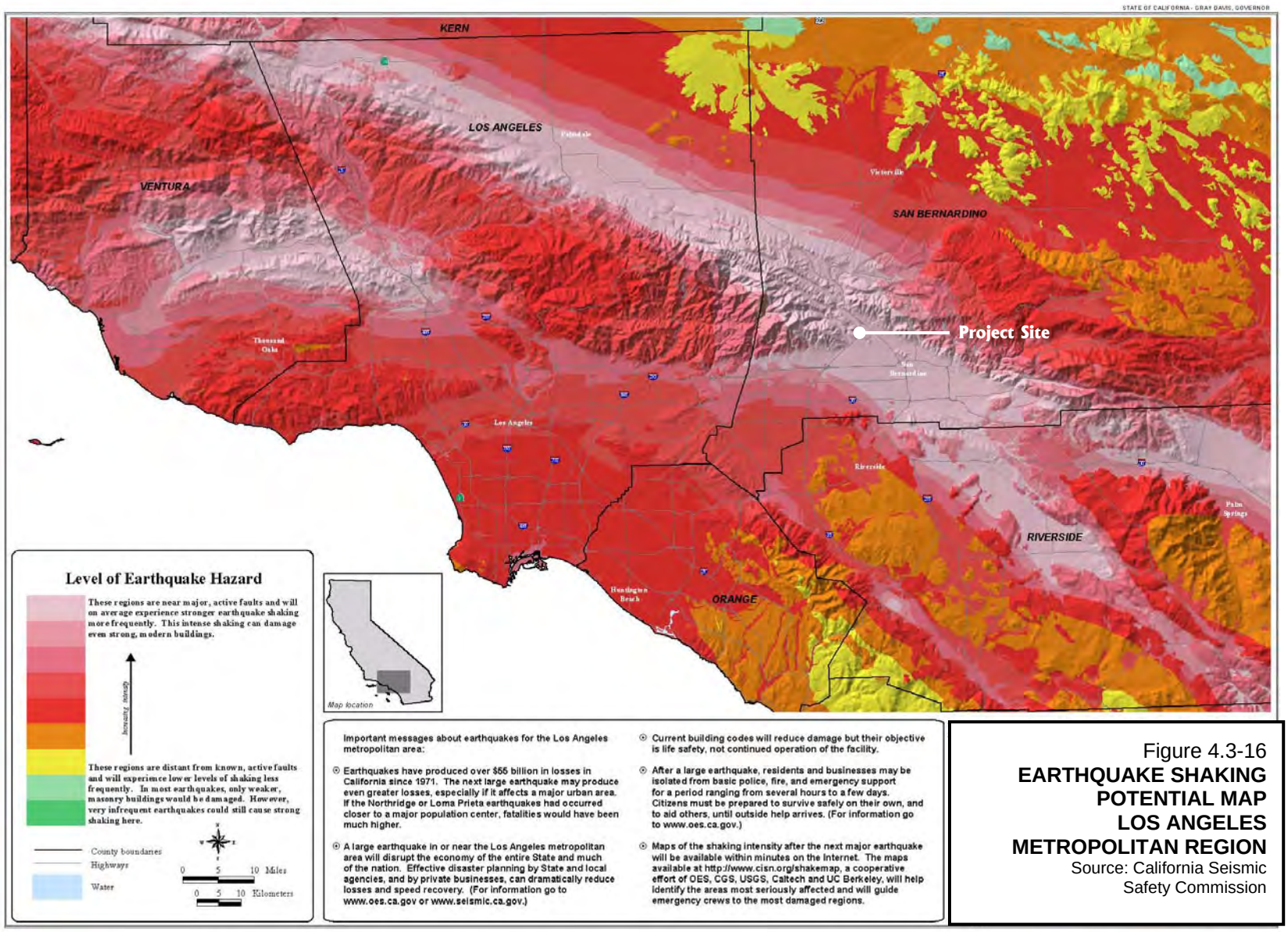


Figure 4.3-16
EARTHQUAKE SHAKING POTENTIAL MAP LOS ANGELES METROPOLITAN REGION
Source: California Seismic Safety Commission

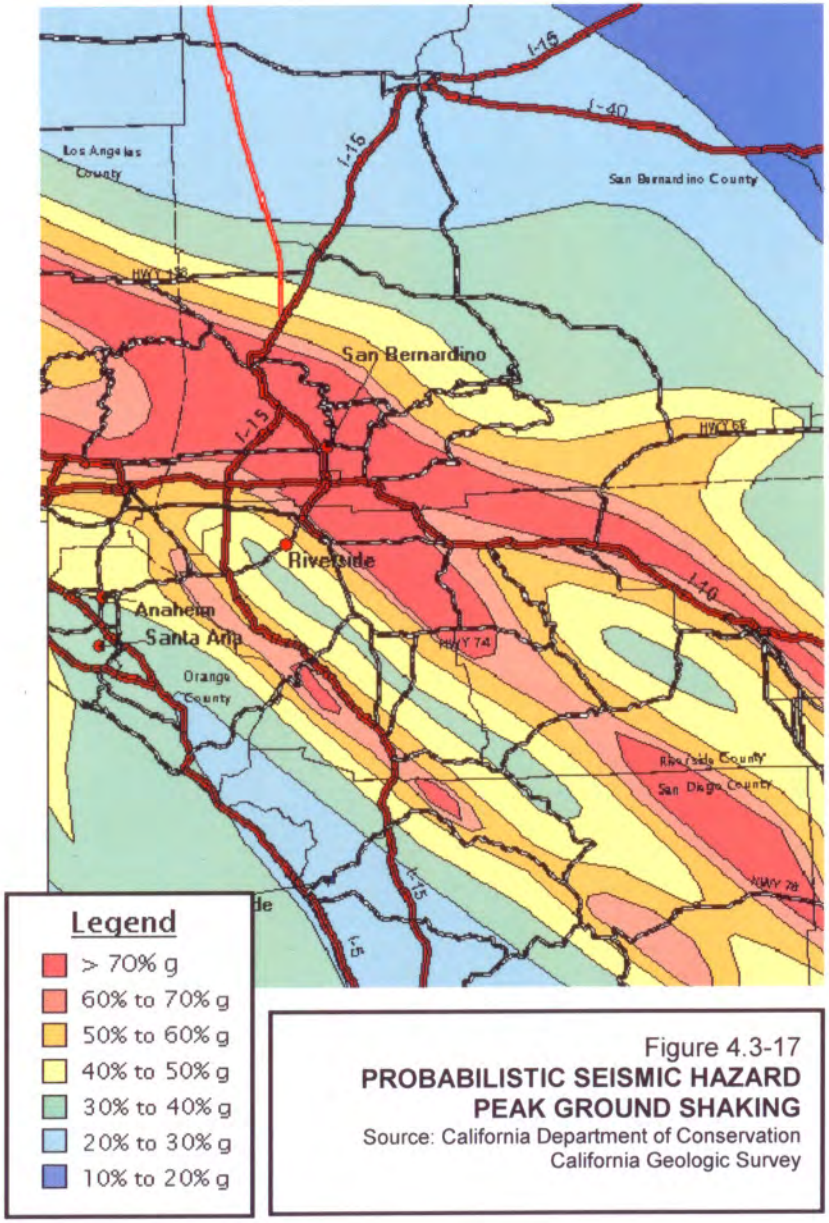


Figure 4.3-17
PROBABILISTIC SEISMIC HAZARD PEAK GROUND SHAKING
Source: California Department of Conservation California Geologic Survey

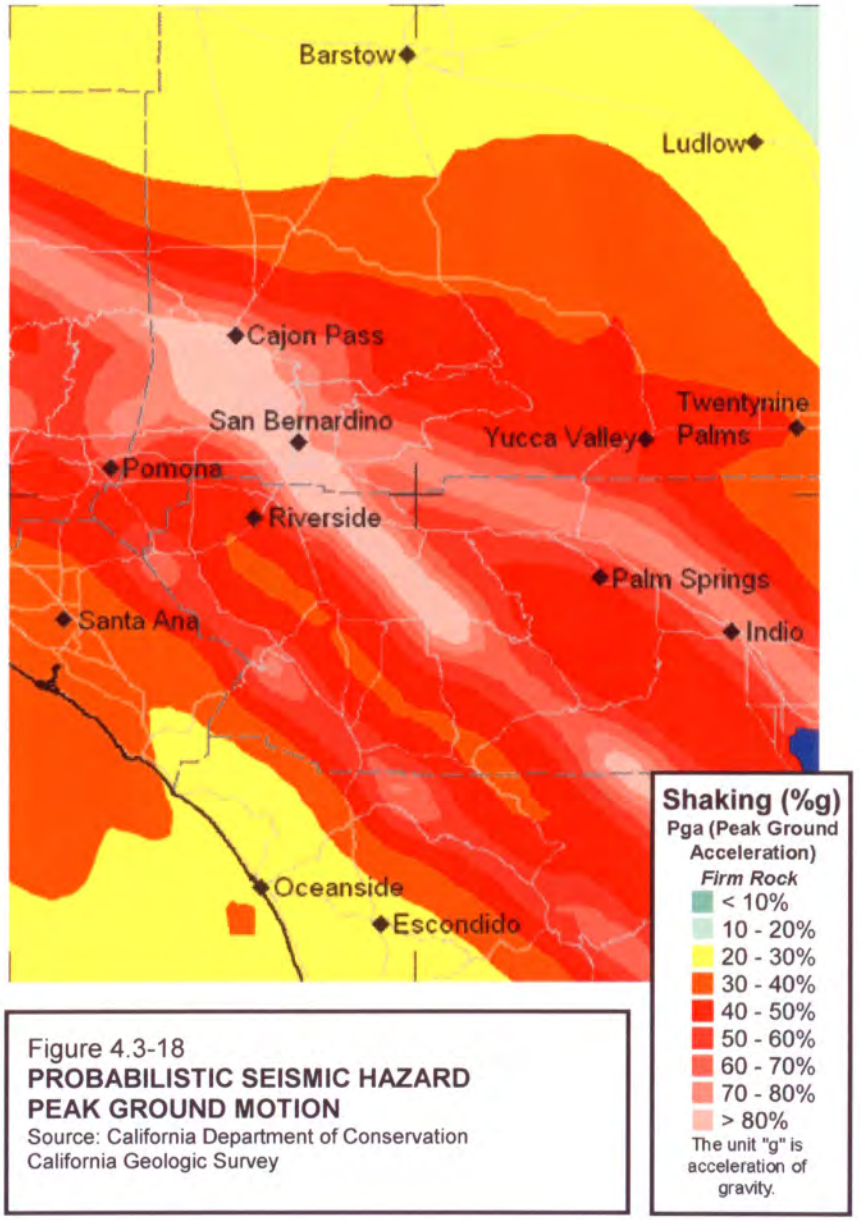
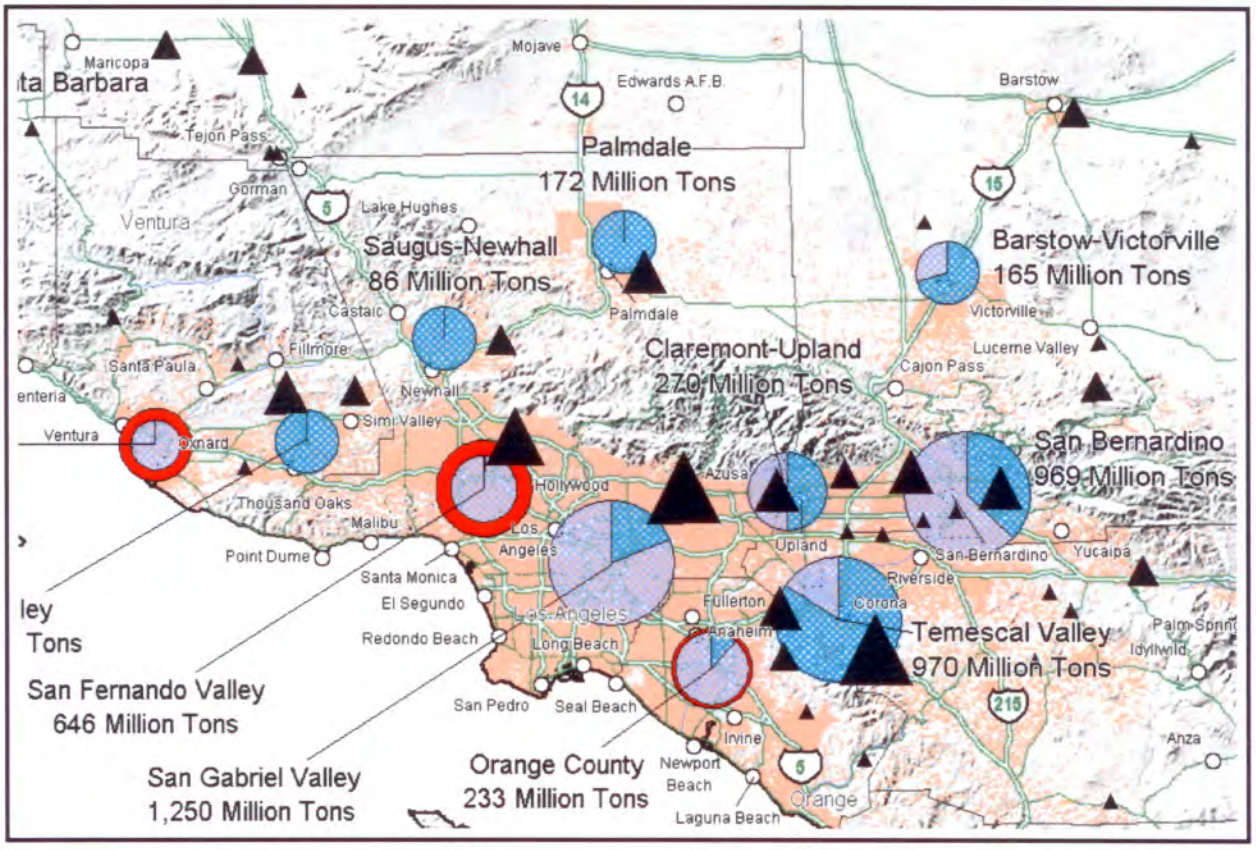


Figure 4.3-18
PROBABILISTIC SEISMIC HAZARD PEAK GROUND MOTION
Source: California Department of Conservation California Geologic Survey



Fifty-Year Aggregate Demand Compared to Permitted Aggregate Resources[1]

The pie diagrams show the projected 50-year demand for aggregate as of January 2001 compared to currently permitted aggregate resources (in short tons).[1] The 50-year demand for a particular region is graphically represented by one of four pie diagram sizes. Each 50-year pie diagram is located in the central portion of the study area it represents. Study area boundaries are shown on the index map of aggregate studies (lower left). The actual 50-year demand is shown on the map adjacent to each pie diagram.

50-year demand that will not be met by existing permitted resources
Permitted aggregate resources

50-year demand is 25 to 200 million tons

50-year demand is > 200 to 500 million tons

50-year demand is > 500 to 800 million tons.

50-year demand is more than 800 million tons

Examples

50-year demand for aggregate is 100 million tons; permitted resources total 25% of the 50-year demand

100 Million Tons

50-year demand for aggregate is 510 million tons; permitted resources are greater than or equal to the 50-year demand

510 Million Tons

Areas With Less Than 5 or 10 Years of Permitted Aggregate Resources

< 5 years of permitted resources remaining in the study area

< 10 years of permitted resources remaining in the study area

Aggregate Production Areas

(Symbols represent one or more aggregate mines, tonnage represents 1999 annual production)

< 0.5 Million Tons per Year

0.5 - 2 Million Tons per Year

>2 - 5 Million Tons per Year

>5 - 10 Million Tons per Year

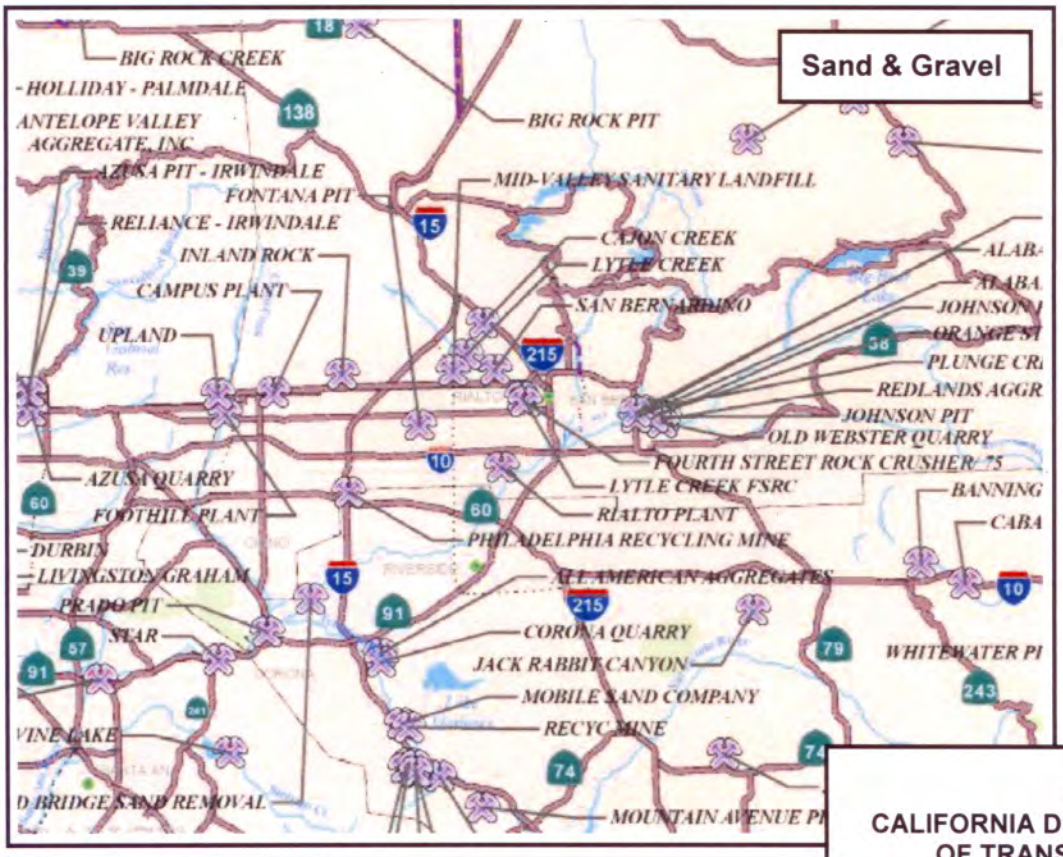
>10 Million Tons per Year

Population

1 Dot = 100 Persons
(based on 1990 Census Data)

[1] *Permitted aggregate resources (also called aggregate reserves) are those portions of the resources for which local lead agencies (counties and cities) have issued mining permits. Non-permitted aggregate resource information is given in each aggregate study report. See accompanying text for references to these reports.*

Figure 4.3-19
CALIFORNIA DEPARTMENT OF CONSERVATION AGGREGATE AVAILABILITY IN CALIFORNIA (MAP SHEET 52)
Source: California Department of Conservation



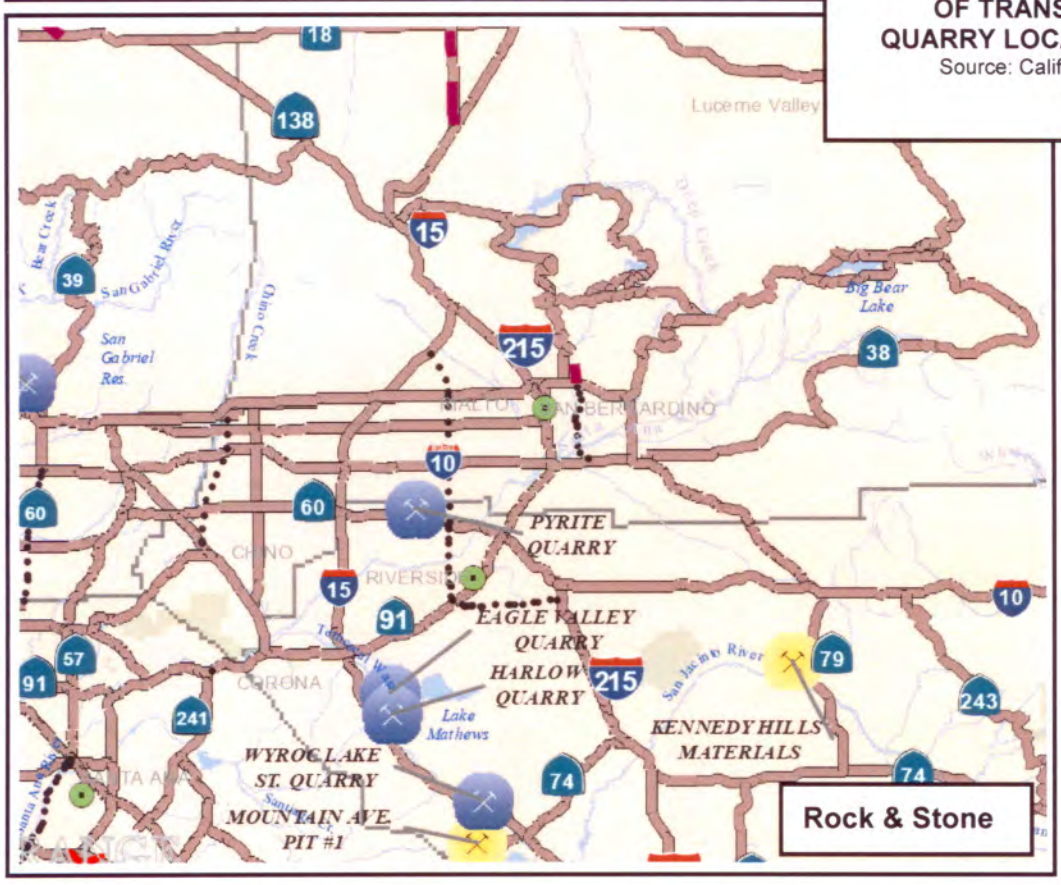


Figure 4.3-20
CALIFORNIA DEPARTMENT OF TRANSPORTATION QUARRY LOCATION MAPS
Source: California Department of Transportation

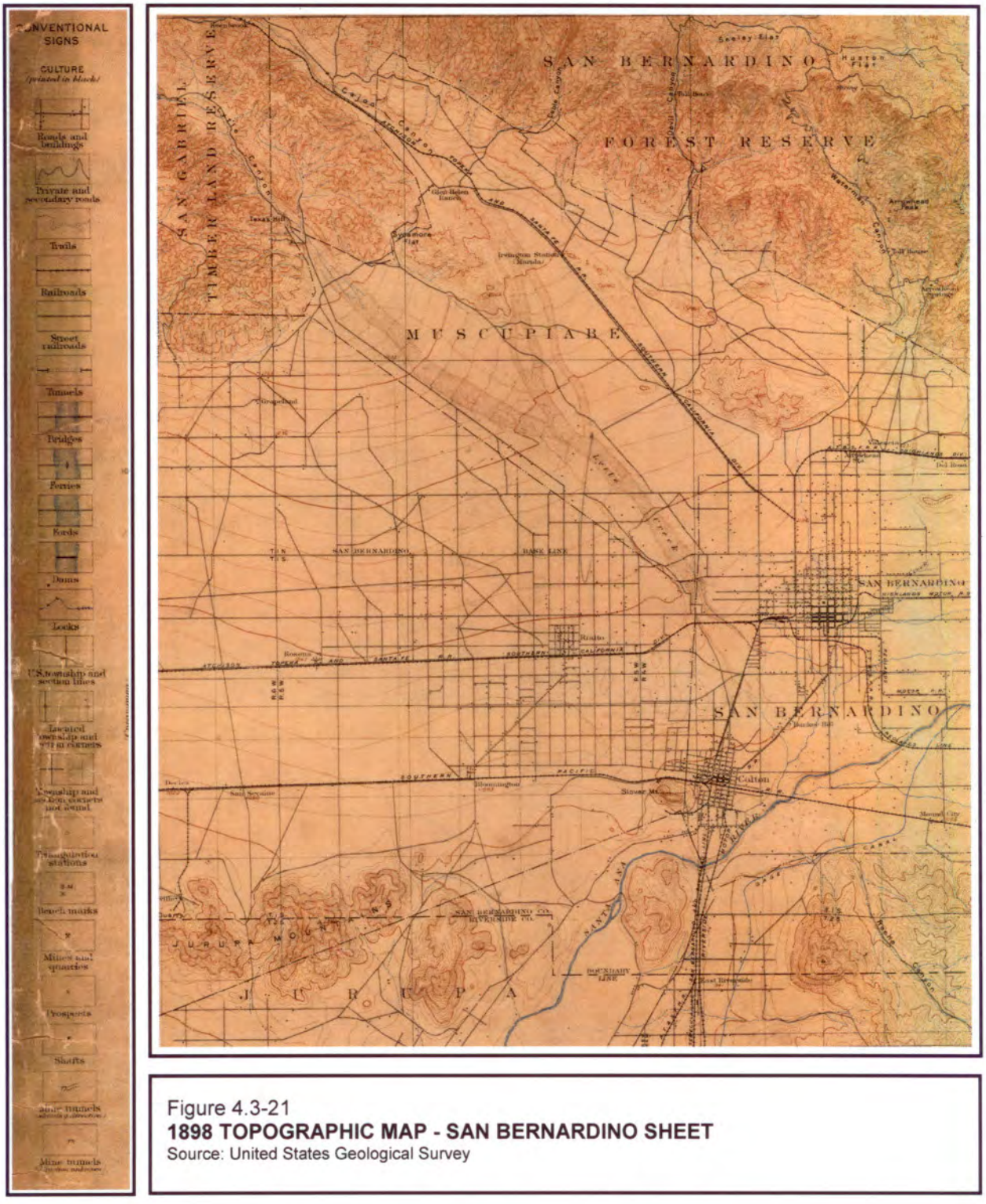


Figure 4.3-21
1898 TOPOGRAPHIC MAP - SAN BERNARDINO SHEET
Source: United States Geological Survey

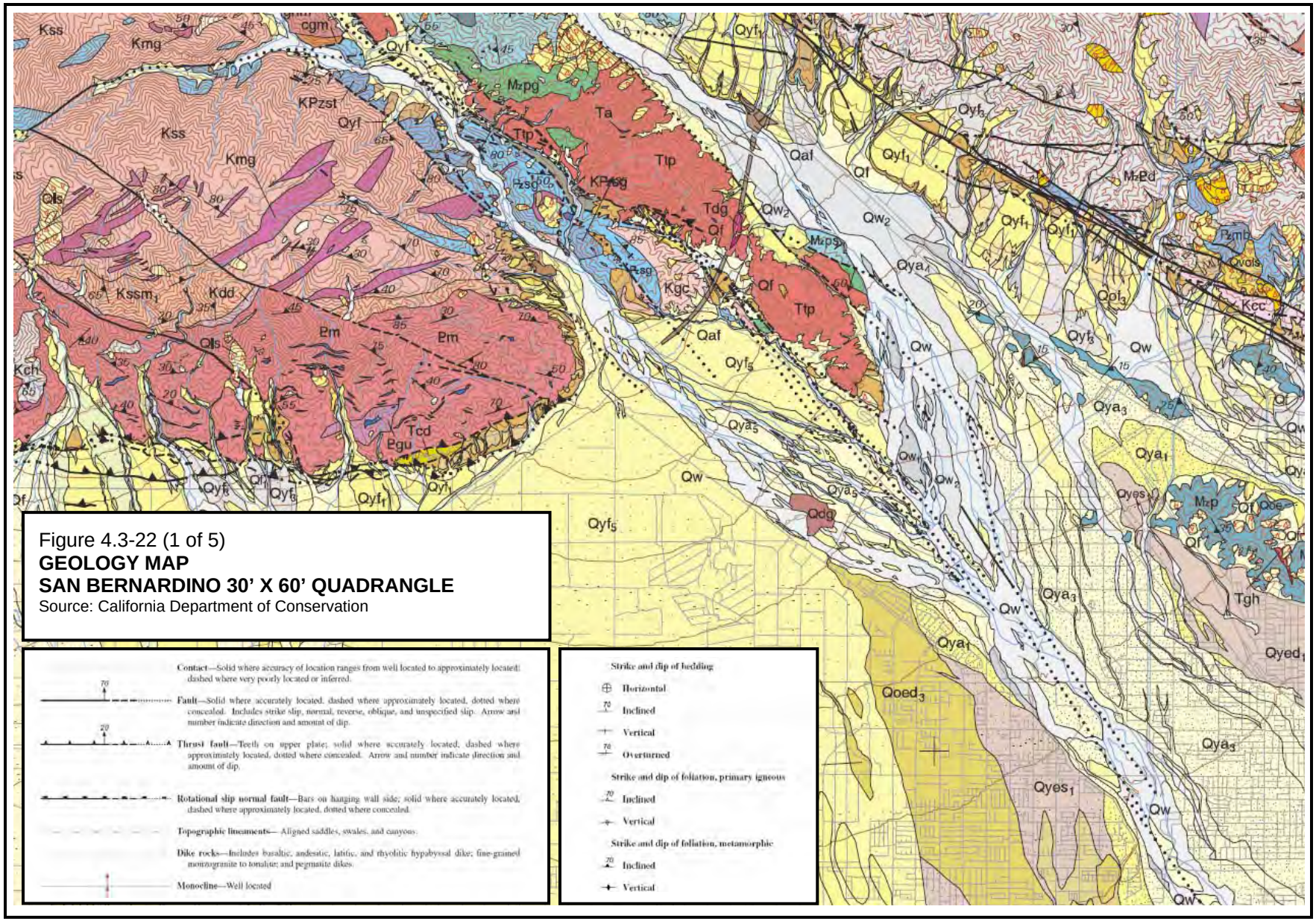


Figure 4.3-22 (1 of 5)
GEOLOGY MAP
SAN BERNARDINO 30' X 60' QUADRANGLE
Source: California Department of Conservation

Figure 4.3-22 (2 of 5)
GEOLOGY MAP - SAN BERNARDINO 30' X 60' QUADRANGLE
Source: California Department of Conservation

GEOLOGIC NOTES

Regional structural subdivisions—Except for most of the Quaternary deposits, rocks within the San Bernardino 30' X 60' quadrangle fall into three, large, relatively well defined rock assemblages separated by major faults, the San Gabriel Mountains assemblage, Peninsular Ranges assemblage, and San Bernardino Mountains assemblage. A fourth, less extensive, wedge-shaped assemblage bounded by the Mill Creek Fault on the north, and by the southernmost strand of the San Andreas Fault Zone on the south (Fig. 1) is also distinguished, because the relations of units within it to units north and south of the San Andreas zone are not clear, and because some of the Tertiary units probably originated in basins that were at least partially defined by the bounding San Andreas strands.

Each of these four rock assemblages is characterized by relatively unique suites of rocks and mutually contrasting internal structure. Because rock units within each assemblage are notably different from those in adjacent assemblages, the **CORRELATION OF MAP UNITS** and the **DESCRIPTION OF MAP UNITS** are organized by rock assemblage, rather than treating all units as if they constituted a single cohesive geologic terrane. For example, the southernmost Pelona Schist on the west side of the San Andreas Fault is in the Crafton Hills, and there are no equivalent rocks east of the fault in the San Bernardino Mountains. The closest Pelona Schist-equivalent rocks on the east side of the San Andreas Fault are 120 km to the southeast in the Orocopia Mountains (Dillon and Ehlig, 1993).

The southwestern quadrant of the quadrangle includes the northern part of the Peninsular Ranges batholith and the northeastern part of the oil-producing Los Angeles basin (Jahns, 1953); both are included in the Peninsular Ranges assemblage. In the northern part of the quadrangle, the southern Mojave Desert is underlain by rocks similar to those found in the flanking San Bernardino Mountains assemblage, and is included as part of that assemblage.

Parts of three physiographic provinces fall within the quadrangle; the east-central part of the Transverse Ranges Province, the southern part of the Mojave Desert Province, and the northern part of the Peninsular Ranges Province. The physiographic provinces within the quadrangle are distinct from the geologically defined rock assemblages, and correspond to them only in a very approximate way; the respective boundaries of these two differently defined sets of divisions only locally coincide. The Transverse Ranges physiographic province includes most of the San Gabriel and San Bernardino Mountains assemblages, but does not encompass either the low lying area between the San Jacinto and San Andreas Fault Zones nor the poorly defined area south of the Sierra Madre Fault Zone, both of which fall within the San Gabriel Mountains rock assemblage.

Classification of Quaternary units—In this report, generic Quaternary sedimentary units, those not having formal or informal names, are classified using a system developed by J.C Matti (written commun., 1999), which is based on a combination of age and sedimentary processes. These generic Quaternary units are common to all of the rock assemblage subdivisions, and on the **CORRELATION OF MAP UNITS** diagram, are placed above the assemblage subdivisions. This classification is the most objective scheme we found for subdividing the complex array of Quaternary units in the region, but like any scheme attempting to classify such a wide variety of deposits, formed where very localized conditions exert strong influences on the character and appearance of the resulting map units, it has limitations. These limitations are not uniform across the classification scheme; for example, some concern only specific types of deposits and some are significant only where comparing widely occurrences of a specific unit. Users of this report should be aware of a few particular limitations, some of which are inherent to the scheme and some a result of how the scheme was applied. These include:

Age—In the San Bernardino 30' X 60' quadrangle, accurate dating is available for very few of the generic Quaternary units. Because of this, distinction between some units, e.g., Qyf_1 and Qyf_2, are based almost entirely on relative age relationships with adjacent or nearby units, and the temporal equivalence of a Qyf_1 deposit at one place compared to a Qyf_1 deposit at a distant locality may also be based largely on similar relative age relationships with local units at each locality.

Sedimentary processes—Interpretations of sedimentary processes are questionable for some units at some localities. For example, distinctions between axial-valley and wash deposits, between colluvial and slope-wash deposits, and between talus, landslide, and colluvial deposits may be unclear in places, particularly where identifications are made from aerial photography and field checking was not possible.

Character and appearance—Due to highly localized differences in source materials and localized differences in depositional conditions at specific sites, a Quaternary unit mapped as Qyf_1 at one place may differ greatly in character and appearance from a Qyf_1 deposit at another locality.

Location—Climatic conditions that influenced deposition of Quaternary units probably differed north and south of the Transverse Ranges during the Quaternary. Because of this, a specific generic Quaternary unit at one locality may not be temporally equivalent to the same unit at all other localities, and even if temporally equivalent, may differ in character and appearance.

Many of the generic Quaternary units are subdivided, e.g., Qyf is subdivided into Qyf_1 and Qyf_2. In these cases, Qyf is the undifferentiated young alluvial-fan unit, and Qyf_1 and Qyf_2 are subdivisions where they can be recognized. The relation between the undifferentiated units and their subdivisions is also the same for young (Q), old (Qo) and very old (Qvo) Quaternary units.

For most of the generic Quaternary units on the south side of the San Gabriel Mountains, characteristic grain-size information is recorded in the map database, but is not plotted on the map. Within the database, unit labels of units for which grain-size information is available carry an extra letter, or letters, denoting average grain size or range in grain size. Where more than one grain size is designated, the first listed is the most abundant and the last is least abundant. The following letters are used: lg, large boulders; b, boulders; g, gravel; a, arenaceous (very coarse through very fine sand); s, silty; c, clayey; m, marl; p, peat. In addition to the labels, approximate grain-size boundaries within individual units are recorded in the database, but not plotted on the map.

Units having limited areal extent—A number of units occur only as small areas of outcrop that are not large enough to show well on the 1:100,000 scale map plot. In addition, some units that have extensive areas of outcrop and are quite prominent on the 1:100,000 scale map plot may also have small areas of outcrop that are not large enough to show well. Even though they may not be discernible on the 1:100,000 scale map plot, these units can be located in the digital map coverage, or by making enlarged plots of specific parts of the coverage. Units having outcrop areas too small to readily discern

p

their identity on the 1:100,000 scale map plot are listed below; units having small outcrop areas in addition to extensive outcrop areas are not listed.

PENINSULAR RANGES ASSEMBLAGE

The Peninsular Ranges assemblage is made up of the northern part of the Peninsular Ranges batholith and a variety of highly recrystallized metasedimentary rocks. Also included in the assemblage are the Tertiary sedimentary rocks in the Puente and San Jose Hills, and the Glendora Volcanics, which span the boundary between the Peninsular Ranges and San Gabriel Mountains assemblages.

SAN GABRIEL MOUNTAINS ASSEMBLAGE

The San Gabriel Mountains assemblage is characterized by a unique suite of rocks that includes anorthosite, Proterozoic and Paleozoic gneiss and schist, the Triassic Mount Lowe Intrusive Suite, the Pelona Schist, and Oligocene granitic rocks. None of these units occur east of the San Andreas Fault within the quadrangle. Internal structure of the assemblage includes the Vincent Thrust Fault, at least two old, abandonded segments of the San Andreas Fault system, and extensive areas of well-developed to pervasive mylonitization.

The main body of the San Gabriel Mountains (Fig. 1) is bounded on the north by the San Andreas Fault and on the south by the Sierra Madre-Cucamonga Fault zone (Matti and Morton, 1993). East of the San Jacinto Fault, the San Bernardino basin is an asymmetric pull-apart basin bounded by the San Andreas Fault on the east, and underlain by many of the rock units that characterize the San Gabriel Mountains (Morton and Matti, 1993). Cretaceous and older rocks are divided into two structurally and lithologically distinct groups by the Vincent Thrust Fault, a regional, low-angle thrust fault that predates intrusion of Oligocene granitic rocks. It separates the Mesozoic Pelona Schist in its lower plate from highly deformed gneiss, schist, and granitic rocks in the upper plate. The Vincent Thrust along with its far-offset, dismembered parts in the Orocopia and Chocolate Mountains, may underlie much of southern California (Haxel and Dillon, 1978; Ehlig, 1982). Oligocene granodiorite of Telegraph Peak intrudes both the Vincent Thrust and upper and lower plate rocks in the eastern San Gabriel Mountains, and a similar Oligocene granitic rock intrudes the Pelona Schist in the Crafton Hills in the southern part of the low lying San Bernardino basin (Fig. 1).

ROCKS BOUNDED BY THE MISSION CREEK AND MILL CREEK STRANDS OF THE SAN ANDREAS FAULT ZONE

Nonmarine sandstone and conglomerate nonconformably overlie crystalline rocks similar to crystalline rocks found in the Little San Bernardino Mountains to the southeast, and appear to have been displaced about 50 km right laterally by the Wilson Creek and Mill Creek Faults of the San Andreas Fault system (Matti and Morton, 1993).

Two other Tertiary units are bounded on the south by the Wilson Creek Fault and on the north by the Mill Creek Fault. One of these units, the formation of Warm Springs Canyon (Tw), is nonmarine sandstone, conglomeratic sandstone, and conglomerate; the other is similar to Tw, and may be part of that unit, but includes what appears to be structurally intermixed Cretaceous marine rocks.

SAN BERNARDINO MOUNTAINS ASSEMBLAGE

The San Bernardino Mountains are bounded on the south by the San Andreas Fault Zone and on the north by a discontinuous series of south-dipping thrust faults. The interior of the range is cut by the east-striking north-dipping Santa Ana reverse fault, the left lateral Cleghorn Fault, and the Devil Canyon Fault of unknown slip sense (Fig. 1).

Within the quadrangle, about 80 to 85 percent of the San Bernardino Mountains bedrock is Mesozoic granitic rocks, and the rest, highly metamorphosed and deformed Late Proterozoic and Paleozoic metasedimentary rocks. Except for possible rocks of questionable affinity having limited extent in the Little Shay Mountain area (Fig. 1), all Middle Proterozoic rocks lie east of the quadrangle. Granitic rocks of the San Bernardino Mountains are similar to those in the Mojave Desert province to the north.

There is a pronounced gradient from east to west, and to a slightly lesser degree from south to north, in the magnitude of both deformation and metamorphism developed in the Late Proterozoic and Paleozoic metasedimentary rocks of the San Bernardino Mountains. At the east edge of the quadrangle, deformation and recrystallization has destroyed, or made questionable, most primary bedding features in carbonate units, and thicknesses of units are alternately highly attenuated or highly thickened. Stratigraphic continuity is minimal due to faulting, folding, and ductile deformation. The westernmost metasedimentary rocks in the range consist of coarsely crystalline schist, quartzite, marble, and calcsilicate rocks. All layering in the rocks is probably the result of transposition of bedding.

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Figure 4.3-22 (3 of 5)
GEOLOGY MAP
SAN BERNARDINO 30' X 60' QUADRANGLE
Source: California Department of Conservation

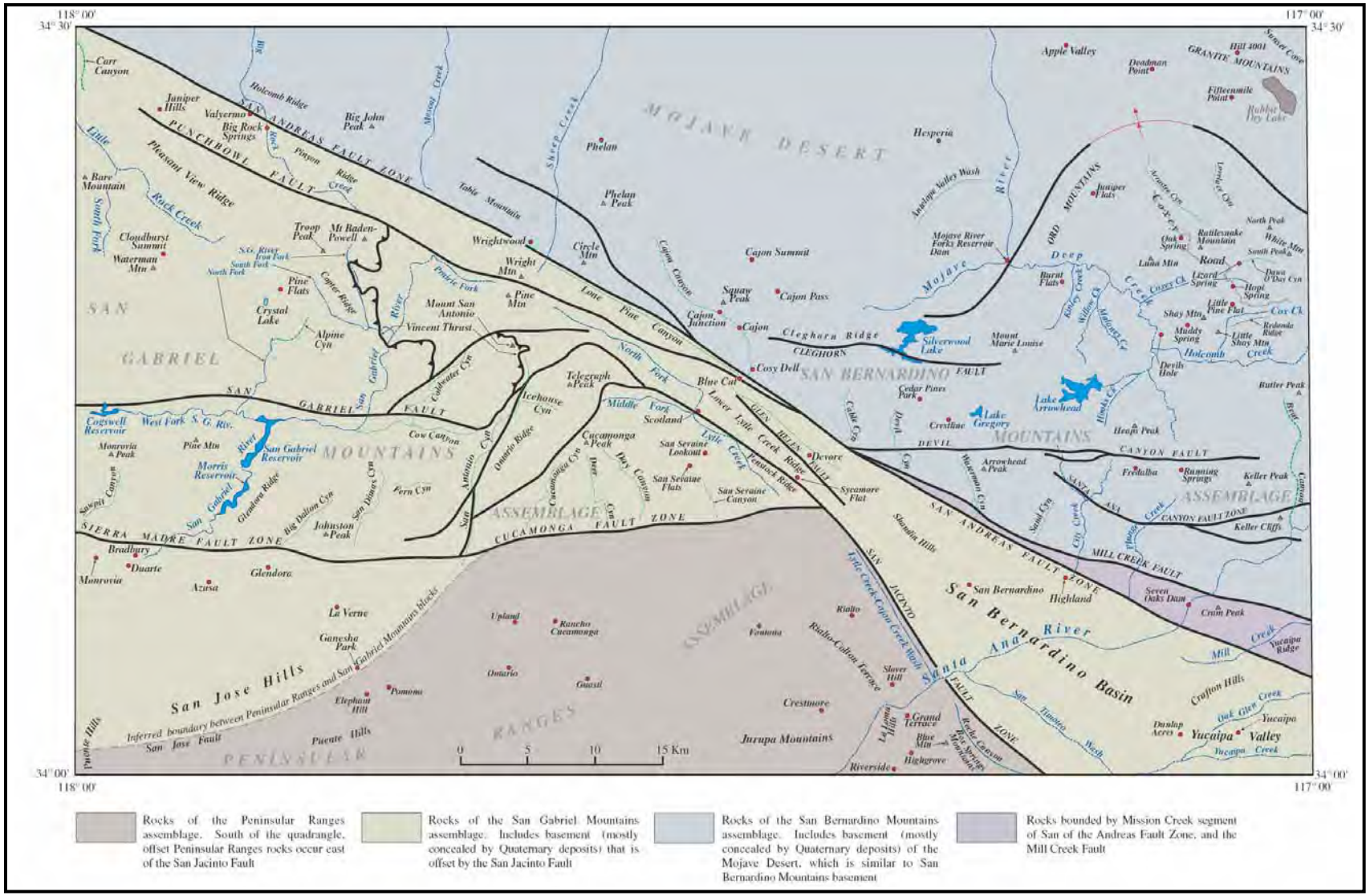


Figure 4.3-22 (4 of 5)
GEOLOGY MAP - SAN BERNARDINO 30' X 60' QUADRANGLE
Source: California Department of Conservation

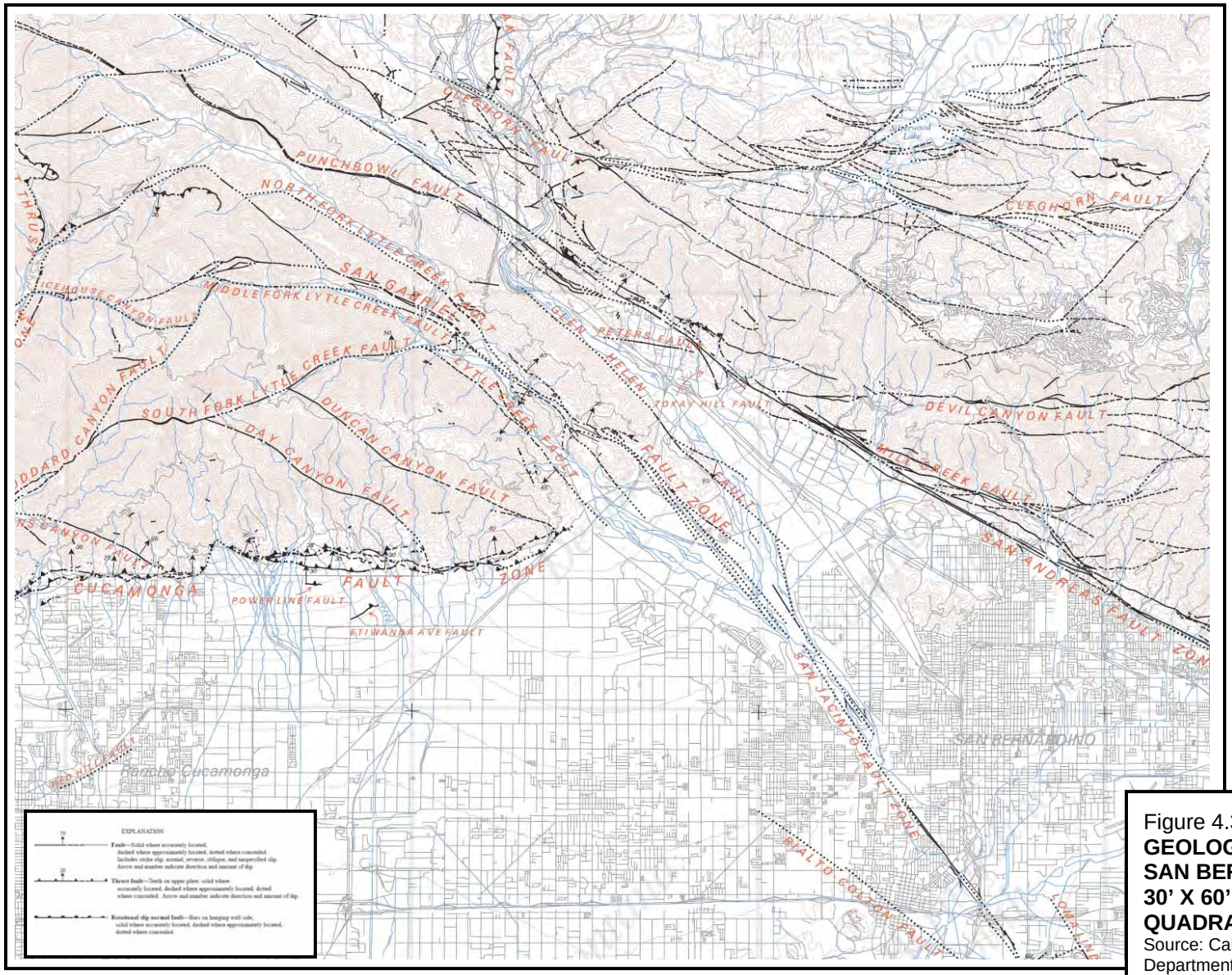


Figure 4.3-22 (5 of 5)
GEOLOGY MAP
SAN BERNARDINO
30' X 60'
QUADRANGLE
Source: California Department of Conservation

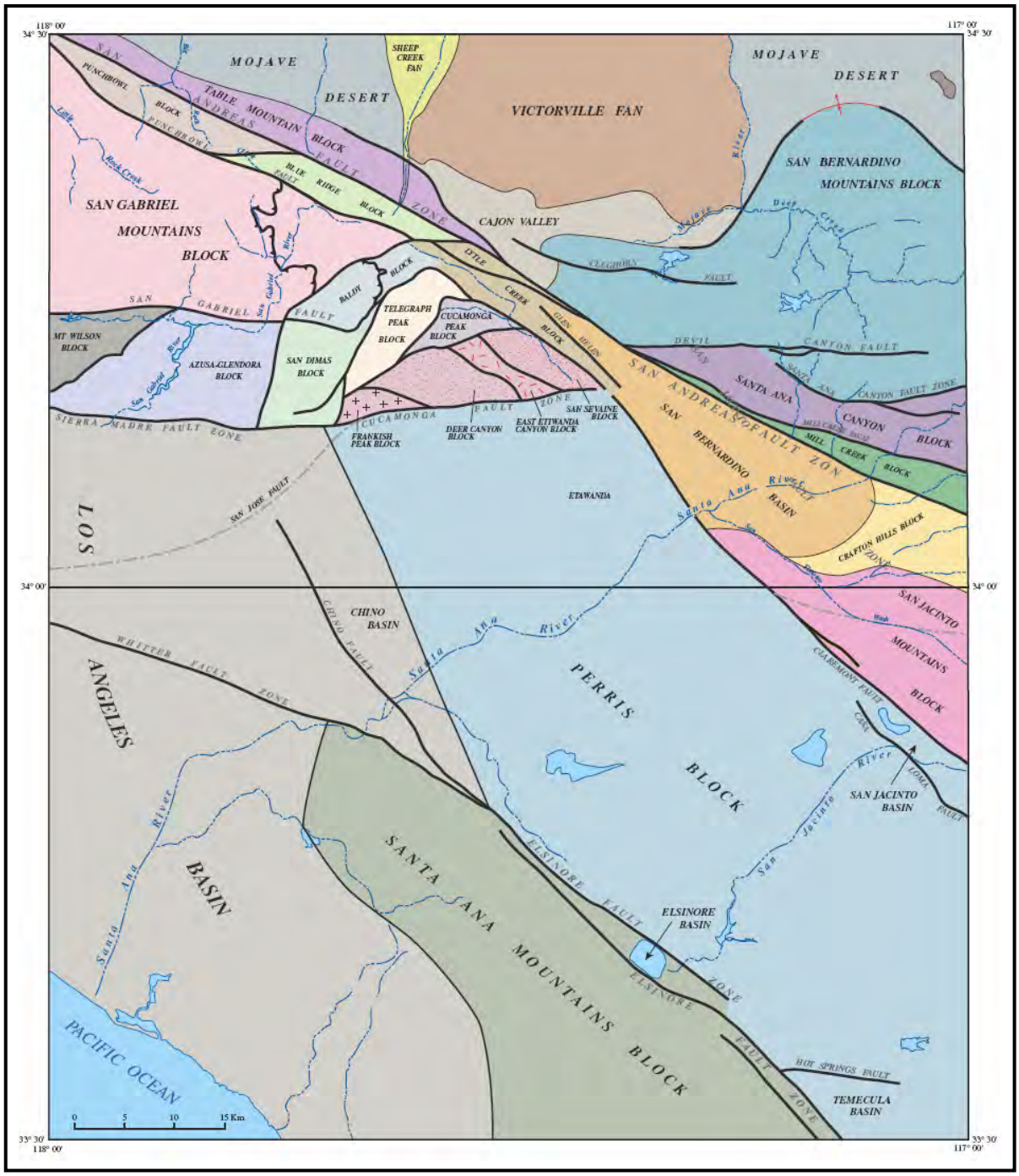


Figure 3. Map showing major faults, informally designated structural blocks, sedimentary basins, and large Quaternary depositional features in the San Bernardino and Santa Ana quadrangles. All features are highly simplified. Within the quadrangles, the west edge of the northern Peninsular Ranges block is considered to roughly coincide with the east edge of the Chino basin. Selected hydrologic features are shown chiefly for geographic reference.

Figure 4.3-23
GEOLOGY MAP – SAN BERNARDINO AND SANTA ANA 30' X 60' QUADRANGLES
Source: United States Geological Survey

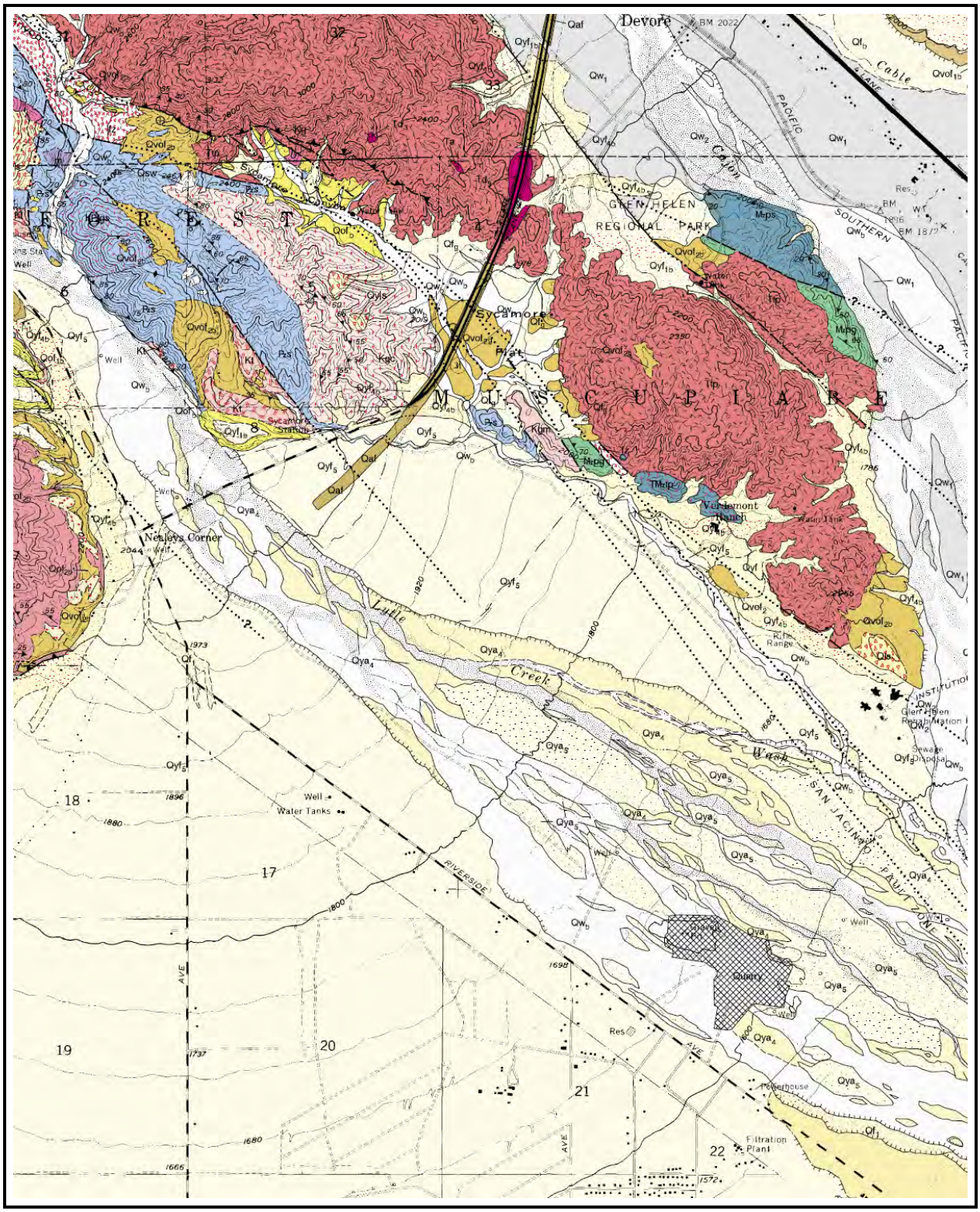


Figure 4.3-24 (1 of 4)
GEOLOGY MAP - DEVORE 7.5-MINUTE QUADRANGLE
Source: United States Geological Survey

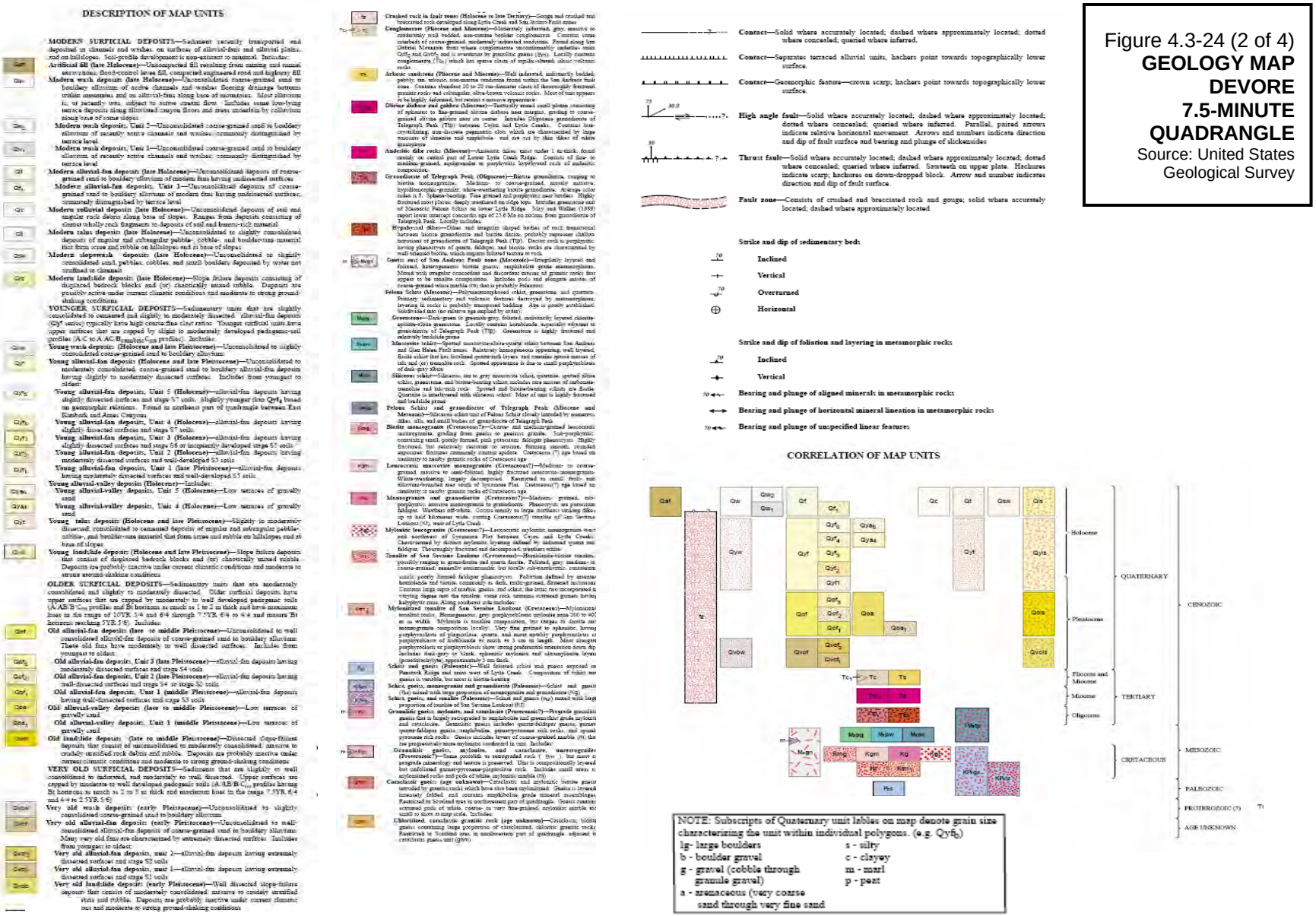


Figure 4.3-24 (2 of 4)
GEOLOGY MAP
DEVORE
7.5-MINUTE
QUADRANGLE
Source: United States Geological Survey

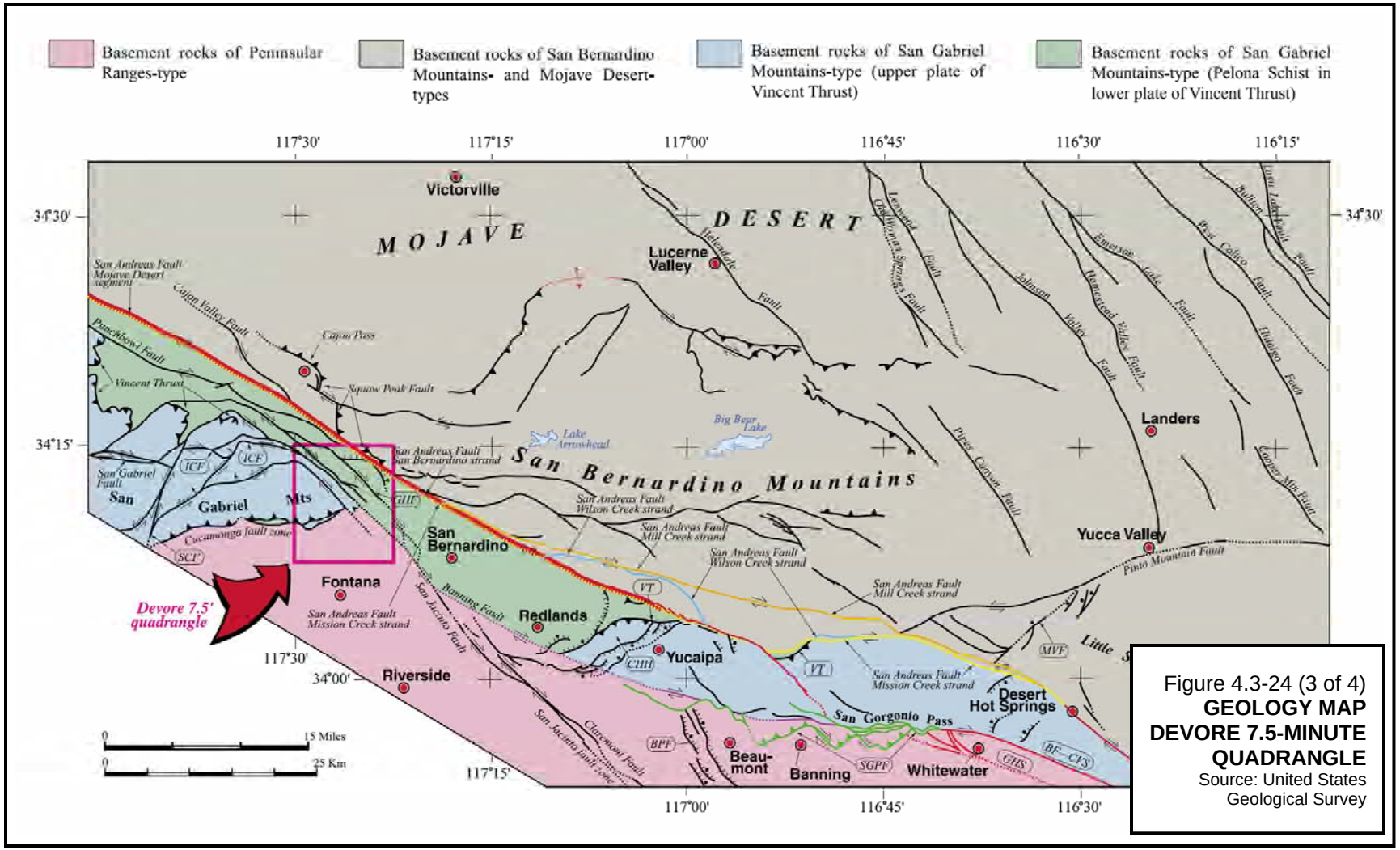


Figure 4.3-24 (3 of 4)
GEOLOGY MAP DEVORE 7.5-MINUTE QUADRANGLE
Source: United States Geological Survey

Map showing regional geologic framework and location of Devore 7.5' quadrangle. Faults modified from Matti and others (1992), Matti and Morton (1993), and Rogers (1967). Faults shown in colors are strands of the San Andreas Fault; red indicates modern traces of the San Andreas Fault. *BF—CVS,* Banning Fault—Coachella Valley segment*; GHS,* San Andreas Fault—Garnet Hill strand*; BPF*, Beaumont Plain fault zone; *CHH*, Crafton Hills horst-and-graben complex; *GHF*, Glen Helen Fault; ICF, Icehouse Canyon Fault; *MVF*, Morongo Valley Fault; *SCF*, San Antonio Canyon Fault; *VT*, Vincent Thrust

GEOLOGIC SUMMARY

The Devore quadrangle straddles part of the boundary between two major physiographic provinces of California, the Transverse Ranges Province to the north and the Peninsular Ranges Province to the south. The north half of the quadrangle includes the eastern San Gabriel Mountains and a small part of the western San Bernardino Mountains, both within the east-central part of the Transverse Ranges Province. South of the Cucamonga and San Andreas Fault zones, the extensive alluviated area in the south half of the quadrangle lies within the upper Santa Ana River Valley, and represents the northernmost part of the Peninsular Ranges Province.

There are numerous active faults within the quadrangle, including right-lateral strike-slip faults of the San Andreas Fault system, which dominate the younger structural elements, and separate the San Gabriel from the San Bernardino Mountains. The active San Jacinto Fault zone projects toward the quadrangle from the southeast, but its location is poorly constrained not only within the quadrangle, but for at least several kilometers to the southeast. As a result, the interrelation between it, the Glen Helen Fault, and the probable easternmost part of the San Gabriel Fault is intrepretive. Thrust faults of the Cucamonga Fault zone along the south margin of the San Gabriel Mountains, represent the rejuvinated eastern end of a major old fault zone that bounds the south side of the western and central Transverse Ranges (Morton and Matti, 1993). Rejuvenation of this old fault zone, including the Cucamonga Fault zone, is apparently in response to compression in the eastern San Gabriel Mountains resulting from initiation of right-lateral slip on the San Jacinto Fault zone in the Peninsular Ranges.

The structural grain within the San Gabriel Mountains, as defined by basement rocks, is generally east striking. Within the Devore quadrangle, these basement rocks include a Paleozoic (?) schist, quartzite, and marble metasedimentary sequence, which occurs as discontinuous lenses and septa within Cretaceous granitic rocks. Most of the granitic rocks are of tonalitic composition, and much of them are mylonitic. South of the granitic rocks is a complex assemblage of Proterozoic (?) metamorphic rocks, at least part of which is metasedimentary. The assemblage was metamorphosed to upper amphibolite and lower granulite grade, and subsequently remetamorphosed to a lower metamorphic grade. It is also intensely deformed by mylonitization which is characterized by an east striking, north dipping foliation, and by a pronounced lineation that plunges shallowly east and west.

East of Lytle Creek and west of the San Andreas Fault zone, the predominant basement lithology is Mesozoic Pelona Schist, which consists mostly of greenschist grade metabasalt and metagraywacke. Intruding the Pelona Schist, between Lytle Creek and Cajon Canyon, is the granodiorite of Telegraph Peak of Oligocene age (May and Walker, 1989). East of the San Andreas Fault in the San Bernardino Mountains, basement rocks consist of amphibolite grade gneiss and schist intermixed with concordant and discordant tonalitic rock and pegmatite.

Tertiary conglomerate and sandstone occur in the Cucamonga Fault zone and in a zone 200 to 700 m wide between strands of the San Andreas Fault zone and localized thrust faults northeast of the San Andreas. Most of the conglomerate and sandstone within the Cucamonga Fault zone is overturned forming the north limb of an overturned syncline. Clasts in the conglomerate are not derived from any of the basement rocks in the eastern San Gabriel Mountains. Clasts in the conglomerate and sandstone northeast of the San Andreas Fault zone do not appear to be locally derived either. The south half of the quadrangle is dominated by the large symmetrical alluvial-fan emanating from the canyon of Lytle Creek, and by the complex braided stream sediments of Lytle Creek and Cajon Wash.

The San Andreas Fault is restricted to a relatively narrow zone marked by a pronounced scarp that is especially well exposed near the east margin of the quadrangle. Two poorly exposed, closely spaced, north-dipping thrust faults northeast of the San Andreas Fault have dips that appear to range from 55° to near horizontal. The shallower dips probably are the result of rotation of initially steeper fault surfaces by downhill surface creep. Between the San Andreas and Glen Helen Fault zones, there are several faults that have north facing scarps, the largest of which are the east striking Peters Fault and the northwest striking Tokay Hill Fault. The Tokay Hill Fault is at least in part a reverse fault. Scarps along both faults are youthful appearing.

The Glen Helen Fault zone along the west side of Cajon Creek, is well defined by a pronounced scarp from the area north of Interstate 15, south through Glen Helen Regional Park; an elongate sag pond is located within the park.

The large fault zone along Meyers Canyon, between Penstock and Lower Lytle Ridges, is probably the eastward extension of the San Gabriel Fault zone that is deformed into a northwest orientation due to compression in the eastern San Gabriel Mountains (Morton and Matti, 1993). At the south end of Sycamore Flat, this fault zone consists of three discreet faults distributed over a width of 300 m. About 2.5 km northwest of Sycamore Flats, it consists of a 300 m wide shear zone. At the north end of Penstock Ridge, the fault zone has bifurcated into four strands, which at the northwest corner of the quadrangle are distributed over a width of about one kilometer. From the northern part of Sycamore Flat, for a distance of nearly 5 km northwestward, a northeast dipping reverse fault is located along the east side of the probable San Gabriel Fault zone. This youthful reverse fault has locally placed the Oligocene granodiorite of Telegraph Peak over detritus derived from the granodiorite.

The Lytle Creek Fault, which is commonly considered the western splay of the San Jacinto Fault zone, is located on the west side of Lytle Creek. Lateral displacement on the Lytle Creek Fault has offset parts of the old Lytle Creek channel; this offset gravel-filled channel is best seen at Texas Hill, near the mouth of Lytle Creek, where the gravel was hydraulic mined for gold in the 1890s.

The Cucamonga Fault zone consists of a one kilometer wide zone of northward dipping thrust faults. Most splays of this fault zone dip north 25° to 35°.

Figure 4.3-24 (4 of 4)
GEOLOGY MAP
DEVORE 7.5-MINUTE QUADRANGLE
Source: United States Geological Survey

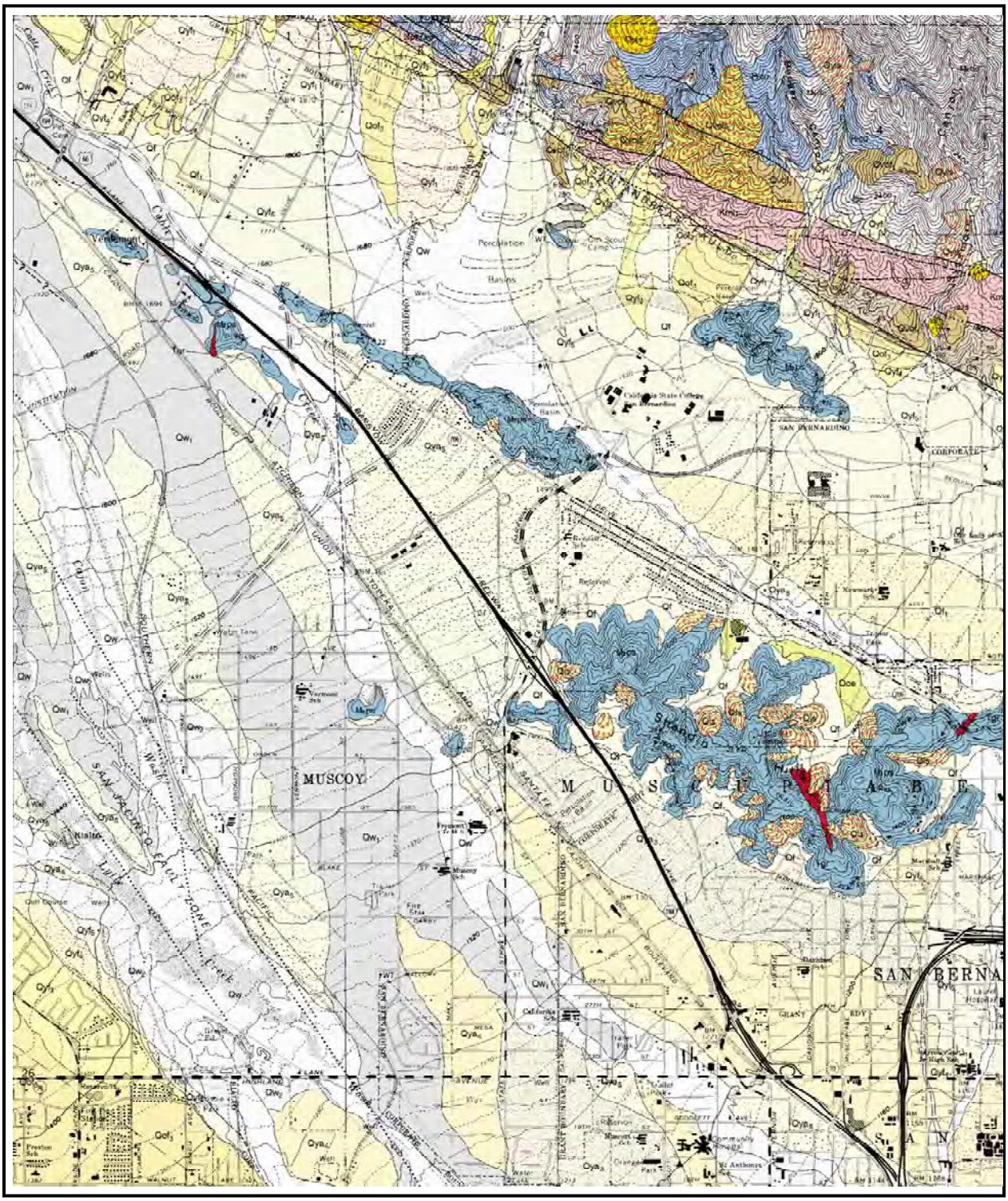


Figure 4.3-25 (1 of 2)
GEOLOGY MAP -SAN BERNARDINO NORTH 7.5-MINUTE QUADRANGLE
Source: United States Geological Survey

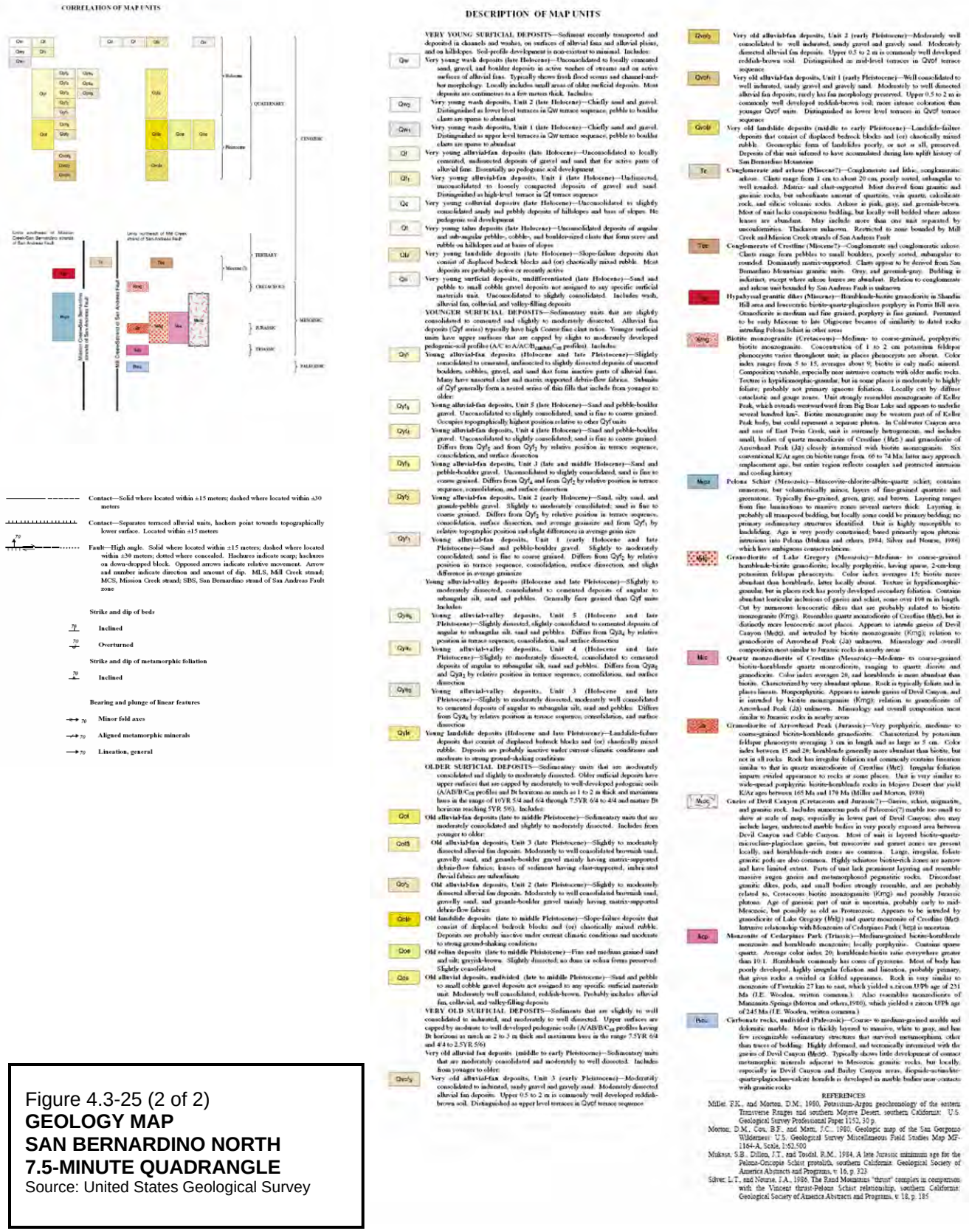


Figure 4.3-25 (2 of 2)
GEOLOGY MAP
SAN BERNARDINO NORTH
7.5-MINUTE QUADRANGLE
Source: United States Geological Survey

Figure 4.3-26
SOUTHERN SAN ANDREAS FAULT
Source: United States Geological Survey

The San Andreas Fault slices through southern California and produces earthquakes that shape and reshape the region. Unlike many other faults, the southern San Andreas Fault produces no small earthquakes. Its next earthquake will disrupt the complicated economic and social systems that define southern California and will affect everyone, including those living and working in communities relatively undamaged by the initial violent shaking.

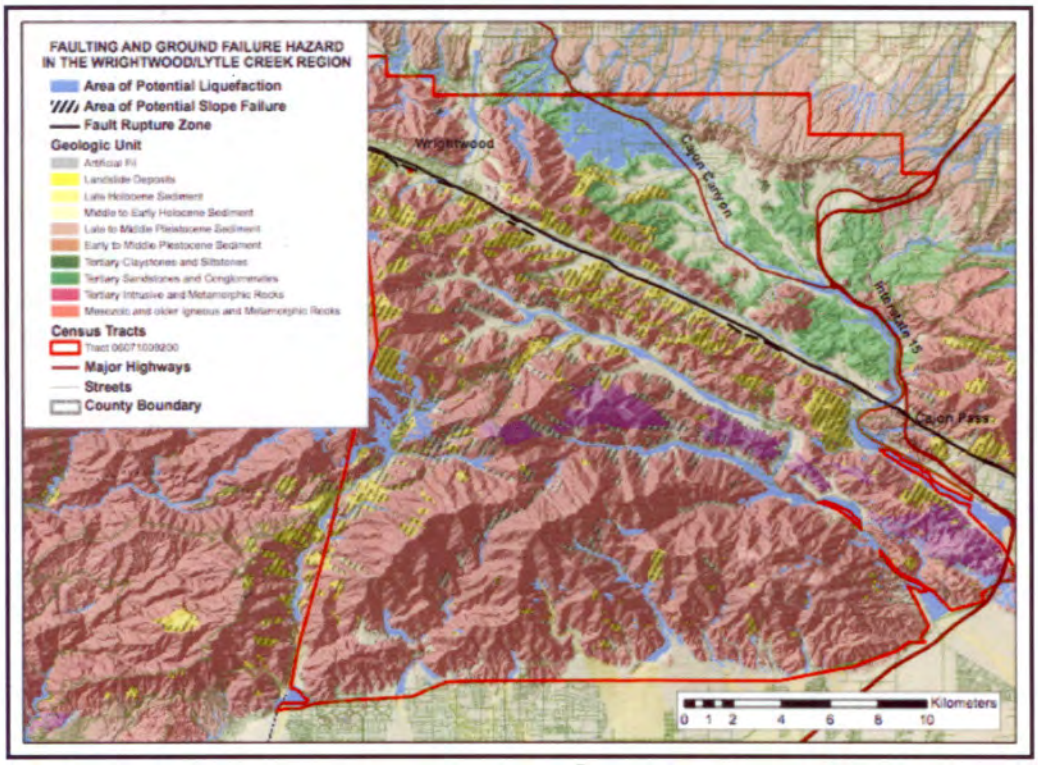


Figure 5.3-27
MAP OF THE EASTERN SAN GABRIEL MOUNTAINS
Source: United States Geological Survey

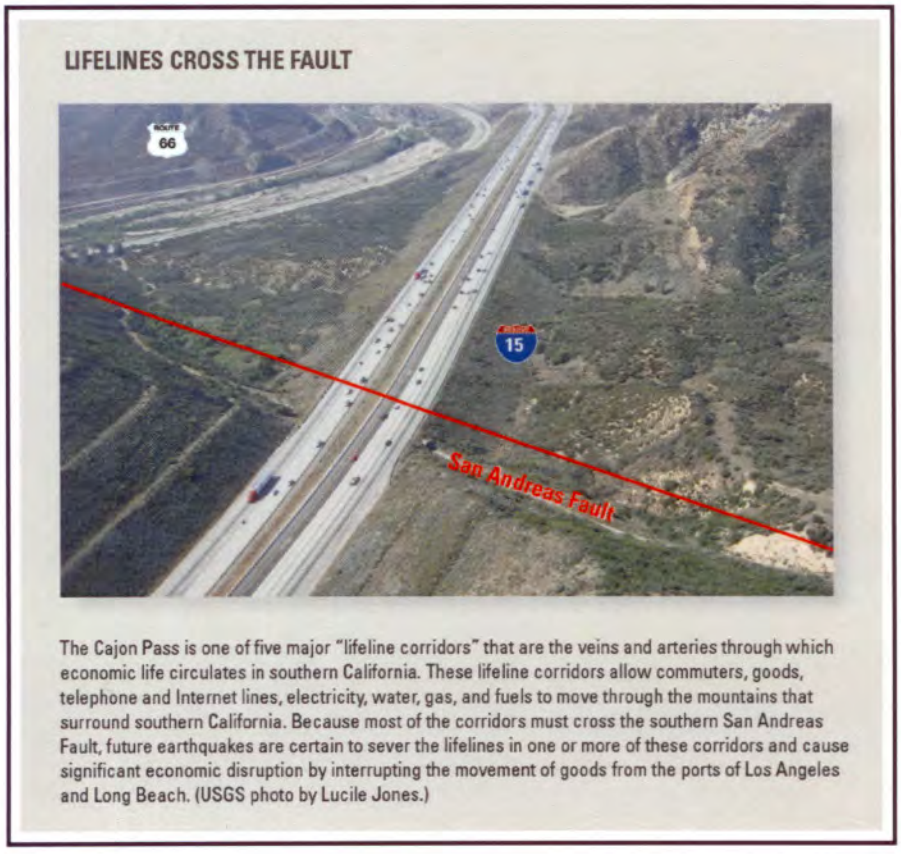
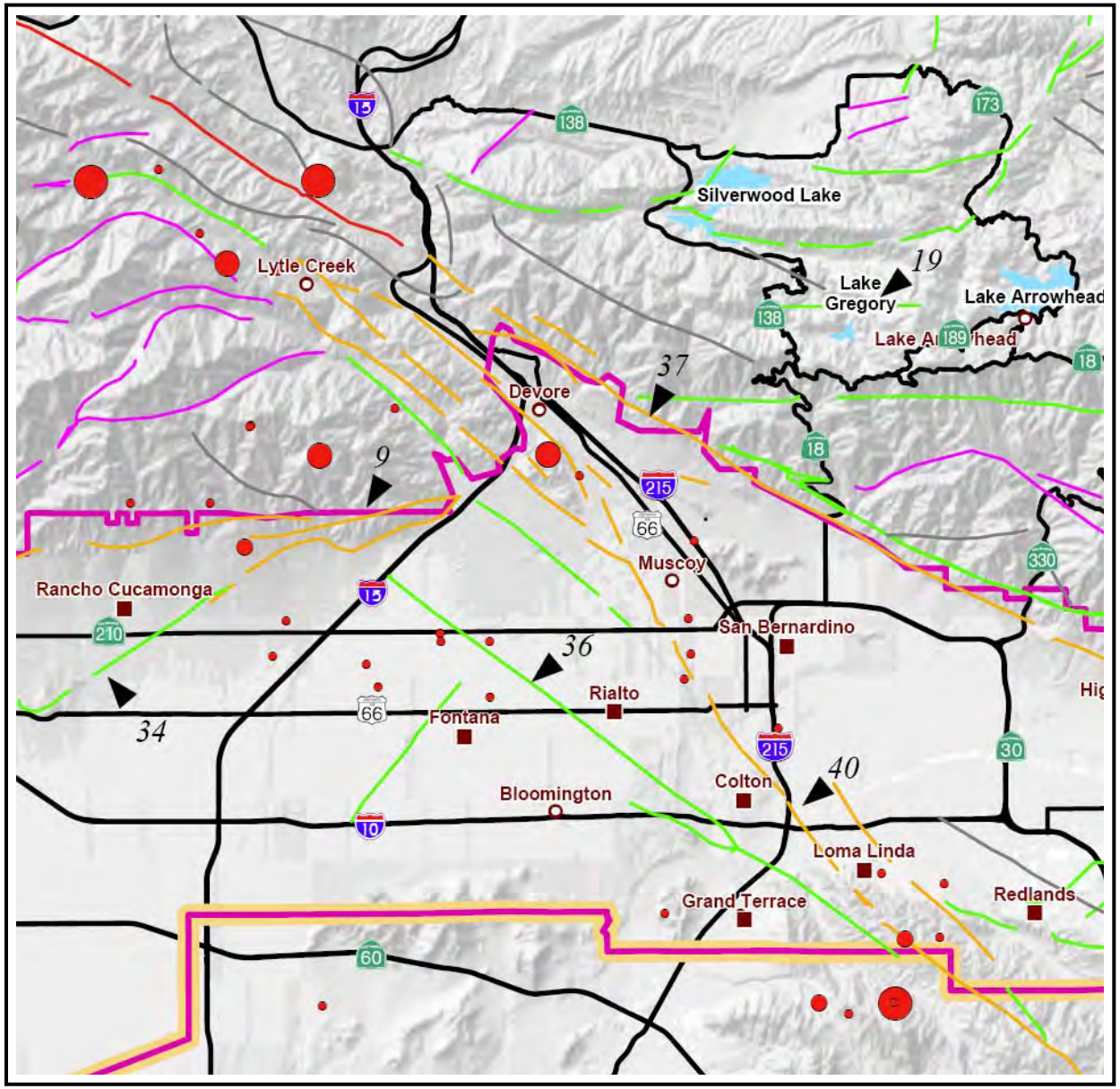


Figure 5.3-28
CAJON PASS LIFELINE CORRIDOR
Source: United States Geological Survey



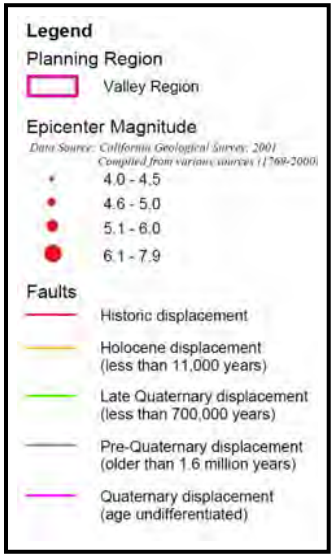
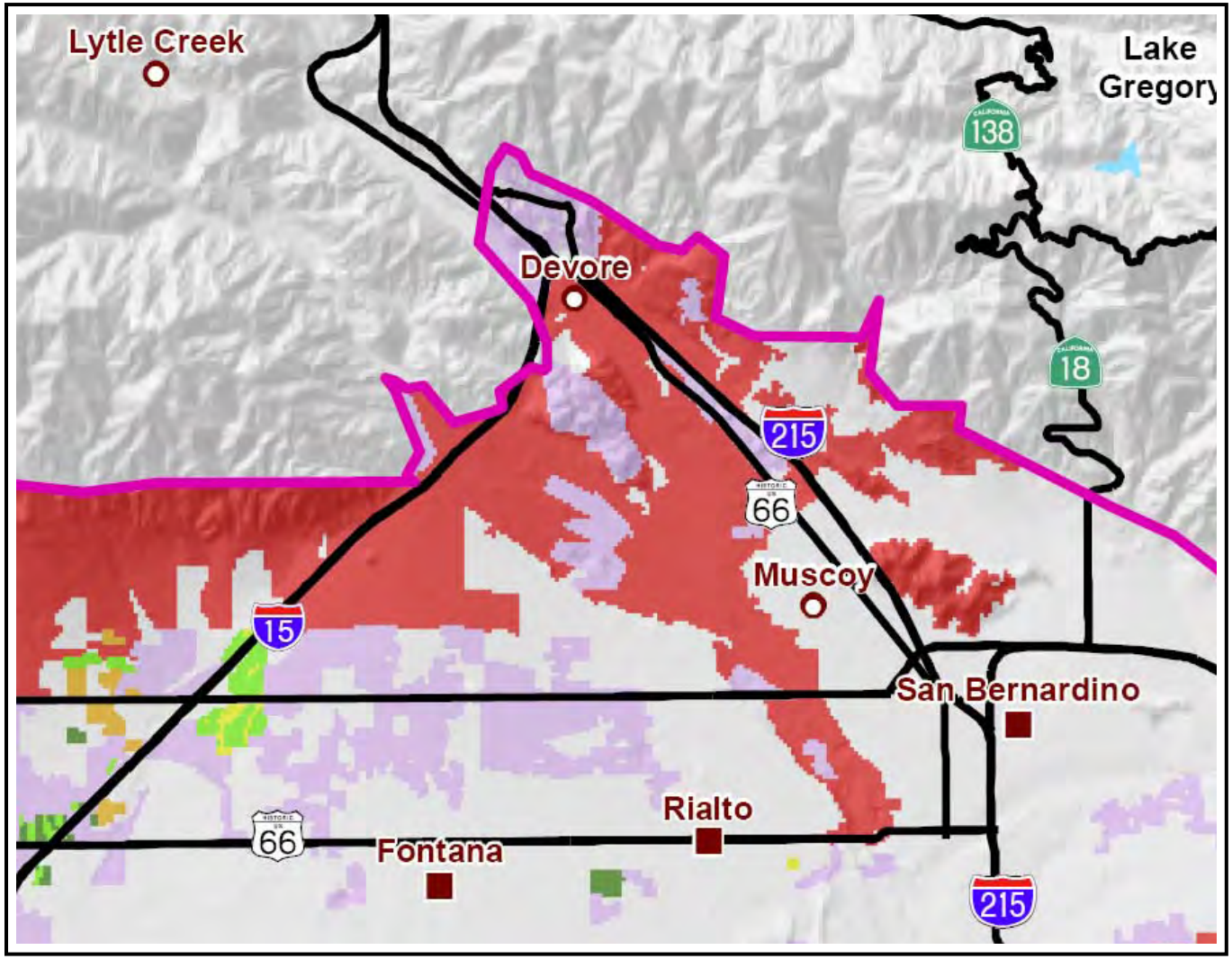


Figure 4.3-29
COUNTY OF SAN BERNARDINO BACKGROUND REPORT FAULT AND EPICENTER MAP
Source: County of San Bernardino



Legend
Planning Region
Valley Region
Farmland
Prime Farmland
Farmland of Statewide Importance
Unique Farmland
Farmland of Local Importance
Grazing Land
Other Land
(Vacant and Nonagricultural)
Williamson Act
Contract Areas

Figure 4.3-30
COUNTY OF SAN BERNARDINO BACKGROUND REPORT PRIME FARMLANDS
Source: County of San Bernardino

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As indicated on the USGS geology maps, a number of map units (surfical deposits) predominately occur on the project site. Each of those units and their corresponding map symbols are identified below.

◊ **Artificial fill** (late Holocene) (Qaf). Sand, gravel, and bedrock from pits, quarries, and excavations related to construction, mining, or quarrying activities; mapped primarily where materials are placed for construction of highways, canals, railroad grades, dams, and water catchment basins. Only large features are mapped; not shown in some places where unit obscures detailed surficial or bedrock relations. Differs from disturbed ground (Qdg) in that generally large amounts of rock and/or sediment have been imported to site.

◊ **Very young wash deposits** (late Holocene) (Qw). Unconsolidated sand and gravel deposits in active washes, ephemeral river channels of axial-valley streams, and in channels on active surfaces of alluvial fans; has fresh flood scours and channel-and-bar morphology. Essentially no soil development. Subject to localized reworking and introduction of new sediment mainly during winter months. In places, especially upper reaches of some drainages, contains clasts several meters across that were deposited by flash floods. Grain shape ranges from angular to rounded; larger clasts tend to be more rounded than smaller clasts. All sediment derived from local bedrock or reworked from local, older Quaternary deposits. In Cajon Was and beds of Lytle Creek and Santa Ana River, clasts are mixed sand to boulders, coarsening toward mountains.

◊ **Young alluvial-fan deposits** (Holocene and late Pleistocene) (Qyf). Unconsolidated to moderately consolidated silt, sand, pebbly cobbly sand, and bouldery alluvial-fan deposits having slightly to moderately dissected surfaces. Young alluvial-fan deposits, including subunits, constitute most widespread, and probably greatest in terms of sediment volume, of all Quaternary units. Forms large and small fans throughout the quadrangle. Covers large areas in upper part of Cajon Canyon. Close to mountains, unit typically contains large proportion of cobbles and boulders.

◊ **Young alluvial-fan deposits, Unit 5** (late Holocene) (Qyf_5). Unconsolidated to slightly consolidated coarse-grained sand to bouldery alluvial-fan deposits having slightly dissected to essentially undissected surfaces. On south side of San Gabriel Mountains, includes large, well formed fan emanating from Lytle Creek drainage; largely boulder alluvium in headwater parts of fan, grading southward into dominantly sand and gravel.

◊ **Mylonitized leucogranite** (Cretaceous) (Kgc). Leucocratic biotitel monzogranite having characteristic mylonitic lineation and foliation defined by ductilely deformed quartz and porphyroclastic feldspar. Pronounced grain-size reduction. Exposed near mouth of Lytle Creek where it is thoroughly fractured and decomposed due to proximity to San Gabriel fault; weathers white. Also common north of Middle Fork Lytle Creek where unit is interlayed with mylonitized quartz diorite, granodiorite, and diorite.[100]

[100]/ *Op. Cit*., Geology Map of the San Bernardino and Santa Ana 30' x 60' Quadrangles, Open File Report 2006-1217, Version 1.0, pp. 79, 80, 83, 84, and 133.

United States Geological Survey Shakeout Scenario

As reported by the USGS: "The question is not if but when southern California will be hit by a major earthquake – one so damaging that it will permanently change lives and livelihoods in the region. How severe the changes will be depends on the actions that individuals, schools, businesses, organizations, communities, and governments take to get ready."[101]

To prepare for that event, the USGS, in combination with the California Geological Survey and the Southern California Earthquake Center, developed the "ShakeOut Scenario," an earthquake model of a magnitude 7.8 earthquake on the southern San Andreas fault, as depicted in Figure 4.3-26 (Southern San Andreas Fault). Geologists selected the details of this hypothetical earthquake by considering the amount of stored strain on that part of the fault with the greatest risk of imminent rupture. Seismologists modeled the ground shaking that would occur and engineers used the shaking to produce a realistic picture of the earthquake's damage to buildings, roads, pipelines, and other infrastructure. Social scientists projected casualties, emergency response, and the impact of the earthquake on southern California's economy and society. The USGS noted that the "earthquake, its damages, and resulting losses are one realistic outcome, deliberately not a worst-case scenario, rather one worth preparing for and mitigating against. . .the ShakeOut earthquake is not a prediction. Certainly, a large earthquake involving this part of the San Andreas fault is highly probable. In fact, scientists have determined that this is the most likely source of a large earthquake in all of California."[102]

The southern San Andreas fault was identified as the most likely source of a very large earthquake in California. The USGS acknowledges that a "magnitude 7.8 is not the largest earthquake that the southern San Andreas fault can produce, nor is the San Andreas the only fault to threaten the populated areas of southern California with large earthquakes. However, those other faults have recurrence intervals (an estimate of the average time) between large earthquakes that are considerably longer, measured in thousands of years. By contrast, the southern San Andreas fault has generated earthquakes of ShakeOut size on average every 150 years – and on a portion of the fault that ruptures in the ShakeOut Scenario, the last earthquake happened more than 300 years ago."[103] The USGS' model concluded that the 7.8 ShakeOut earthquake would cause about 1,800 deaths and $213 billion in economic losses.[104]

Significant economic losses to structures due to landslides appear most likely to occur in the eastern San Gabriel Mountains, between Wrightwood and Cajon Pass. As illustrated in Figure 5.3-27 (Map of the Eastern San Gabriel Mountains), near Wrightwood, existing landslides are mapped near the San Andreas fault that may likely reactivate under strong shaking with some impact to buildings. As illustrated in Figure 5.3-28 (Cajon Pass Lifeline Corridor), the largest concern is, however, likely within the Cajon Pass "lifeline corridor."

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[101]/ Perry, Suzanne, Cox, Dale, Jones, Lucile, Bernknoft, Richard, Goltz, James, Hudnut, Kenneth, Mileti, Dennis, Ponte, Daniel, Porter, Keith, Reichle, Hope S., Shoaf Kimberley, Treiman, Jerry, and Wein, Anne., The ShakeOut Earthquake Scenario – A Story that Southern Californians are Writing, United States Geological Survey and California Geological Survey Special Report 207, Circular 1324, 2008, p. 1.

[102]/ *Ibid*., pp. 1-2.

[103]/ Jones, Lucile M., Bernknopf, Richard, Cox, Dale, Goltz, James, Hudnut, Kenneth, Mileti, Dennis, Perry, Suzanne, Ponti, Daniel, Porter, Keith, Reichle, Michael, Seligson, Hope, Shoaf, Kimberley, Treiman, Jerry, and Wein, Anne, The ShakeOut Scenario, United States Geological Survey Open-File Report 2008-1150 and California Geological Survey Preliminary Report 25, 2008, pp. 2-3.

[104]/ *Ibid*., p. 10.

Two Southern California Gas Company (SoCalGas) transmission pipelines at Cajon Pass rupture at the fault during the main shock event where the offset causes 6.2 meters of compression in the pipe. There is a subsequent explosion, possibly as a result of arcing from current within the pipeline, a current induced by overhead power transmission lines. The CalNev 14-inch product pipeline crosses the fault and also ruptures as a result of significant ground displacement. The CalNev pipeline is transporting gasoline, adding to the fire. The fire reaches the overhead power lines, causing them to break.[105]

Damage to electrical lines and petroleum product pipelines in Cajon Pass is likely to cause fire that spreads to brush-covered mountains. The need to fight urban fires will reduce the resources available to fight wildland ignitions.[106]

After a main shock earthquake event, damaging aftershocks can occur for decades in a broad region around southern California. For the ShakeOut Scenario, ten aftershock scenarios were considered for the first week following the main shock. One aftershock scenario involved a magnitude 7.2 event, seventeen hours after the main shock, on the Cucamonga fault, rupturing along the front of the San Gabriel Mountains. The total rupture area of this event extends about 50 km from Lytle Creek west to near Monrovia. This event would cause substantial damage throughout the San Gabriel Valley, perhaps increasing the financial losses and deaths by 20 to 30 percent.[107]

Surface displacement within the Cajon Pass area is modeled to occur along the principal trace of the San Andreas fault. Ground rupture is proposed to offset rail lines by as much as 4.0 meters, the I-15 Freeway by 2.8 meters, and a number of gas, oil, communication, and power lines by as much as 5.3 meters. Landslides are likely to cause the most significant impact to transportation and utility lifelines in the Cajon Pass area. Seismically-induced settlement could displace the I-15 Freeway by as much as several meters vertically. Rail line could be displaced in several locations. Shallow and deeper landslides could cause failure of power transmission towers along five separate rights-of-way. A 36-inch gas line could be displaced at up to four locations. Other buried petroleum product lines and fiber-optic communication lines are expected to be displaced by landslides and/or buried by debris at multiple locations. Several areas reveal high potential for liquefaction-induced lateral spread.

Estimates of horizontal displacement are as much as 10 meters, affecting railway lines, highways, petroleum and gas pipelines, and fiber-optic communication cables.[108] Significant vulnerabilities exist in the water conveyance systems and in the lifelines that cross the San Andreas fault. The lifelines that cross the fault "will all break when the fault moves." This will disrupt the movement of water, petroleum products, telecommunications, and general transportation.[109]

County of San Bernardino General Plan Background Reports

The County recently completed its comprehensive update to the County General Plan and County Development Code. As part of the planning process, the County prepared a number of "background reports" which serve as reference documents and technical appendices for that

[105]/ *Ibid*., pp. 147-148.
[106]/ *Ibid*., p. 155.
[107]/ *Ibid*., pp. 5 and 88.
[108]/ *Ibid*., p. 101-102.
[109]/ *Ibid.*, pp. 7-8.

planning document. Those reports contain information applicable to an understanding of the project's existing environmental setting and conditions likely to exist in the foreseeable future.
The County's "Safety Background Report" acknowledges that the County lies in a seismically active region of southern California and contains numerous active and potentially active earthquake faults. The report indicates that an "earthquake occurring on one or more of these faults is perhaps the most threatening geologic hazard to the County with respect to life and property loss." [110] The report presents general information concerning the geologic setting of the Valley Region. The Valley Region is described as an area of low relief, consisting predominantly of alluvial plains that range from 1,000-1500 feet AMSL in elevation. Beneath the surface, the region is a deep alluvial-filled basin that receives sediment from the adjacent San Gabriel and San Bernardino Mountains. The report concluded that "because the higher population center is in close proximity to the San Andreas, San Jacinto, and other fault systems, and the associated seismic hazards, the Valley Region is currently most at risk to potential geologic hazards."[111]

The "locations of the potential seismic source faults and earthquake epicenters with magnitudes greater than 3.5" are illustrated, in part, in Figure 4.3-29 (County of San Bernardino Background Report - Fault and Epicenter Map) and presented in Table 4.3-5 (County of San Bernardino Background Report - Summary of Seismic Sources Considered Significant to the County of San Bernardino).[112] The County reports contain some general information on a number of the faults located in proximity to the project site. That information is summarized below.

Table 4.3-5
COUNTY OF SAN BERNARDINO BACKGROUND REPORT
SUMMARY OF SEISMIC SOURCES CONSIDERED SIGNIFICANT
TO THE COUNTY OF SAN BERNARDINO

Fault No.	Fault/Fault Zone Name	Displacement Style	Approximate Fault Length (km)	Estimated Slip Rate (mm/yr)	Estimated Maximum Magnitude	Historic Earthquakes
9	Cucamonga	Thrust	28	5	6.9	-
36	Rialto-Colton	Right-lateral	24	NA	6.5	-
37	San Andreas (San Bernardino)	Right-lateral	103	24	7.5	-
40	San Jacinto (San Bernardino)	Right-lateral	36	12	6.7	M6.3 Loma Linda (7/22/23)

Notes:
1. Fault number corresponds with the fault number locations numbers on Figure 4.3-28 (County of San Bernardino Background Report – Fault and Epicenter Map).

Source: County of San Bernardino

- **San Andreas Fault Zone**. The right-lateral, strike-slip San Andreas fault zone is the longest fault in California, extending about 1,120 km from the Gulf of California to Cape Mendocino. Historically, the fault zone has produced earthquakes up to about M8.0. The fault can be divided into several discrete segments along its length, based on differing seismic characteristics. The segments that traverse the County include the

[110]/ County of San Bernardino, Safety Background Report, June 15, 2005, p. 7-4.
[111]/ *Ibid*., p. 7-18.
[112]/ *Ibid*., Figure 7-1A and Table 7-1, pp. 7-5 and 7-27.

Mojave and San Bernardino Mountain segments. In future earthquakes, these segments may rupture separately or together, as occurred in the 1857 Fort Tejon earthquake (M7.9). The Mojave and San Bernardino Mountain segments are capable of generating about a M7.4 and M7.5 earthquake, respectively. If these segments were to rupture together and with other segments to the north or south, the fault zone could generate a M7.8 to M8.0 earthquake.

- **San Jacinto Fault Zone**. The right-lateral, strike-slip San Jacinto fault zone is a major splay of the San Andreas fault system in southern California, extending approximately 256 km from Wrightwood (where it joints the San Andreas fault) to Superstition Mountain near El Centro. The San Jacinto fault zone is the most active fault zone in southern California and has been associated with several moderate to large historic earthquakes over its length. The largest earthquake event was about a M7.0 in 1918 which caused severe damage to the communities of Hemet and San Jacinto. In the County, the San Jacinto fault zone separates into three sub-parallel branches, commonly known as the Lytle Creek, the San Jacinto, and the Glen Helen faults.

- **Cucamonga Fault**. The Cucamonga fault is a major, north-dipping thrust fault that strikes east-west for about 28 km along the southern boundary of the San Gabriel Mountains. The Cucamonga fault is the easternmost segment of the Sierra Madre fault system which has a total length of about 110 km. The Sierra Madre fault system consists of a series of arcuate 13-30 km long fault segments. About 36 meters of surface displacement has been measured along the Cucamonga fault and a Holocene slip rate of 4.5-5.5 mm/yr has been calculated.[113]

As further indicated in the County's "Conservation Background Report," certain soil types have been identified as meeting the criteria for Prime Farmland, as outlined in the United States Department of Agriculture's "Land Inventory and Monitoring (LIM) Project." Included on the list of qualifying soils is Hanford course sandy loam, 2 to 9 percent slope (HaC).[114] HaC soils have been identified as present on the project site. A portion of those areas identified in the "Conservation Background Report" as "Prime Farmlands – Valley Region" is presented in Figure 4.3-30 (County of San Bernardino Background Report - Prime Farmlands).

As further indicated therein, "the Valley region contains moderate acreage of undeveloped areas suitable for use as either urban agricultural or pasture lands. Soils in the Valley region consist predominately of deep, well drained loams and sandy loams which are amenable to agricultural use. Portions of nine separate soil associations are located within the Valley region, with six of these (comprising approximately 80 percent of the valley area) possessing physical and chemical characteristics suitable for agricultural production."[115]

Liquefaction Susceptibility

During an earthquake, seismic waves travel through and vibrate the ground. In cohesionless granular material having low relative density (e.g., loose sandy sediment), this vibration can disturb the particle framework, leading to increased compaction of the material and reduction of pore space between the framework grains. If the sediment is saturated, water occupying the

[113]/ *Ibid*., pp. 7-29 through 7-31.
[114]/ County of San Bernardino, Conservation Background Report, February 1, 2006, p. 6-102.
[115]/ *Ibid*., p. 6-105.

pore spaces resists this compaction and exerts pore pressure that reduces the contact stress between the sediment grains. With continued shaking, transfer of intergranular stress to pore water can generate poor pressures greater enough to cause the sediment to lose its strength and change from a solid state to a liquefied state. This mechanism can cause various kinds of ground failure at or near the surface (e.g, lateral spreads, flow failures, ground oscillation, and loss of bearing strength). The liquefaction process typically occurs at depths less than 50-feet subsurface, although the most susceptible conditions occur at depths shallower than 30-feet subsurface. Diminished susceptibility as depths increase is due to the increased firmness of deeper sedimentary materials which can be attributable to: (1) increased overburden pressure resulting from the load of overlying sediment layers; and (2) increased geologic age.

Liquefaction of subsurface sediments does not, in itself, pose a hazard or risk to structures or life. The hazard is posed by ground failures that can be induced by liquefaction. Ground failures do not always accompany subsurface liquefaction and many susceptible areas may experience no ground failure at all if the physical effects of liquefaction do not propagate to near-surface zones.

The factors that determine whether sedimentary materials are susceptible to earthquake-induced liquefaction can be grounded into the following three categories: (1) the geotechnical properties of sediment; (2) depth to groundwater; and (3) the intensity and duration of ground shaking.[116]

The San Bernardino Valley region is a broad, gently sloping lowland that flanks the southwest margin of the San Bernardino Mountains. The lowland is underlain by alluvial sediments eroded from bedrock in the adjacent uplands and washed by rivers and streams into the valley region where the sediment has accumulated in layers of gravel, sand, silt, and clay. Sediment accumulation has continued for several million years, during which time an ever-thickening blanket of sediment gradually as buried the original hill and valley topography of the San Bernardino Valley. Deeper parts of the sedimentary fill are older and are well consolidated. The relatively loose near-surface sediments potentially are susceptible to earthquake-induced liquefaction.

Near-surface alluvial sediments of the San Bernardino Valley region accumulated in two depositional regimes: (1) alluvial fans that extend downslope from the mouths of mountain canyons; and (2) river flood plains of the Santa Ana River and Cajon and Lytle Creeks. Although the alluvial-fan deposits tend to be coarser grained and more poorly sorted than the flood-plain deposits, both alluvial suites show considerable range in particle size. Near the mountain front, the deposits consist of sand-bearing cobble and boulder gravel interstratified with layers of sand and gravelly sand. Downstream from the mountain front, the gravelly sediment gradually becomes finer grained. Where the alluvial-fan and flood-plain regimes meet in the vicinity of metropolitan San Bernardino, sand and silt ultimately predominate over subordinate layers of clay and pebbly gravel.[117]

In 1991, the USGS undertook an evaluation of earthquake-induced liquefaction susceptibility of the alluvial sediments of the San Bernardino Valley, including the preparation of maps that zone the region into areas having high to low susceptibility for each of the following three surface-wave magnitude (M_S) scenario earthquakes: (1) M_S8.0 earthquake on the San Andreas fault, (2)

[116]/ Matti, Jonathan, C., and Carson, Scott E., Liquefaction Susceptibility in the San Bernardino Valley and Vicinity, Southern California – A Regional Evaluation, United States Geological Survey Bulletin 1898, 1991, pp. 3-4.
[117]/ *Ibid*., p. 6.

M_S7.0 earthquake on the San Jacinto fault, and (3) a M_S6.75 earthquake on the Cucamonga fault. The evaluation was conducted by using a combination of site-specific (e.g., penetration-resistance data from representative locations) and regional (e.g., susceptible conditions at local sites were linked to particular geologic and hydrologic conditions) techniques.[118]

Three segments of the San Andreas fault occur adjacent to the San Bernardino Valley, the Coachella Valley segment to the southeast, the Mojave Desert segment to the northwest, and the San Bernardino segment that flanks the San Bernardino Mountains and intervenes between the Mojave Desert and Coachella Valley segments. Separately or in combination, the three segments of the San Andreas fault have the potential for generating large earthquakes whose ground-shaking effects could severely affect the San Bernardino Valley region.[119]

A M_S8.0 earthquake on the San Andreas fault is accompanied by elevated (high, moderately high) susceptibility wherever groundwater is shallow. Within 0-4 miles of the fault, the overall susceptibility of sands and silty sands is high, even where groundwater is as deep as 30-50 feet below the surface. For areas 4-8 miles from the fault, overall susceptibility remains high where groundwater is shallower than 10 feet subsurface but declines to moderate where groundwater is deeper. At all distances from the fault, silty sediments have lower susceptibility than sandy sediments but the numerical abundance of sandy sediments at most locations tends to increase the overall susceptibility rating even at deeper ground-water levels.[120]

The San Jacinto fault southeast of Riverside is thought to have generated two M6.5 to 7.0 earthquakes in 1899 and 1918. The likely length of fault rupture along the San Bernardino segment is unknown because none of the earthquakes attributable to it have generated surface rupture. A minimum rupture from the mouth of Lytle Creek to the head of Reche Canyon would be about 25 km and would lead to a magnitude range of about 6.7 to 7.0. A larger 35-km rupture involving co-seismic displacement on the Glen Helen and San Jacinto faults between Cajon Pass and the head of Reche Canyon would lead to magnitude in the range of 7.0 to 7.2. Even greater magnitudes would develop if both the San Bernardino Valley and San Jacinto Valley segments were to rupture co-seismically.[121]

A M_S7.0 earthquake on the San Jacinto fault is accompanied by susceptibilities whose intensities vary with fault distance and ground-water conditions. Elevated susceptibilities (high, moderately high) occur within 0-4 miles of the fault wherever groundwater is shallower than 20 feet and within 4-8 miles of the fault wherever groundwater is between 2-50 feet subsurface. Within 4-8 miles of the fault, susceptibilities decline to moderate and low where groundwater is between 30-50 feet subsurface. In general, silty sediments appear to be less susceptible than sandy samples, especially at ground-water levels below 30 feet subsurface.

The Cucamonga fault is part of a family of reverse and thrust faults in southern California that are responsible for the Pleistocene and Holocene uplift of mountainous regions, including the San Gabriel and San Bernardino Mountains. The fault is not known to have generated a significant earthquake in historic time but a series of fault scarps in Holocene and uppermost Pleistoncene alluvial-fan deposits at the southeastern base of the San Gabriel Mountains attests to a succession of ground-rupturing earthquakes in the recent geologic past.[122]

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[118]/ *Ibid*, p. 1.
[119]/ *Ibid*, p. 8.
[120]/ *Ibid*, p. 1.
[121]/ *Ibid*, p. 10.
[122]/ *Ibid*, p. 10.

Elevated susceptibilities accompanying a M_S6.75 earthquake on the Cucamonga fault are not as widespread as those for larger earthquakes on the San Andreas and San Jacinto faults. Within 0-4 miles of the fault, susceptibilities probably are high and moderately high where groundwater is shallow but, because penetration data from this fault-distance interval were not available during that investigation, the ratings are inferred on the basis of their comparison with susceptibility results from equivalent ground-water intervals at greater distance from the fault. At all distances between 4-15 miles of the fault, high or moderately high susceptibility occurs wherever groundwater is shallower than 10 feet but susceptibilities decline to moderate and low where groundwater is deeper than 10 feet subsurface.

The shape and size of the susceptibility zones are controlled largely by depth to groundwater and distance to the causative fault, although the age and type of sediment also influences it susceptibility. The main zones or susceptibility are underlain by recently deposited Holocene sediments that would be expected to have lower penetration resistance and higher susceptibility than older sediments. However, even the older Holocene and uppermost Pleistocene sediments have elevated susceptibility comparable to those in the younger deposits, thus accounting for the zones of high and moderately high susceptibility that extend away from the modern flood plains and into adjacent areas underlain by older deposits. Additional areas of elevated susceptibility occur in isolated zones downstream from the mouths of canyons along the base of the San Bernardino Mountains. [123]

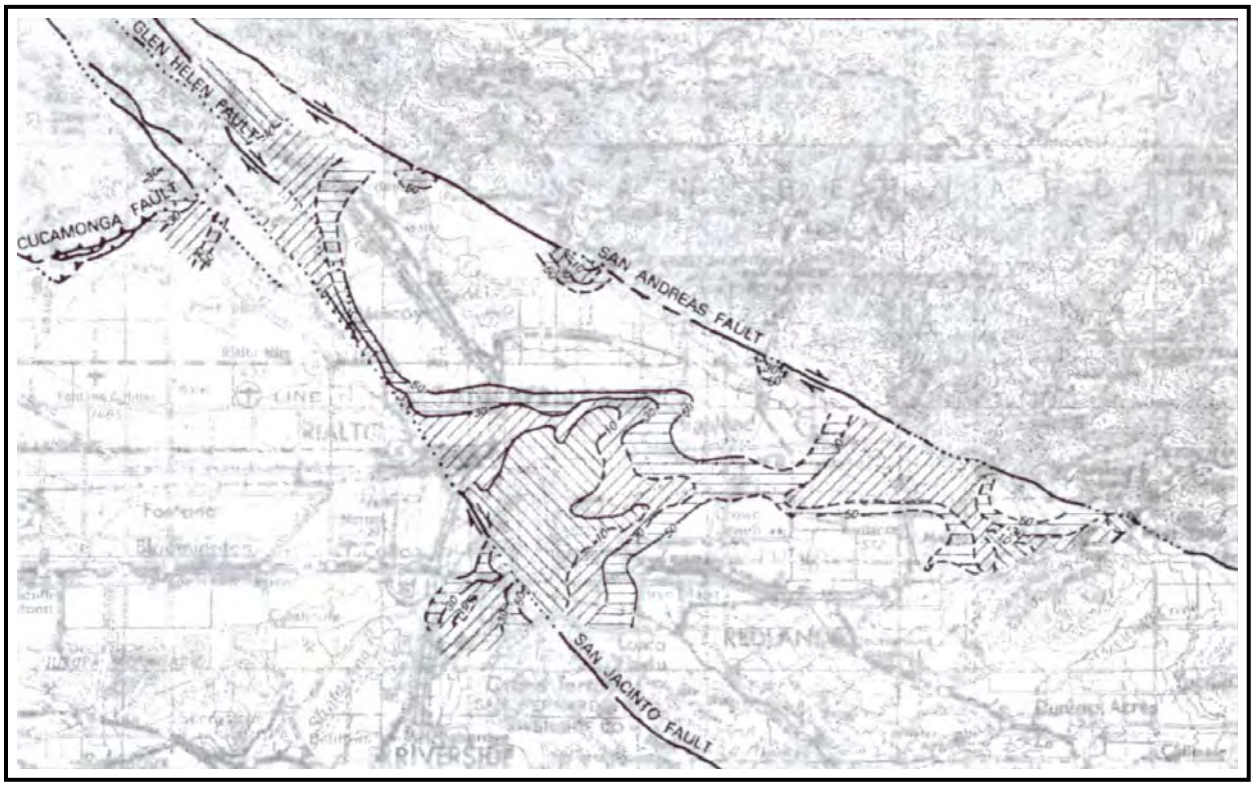
The liquefaction susceptibility map presented in Figure 4.3-31 (Preliminary Estimate of Liquefaction-Induced Ground-Failure Potential for the San Bernardino Valley)[124] are designed to reveal areas where liquefaction has any significant possibility of occurring and to distinguish those areas from those where susceptibility to liquefaction is minimal. Based on the analysis and mapping produced by Matti and Carson, the liquefaction susceptibility potential for each of the project's proposed neighborhoods can be rated based on the three earthquake scenarios. Presented in Table 4.3-6 (Earthquake-Induced Liquefaction Susceptibility Potential) is the earthquake-induced liquefaction susceptibility categorization for each of the four neighborhoods comprising the project site based on earthquakes originating along the Cucamonga, San Jacinto, and San Andreas faults.

Table 4.3-6
EARTHQUAKE-INDUCED LIQUEFACTION SUSCEPTIBILITY POTENTIAL

Neighborhood	Liquefaction Susceptibility		
	MS6.75 Cucamonga Fault	**MS7.0 San Jacinto Fault**	**MS8.0 San Andreas Fault**
I	Moderately High Susceptibility	High Susceptibility	Moderate Susceptibility
II	Low to Moderate and Low Susceptibility	Moderate to Low and Low Susceptibility	Moderate and Moderately High to Moderate Susceptibility
III	Low to Moderately High Susceptibility	Moderate to High Susceptibility	Low, Moderate, and High Susceptibility
IV	Low to Moderately High Susceptibility	High Susceptibility	Moderate Susceptibility

Source: United States Geological Survey

[123]/ *Ibid*., p. 1.
[124]/ *Ibid*, Figure 13, p. 35.



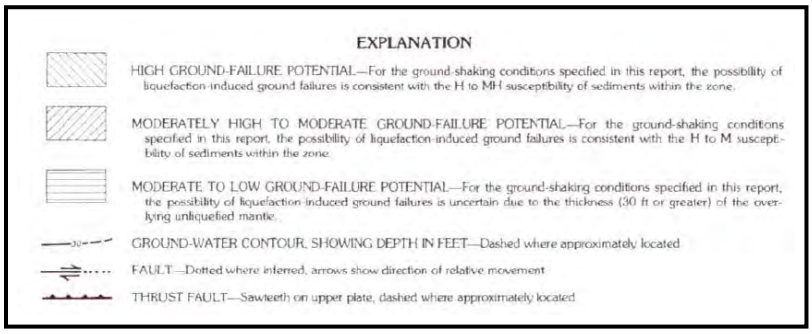


Figure 4.3-31
PRELIMINARY ESTIMATE OF LIQUEFACTION-INDUCED GROUND-FAILURE POTENTIAL FOR THE SAN BERNARDINO VALLEY
Source: United States Geological Survey

4.3.3.2 Local Setting

At the topographic apex,[125] Lytle Creek drains approximately 50 square miles of the San Gabriel Mountains, which are composed of highly fractured rock at steep slopes. Erosion from the watershed produces a high yield of very course sediment. The fan slope is almost three percent. The main channel is incised as it leaves the mountains. This fan is one of a series that consist of unconsolidated alluvial deposits to the south of the Sierra Madre-Cucamonga fault zone. The piedmont is a complex bajada with several trenched and untrenched alluvial fans. The fan is composed of gravelly and bouldery granitic alluvium and other sediment, including limestone, schist, and volcanic fragments of the San Gabriel Mountains. The soil is composed of stony loamy sand deposits on alluvial fans.

[125]/ The topographic apex is the point where the channel is confined at a relatively constant and narrow width downstream of which the limits of the confining hillsides expand to allow the formation of a fan wider than the self-forming natural channel.

The landform has the appearance of a cone nearly fully extended. The concentric contours are convex downslope, with some lateral restriction on the east side. The apex of this fan is at the southern front of the San Gabriel Mountains, near the eastern edge of the Cucamonga scarp. Differential movement is suggested by the steeping of the elevation profile as the stream emerges from the confines of the V-shaped canyon upstream of the I-15 Freeway. Much of the topographic break is also associated with the lateral unconfinement as the stream leaves the confines of the steep mountain canyon onto the piedmont. The alluvial fan is broad and long and the eastern lateral bounds are at the mountain in the upper part and at Cajon Creek in the middle and lower parts of the fan. The western boundary is at a swale where the fan coalesces with the San Sevaine Canyon, Etiwanda Creek, and Day Creek fans. These boundaries are roughly defined on the NRCS' soil survey maps, which identify several soils as those of an alluvial fan.[126]

Soil Survey

Soil surveys for southwestern San Bernardino County have been conducted by the SCS, now the NRCS, a division of the United States Department of Agriculture.[127] Soil surveys serve to delineate soil boundaries and provide general information on the characteristics of individual soil types. This information is intended for general land use planning and management decisions at the community level. Soil surveys includes information on the suitability of soils for building sites, roads, septic tank absorption, wildlife habitat, recreation, agriculture, and construction materials. Soils are generally rated as having slight, moderate, or severe limitations for a particular use. As described below and as illustrated in Figure 4.3-32 (Soils Survey Map), the project site contains the following soils associations.

- **Soboba – stoney loamy sand, 2-9 percent slopes** (SpC). The Soboba series consists of excessively drained, nearly level to moderately sloping soils. These soils are formed on alluvial fans in granitic alluvium. Elevation is 900-2,200 feet. Vegetation is chamise, annual grasses, and forbs. In a representative profile, the surface layer is grayish-brown stony loamy sand about 10 inches thick. These soils are very rapidly permeable. This gently sloping to moderately sloping soil (SpC) is on long, broad, smooth alluvial fans. It has the profile described as representative of the series. Included with it in mapping are small areas (20-40 acres in size) where slopes are 0-2 percent. Also included are random patches of areas of Tujunga gravelly loamy sand. Runoff is slow and the hazard of erosion is slight. The Sobaba soil is used mainly for dry farmed seeded pastures. Some areas are used for citrus.

- **Tujunga – gravelly, loamy sand, 0-9 percent slopes** (TvC). The Tujunga series consists of somewhat excessively drained, nearly level to moderately sloping soils that formed on alluvial fans in granitic alluvium. Slopes are 0-9 percent. Elevation is 1,000-2,000 feet. Vegetation is thin stands of chamise, some big sage brush, and annual grasses and forbs. In a representative profile, the soil is brown loamy sand and pale-brown coarse sand that extends to a depth of 60 inches or more. The Tujunga soils are rapidly permeable.

[126]/ Committee on Alluvial Fan Flooding, Alluvial fan Flooding, National Research Council, 1996, pp. 96-98.
[127]/ United States Department of Agriculture, Soil Survey of San Bernardino County, Southwestern Part, Soil Conservation Service, January 1980, Devore and San Bernardino North Quadrangles.

This nearly level to moderately sloping soil (TvC) occurs on long, broad, smooth alluvial fans. It has a profile similar to that described as representative of the series but the content of fine gravel, to a depth of 36-40 inches, is about 15-30 percent by volume. Included with this soil in mapping are areas of Sobaba gravelly loamy sand. Also included are areas of Delhi fine sand. Runoff is very slow to slow. Available water capacity is 3-4 inches. The hazard of erosion is slight because of the gravelly surface layer. This Tujunga soil is used for irrigated small grains and pasture plants. It is a favored soil for lemons in the west end of the survey area, north of Foothill Boulevard.

- **Hanford – course, sandy loam, 2-9 percent slopes** (HaC). The Hanford series consists of well-drained, nearly level to strongly sloping soils that formed in recent granitic alluvium on valley floors and alluvial fans. Slopes are 0-15 percent. Elevation is 1,000-1,800 feet. Vegetation is mainly annual grasses and forbs. In a representative profile, the soil material is pale-brown and very pale brown sandy loam to a depth of 60 inches or more. This material is slightly acid to neutral throughout. These soils are moderately rapidly permeable. Available water capacity is about 7-8 inches.

  This gently sloping to moderately sloping soil (HaC) occupies alluvial fans. It has a profile similar to the one described as representative of the series but the suface layer is light brownish-grey course sandy loam about 10 inches thick. Included with it in mapping are areas of Greenfield sandy loam that make up as much as 10 percent of the total mapped area. Also included are patches of Tujunga loamy sand, 0-5 percent slopes. Runoff is slow to medium and the hazard of erosion is slight to moderate where the soil is left unprotected. This Hanford soil is used for irrigated crops, such as citrus and alfalfa. It also is used for dry farmed small grains and pasture plants. Homesites and other related uses are also important.

- **Cieneba – rock outcrop, complex** (Cr). The Cieneba series consists of somewhat excessively drained, strongly sloping to steep soils. These soils formed on uplands in material weathered from granitic rock. Slopes are 9-50 percent. Elevation is 1,000-2,000 feet. Vegetation is chaparral, chamise, and annual grasses and forbs. In a representative profile, the surface layer is brown, slightly acid sandy loam about 8 inches thick. These soils are rapidly permeable. Available water capacity is about 1-3 inches. This steep complex (Cr) occupies area on uplands. It is about 60 percent Cieneba sandy loam, 30-50 percent slopes, and 30 percent granitic rock outcrops. The Cieneba soil occurs at random throughout each mapped area but rock outcrops are generally along the ridgetops and north-facing slopes. The Cieneba soil has the profile describes as representative of the series. Included with this complex in mapping are small areas of soil that have moderate sheet and rill erosion, places where slopes exceed 50 percent, and small areas where slopes are 15-25 percent. Also included are small areas that consist mainly of rock outcrop. Runoff is rapid and the hazard of erosion is moderate if soils are burned over or overgrazed. This complex is used chiefly for grazing during spring and for watershed.

- **Cieneba sandy loam, 9-15 percent slopes** (CnD). This stongly sloping soil is in small areas on foothills throughout the uplands. Included with it in mapping area a few rock outcrops and small patches of soils that have moderate sheet and rill erosion. Runoff is medium and the hazard of erosion is moderate if the soil is protected or not overgrazed. If this soil is left bare, burned over, or expose during engineering construction, the

hazard of erosion can be high. This soil is used mainly for dryfarmed grains and pasture. Some areas are used for homesites and other community uses.

- **Psamments and fluvents, frequently flooded** (Ps). This series consists of sandy and gravelly material in intermittent streambeds. Some areas consist of cobbles, stones, and boulders. During each flood, alluvium from streambanks is freshly deposited and partly reworked. Areas of this mapping unit have no value for farming. Their main use is as a source for sand and gravel for construction material. Vegetation is very limited, consisting mainly of a scantly growth of annual grasses and forbs and a few willow and cottonwood trees.

Many of these soils association are classified as "Capability Unit III" soils, defined as soils that have severe limitations that reduce the choice of plants, frequently requiring the use of special conservation practices, have moderately steep slopes, high susceptibility to wind or water erosion, overflows that may result in crop damage, only slightly permeable subsoil, a shallow depth to rock or hardpan, which restricts rooting, poor fertility and moderate salinity or alkalinity, either all in combination or singly. They may be used for cultivated crops, pasture, forest, range, or wildlife. Management of these soils must be very good if they are to remain productive.[128]

As indicated by the CDC, Hanford – course, sandy loam, 2-9 percent slope (HaC) has been identified as a soil mapping unit meeting the criteria for prime farmland, as outlined by the United States Department of Agriculture's Land Inventory and Monitoring (LIM) Project for San Bernardino County, southwestern part.[129] This soil is classified as "Capability Unit IIe-1 Irrigated." As described by the NRCS, this capacity unit consists of very deep, well-drained, gently sloping to moderately sloping soils of the Hanford and other series. These soils occupy alluvial fans and terraces. Available water capacity is more than 5.0 inches. The surface layer ranges from slightly acid to moderately alkaline. Some of the soils are calcareous throughout. These soils are well suited to all crops that are suitable for the climate of the area. Good management is needed to keep erosion to a minimum.[130]

As indicated in the County's "Hydrology Manual," watershed outflow is a function of precipitation, watershed losses, and routing processes. Watershed losses are considered to be depression storage, vegetation interception and transpiration, minor amounts of evaporation, and infiltration. Infiltration is the process of water entering the soil surface and percolating downward into the soil where it is stored during a precipitation event. Subsequently, the stored soil water may be consumptively used by vegetation, percolate further downward to groundwater storage, or exit the soil surface as seeps or springs.

The major factor affecting loss rates is the nature of the soil itself. The soil surface characteristics, its ability to transmit water to subsurface layers, and total storage capacity are all major factors in controlling the infiltration rate and initial abstraction parameter values of a particular soil. Soils are classified into the following four hydrologic soil groups: (1) Group A – Low runoff potential; soils having high infiltration rates even when thoroughly wetted and consisting chiefly of deep, well-drained sands or gravels; these soils have a high rate of water transmission; (2) Group B – Soils having moderate infiltration rates when thoroughly wetted and

[128]/ *Ibid*, Table C-1 (S.C.S. Soil Names for Hydrologic Classifications), pp. C-30 through C-50.
[129]/ California Department of Conservation, Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, San Bernardino County, Farmland Mapping and Monitoring Program, August 1, 1995, updated August 23, 2005, p. 1.
[130]/ *Op. Cit*., Soil Survey of San Bernardino County, Southwestern Part, p. 30.

consisting chiefly of moderately deep to deep, moderately well to well drained sandy-loam soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission; (3) Group C – Soils having slow infiltration rates when thoroughly wetted and consisting chiefly of silty-loam soils with a layer that impedes downward movement of water or soils with moderate fine to fine texture; these soils have a slow rate of water transmission; (4) Group D – High runoff potential; soils having very slow infiltration rates when thoroughly wetted and consisting chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with claypan or clay layer at or near the surface, and shallow soils over nearly impervious material; these soils have a very slow rate of water transmission.[131]

Maps have been prepared which designate the location of the various soil groups within the County. The applicable soil group map depicting the project site is presented in Figure 4.3-33 (Hydrologic Soils Group Map for Southwest-A Area).[132] As indicated in the County "Hydrology Manual," the soil group classifications for the primary soil groups found on the project site are: Sobaba – Group A, Tujunga – Group A, Hanford – Group B, and Cieneba – Group C.

A variety of laboratory testing procedures have been utilized during previous studies by GSI and others.[133] These tests served to generally classify and evaluate soil parameters for earth materials exposed throughout the site area. In general, site soils are typically very low to low in expansive potential, although soils with medium to high or very high expansion characteristics may locally exist, including PA 8 in Sycamore Flat (Neighborhood I). Variations may occur and additional expansion index testing should be performed during future development to further evaluate conditions subsequent to grading.

Site soils typically have negligible sulfate contents and are slightly to medium acidic with respect to soil pH. Such soils are not generally problematic with respect to concrete and ferrous metals, where in contact. Additional testing of site materials and evaluation by a corrosion engineer is recommended during future geotechnical studies and when proposed grading is complete, to further evaluate these findings.[134]

Mineral Resources

The CDC reports that, "[a]s a construction material, sand and gravel is a key component in products such as Portland cement concrete, asphaltic concrete (blacktop), railroad ballast, stucco, road base, and fill. Aggregate normally provides from 80 to 100 percent of the material volume in these products. Portland cement concrete, in turn, is also used in a number of building materials such as concrete blocks and pipes, foundation pilings, precast concrete beams, and tilt-up concrete walls. In total, aggregate as a basic construction material has important economic multiplier effects. The availability of aggregate is essential, for example, to the construction industry. Developers, building and highway contractors, cement manufacturers, asphalt producers, construction workers, and truck drivers are dependent, either directly or

[131]/ San Bernardino County Flood Control District (Williamson and Schmid), Hydrology Manual, August 1986, pp. C-1 and C-2.

[132]/ *Ibid*., Figure C-13 (Hydrologic Soils Group Map for Southwest-A Area), p. C-26.

[133]/ Typical testing included moisture-density, laboratory maximum densities, consolidation testing, shear testing, expansion index testing, and corrosion.

[134]/ GeoSoils, Inc., EIR Level Geotechnical Review, Lytle Creek Ranch Land Use Plan, City of Rialto, San Bernardino County, California, May 22, 2008.

indirectly, on a ready supply of aggregate. Therefore, the availability of aggregate deposits and their proximity to markets are critical factors in the strength of the economy."[135]

As indicated in the SR 143 VII Report and as illustrated in Figure 4.3-34 (San Bernardino Production-Consumption Region),[136] the project site is located within the SBPC Region. The SBPC Region is the largest area of the seven production-consumption (P-C) regions in the greater Los Angeles area. The SBPC Region is bordered on the west by the Claremont-Upland and Orange County-Temescal Valley P-C Regions and on the east by the Palmdale P-C Region. Several areas within the SBPC Region have been classified as MRZ-2.[137]

Thirteen parcels, identified as "Sector B" (14 CCR 3550.8), covering the non-urbanized portion of Lytle Creek from north of the I-15 Freeway to west to the City of San Bernardino, have been designated as "regionally significant"[138] by the CDC (14 CCR 2790). Those thirteen areas are illustrated in Figure 4.3-35 (Regionally Significant Construction Aggregate Resource Areas in the San Bernardino P-C Region).[139] As of 1987, the estimated quantity of aggregate resources located in "Sector B" is presented in Table 4.3-7 (Data on Resource Areas and Sectors - San Bernardino P-C Region).[140] The CDC estimates that there exists 6,888+ million short tons of aggregate resources within the San Bernardino P-C Region, including 860 million short tons in "Sector A," 912 million short tons in "Sector B, and 624 million short tons in "Sector C."[141,142]

Map Sheet 52, as illustrated in part in Figure 4.3-19 (California Department of Conservation - Aggregate Availability in California [Map Sheet 52]) and as published in 2006, supersedes the information presented in the SR 143 VII Report as to demand, aggregate availability, and other factors that impact the resource zone. Since its publication in 1987, the character and landscape in the vicinity of Sector B (Sectors B-1 and B-5) as described in the SR 143 VII Report has dramatically changed. Since 1987, some areas in the southern part of the SBPC Region have been utilizing necessary construction aggregates extracted from the Temescal Valley area in southwestern Riverside County. As depicted in Map Sheet 52, reserves are presently being utilized from the Upland Claremont P-C Region for the western portions of the SBPC Region. Additional construction aggregate resources are hauled from the Barstow-Victorville P-C Region to San Bernardino.

According to Map Sheet 52, the Barstow-Victorville P-C Region has 74 percent of its necessary permitted aggregate reserves to meet the 50-year demand criteria. This region is currently hauling construction aggregates to the SBPC Region area, thus relieving this area when demand is high for aggregates. Additionally, the Claremont-Upland P-C Region has traditionally and continues to routinely haul construction-grade aggregates to the SBPC Region.

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[135]/ California Department of Conservation, Division of Mines and Geology, Designation of Regionally Significant Construction Aggregate Resource Areas in the Claremont-Upland and San Bernardino Production-Consumption Regions, SMARA Designation Report No. 5, January 1987, p. 3.

[136]/ *Op. Cit.*, Mineral Land Classification of the Greater Los Angeles Area, Special Report 143, Part VII, Figure 7.3, p. 8.

[137]/ *Op. Cit.*, Designation of Regionally Significant Construction Aggregate Resource Areas in the Claremont-Upland and San Bernardino Production-Consumption Regions, SMARA Designation Report No. 5, January 1987, p. 11.

[138]/ *Ibid.*, p. 12.

[139]/ *Ibid.*, Plates 2, 3, and 7.

[140]/ *Ibid.*, Table II, p. 16.

[141]/ *Ibid.*, Table II, pp. 16-18.

[142]/ A short ton is equal to 2,000 pounds.

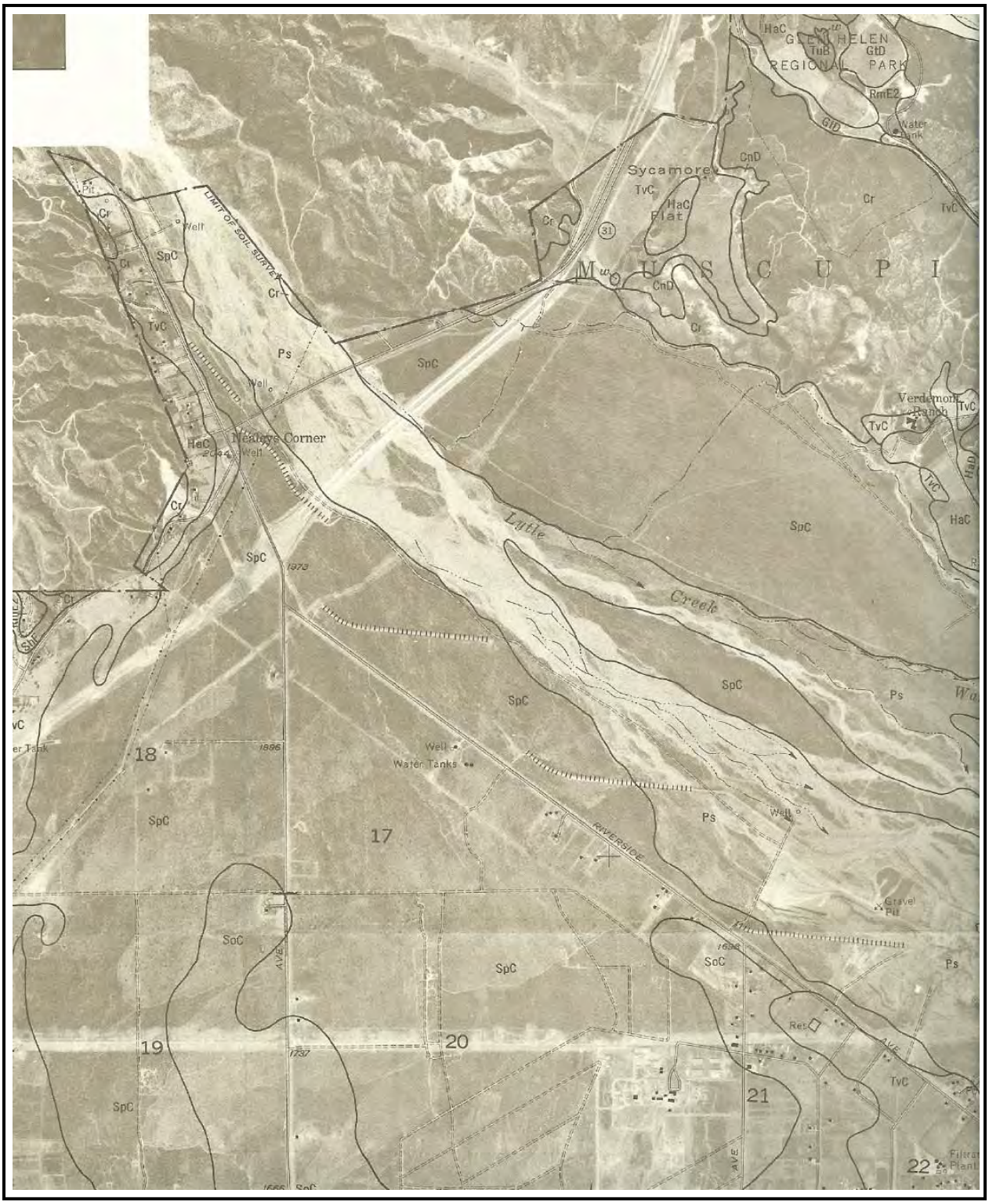

Figure 4.3-32 (1 of 2)
SOILS SURVEY MAP - DEVORE QUADRANGLE
Source: Natural Resources Conservation Service

Figure 4.3-32 (2 of 2)
SOILS SURVEY MAP
SAN BERNARDINO NORTH QUADRANGLE
Source: Natural Resources Conservation Service

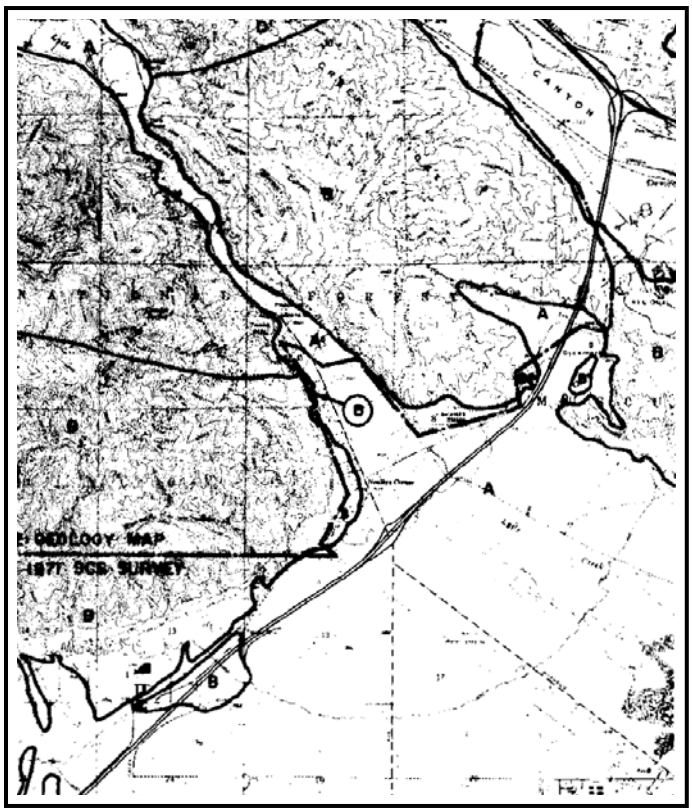

Figure 4.3-33
HYDROLOGIC SOILS GROUP MAP FOR SOUTHWEST- A AREA
Source: San Bernardino County

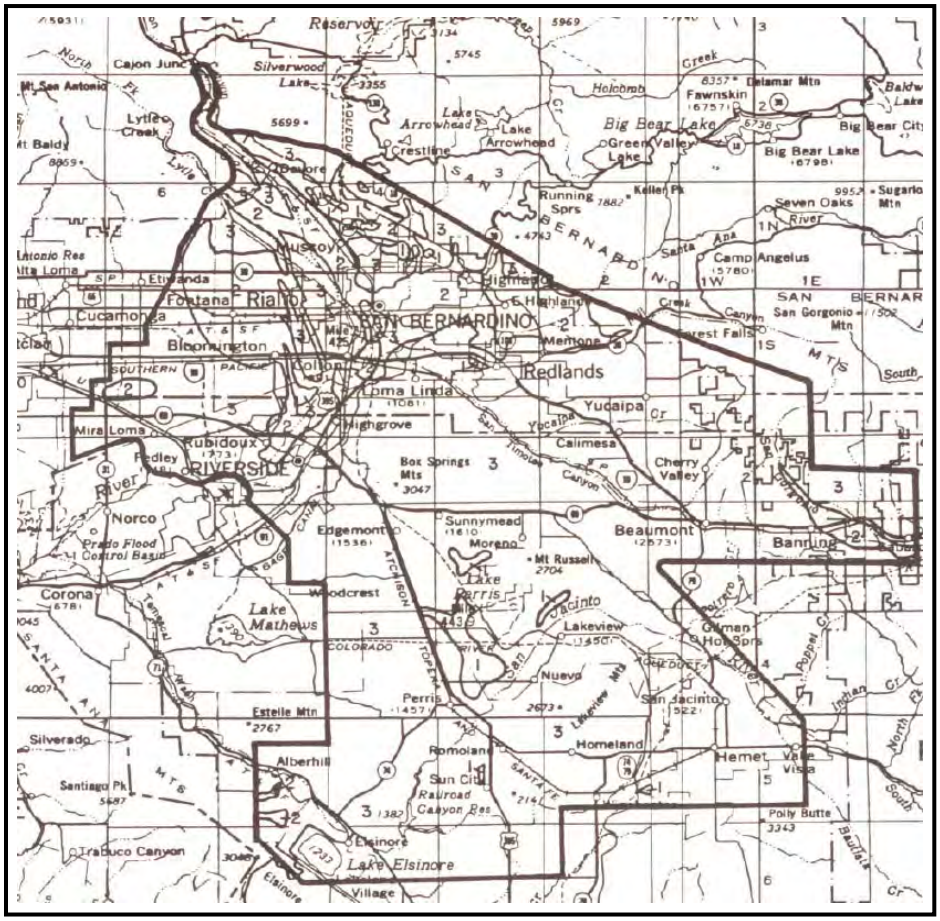

Figure 4.3-34
SAN BERNARDINO PRODUCTION-CONSUMPTION REGION
Source: California Department of Conservation

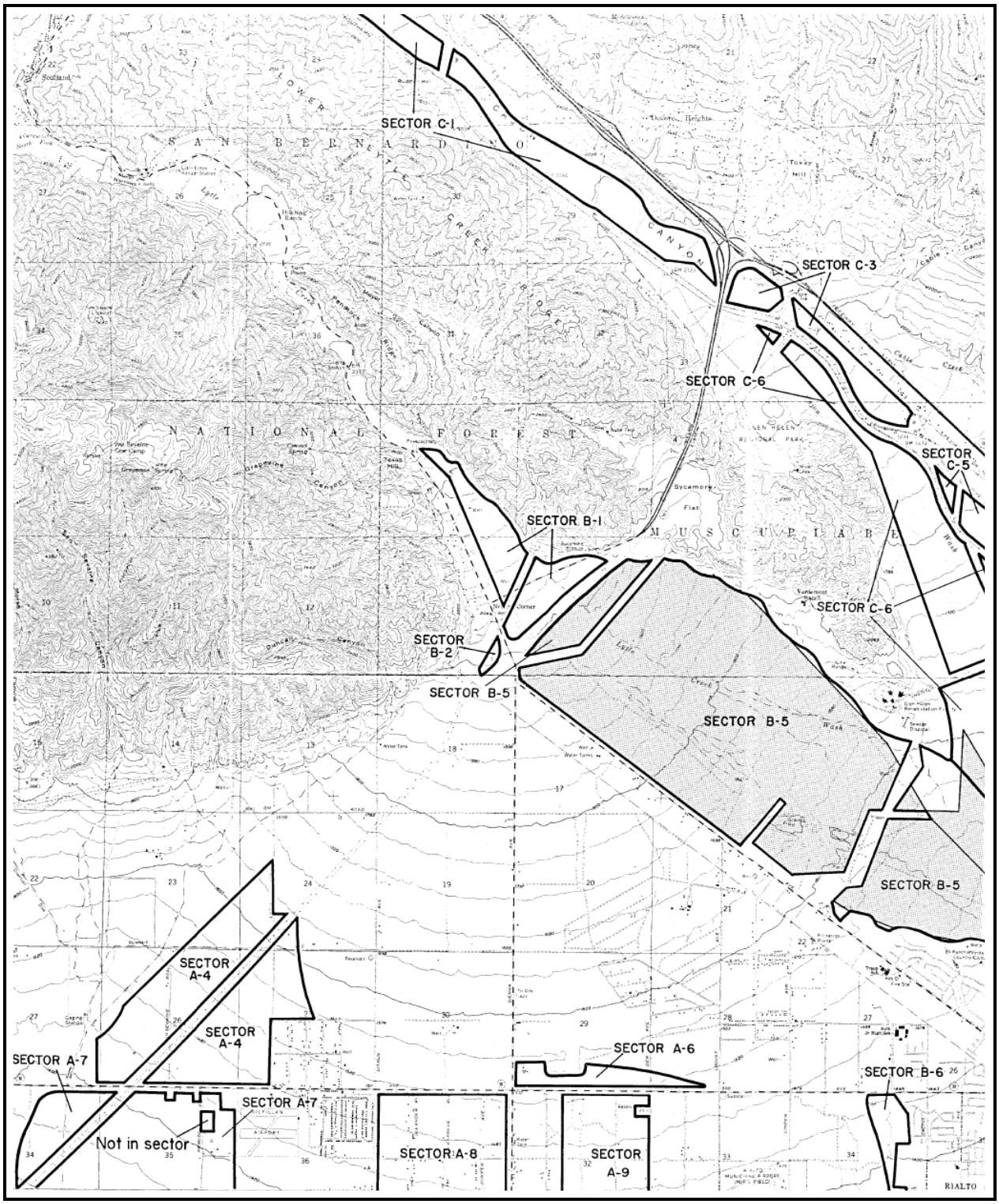

Figure 4.3-35 (1 of 3)
REGIONALLY SIGNIFICANT CONSTRUCTION AGGREGATE RESOURCE AREAS IN THE SAN BERNARDINO PC-REGION - SMARA DESIGNATION REPORT NO. 5 - PLATE 2
Source: California Department of Conservation

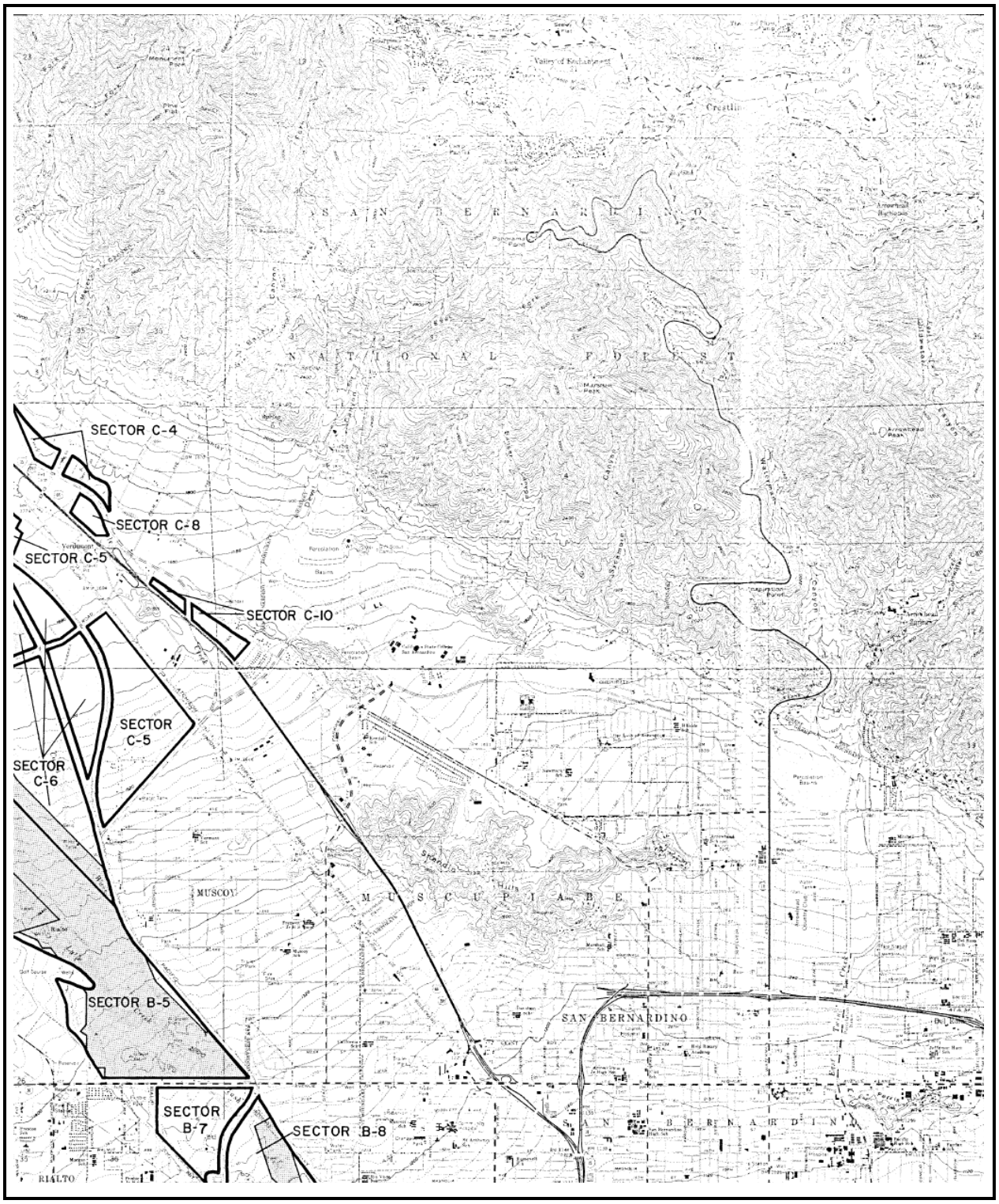

Figure 4.3-35 (2 of 3)
REGIONALLY SIGNIFICANT CONSTRUCTION AGGREGATE RESOURCE AREAS IN THE SAN BERNARDINO PC-REGION - SMARA DESIGNATION REPORT NO. 5 - PLATE 3
Source: California Department of Conservation

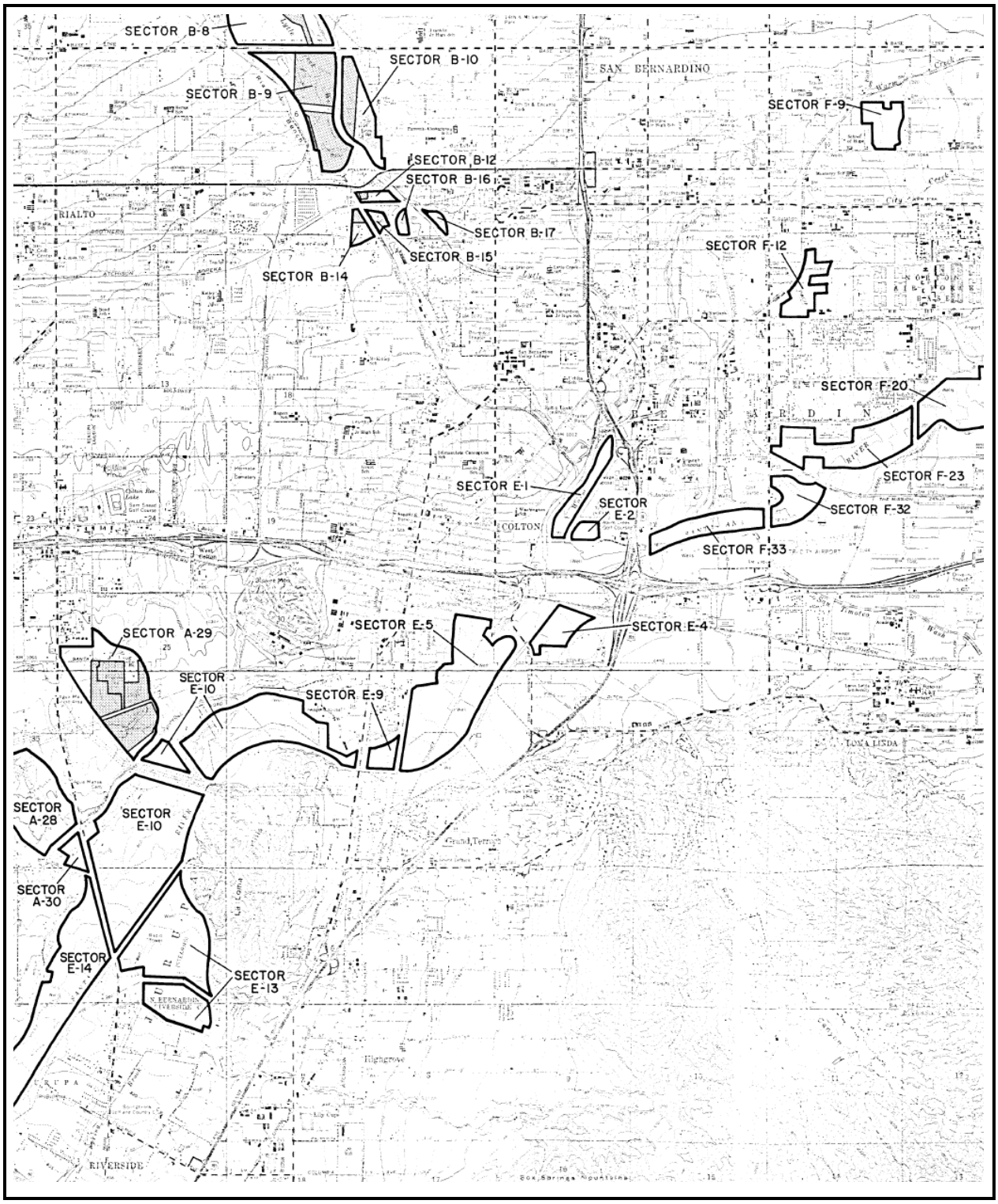

Figure 4.3-35 (3 of 3)
REGIONALLY SIGNIFICANT CONSTRUCTION AGGREGATE RESOURCE AREAS IN THE SAN BERNARDINO PC-REGION - SMARA DESIGNATION REPORT NO. 5 - PLATE 7
Source: California Department of Conservation

Table 4.3-7
DATA ON RESOURCE AREAS AND SECTORS - SAN BERNARDINO P-C REGION

Sector	Million Short Tons Resource[1] (Reserves)
B-1	45.4
B-2	1.8
B-5	709.2[2]
B-6	5.3
B-7	47
B-8	59.1[2]
B-9	28.5[2]
B-10	12[2]
B-12	0.9[2]
B-14	1.3[2]
B-15	0.3[2]
B-16	0.6
B-17	0.3
Total	912 (120)

Notes:
1. Includes Reserves.
2. Cannot be shown individually due to confidentiality; however, amount is included in total at bottom.

Source: California Department of Conservation, Division of Mines and Geology

Map 52 indicates that, throughout California, "aggregate haul distances have been gradually increasing as local sources of aggregate diminish. Consequently, older P-C regions, most of which were established in the late 1970's have changed considerably since their boundaries were drawn."[143] Although the SBPC Region has over 260 million tons of permitted aggregates remaining, only 24 percent of the necessary aggregates projected demand exists. The Barstow-Victorville P-C Region and the Claremont-Upland P-C Region haul to various areas of the SBPC Region due to demand requirements and relatively close proximity to the San Bernardino market with little to moderate increase in haul costs associated with transportation. Notwithstanding the broader regional availability, within the SBPC Region, the CDC states that "unless additional resources are permitted for mining or alternative resources are utilized, existing reserves will be depleted in 41 years."[144]

The CDC notes that the "aggregate study areas with the greatest projected future need for aggregate are the South San Francisco Bay, San Gabriel Valley, Temescal Valley-Orange County, Western San Diego County and San Bernardino. Each is expected to require more than a billion tons of aggregate by the end of 2055."[145] For the SBPC Region, a comparison of 50-year aggregate demand to permitted resources is presented in Table 4.3-8 (Comparison of 50-Year Demand and Permitted Aggregate Resources – San Bernardino and Other Outlying P-C Regions).[146]

[143]/ *Ibid*., p. 15.
[144]/ *Ibid*., p. xii.
[145]/ California Department of Conservation, California Geological Survey, Aggregate Availability in California, 2006, Map Sheet 52, updated 2006, p. 3.
[146]/ *Ibid*., p. 4.

Table 4.3-8
COMPARISON OF 50-YEAR DEMAND AND PERMITTED AGGREGATE RESOURCES SAN BERNARDINO AND OTHER OUTLYING P-C REGIONS

P-C Region	50-Year Demand (million tons)	Permitted Aggregate Resources (million tons)	Percent of Permitted Aggregate Resources Compared to 50-Year Demand
San Bernardino	1,074	262	24
Barstow-Victorville	179	133	74
Claremont-Upland	300	147	49
Temescal Valley-Orange County	1,122	355	32
Statewide	13,536	4,343	32

Source: California Department of Conservation

Map Sheet 52 neither addresses nor includes the availability of non-permitted aggregate resources, defined as those aggregate resource deposits that may meet specifications for construction aggregate and which are recoverable with existing technology, have no land overlying them that is "incompatible" with mining, and currently are not permitted for mining. There are currently an estimated 74 billion tons of non-permitted construction aggregate resources located throughout the State's 31 aggregate study areas. While this number is large, it is unlikely that all of these resources will ever be mined because of social, environmental, or economic factors.

The CDC notes that "non-permitted aggregate resources are the most likely future sources of construction aggregate potentially available to meet California's continuing demand."[147] The CDC further reports: "Only six percent of the total aggregate resources identified within the 31 study areas are currently permitted." It, therefore, appears that the projected aggregate supply, in relation to its 50-year demand, is one of an inability to permit the necessary construction-grade aggregates rather than an issue concerning the general depletion or site-specific forfeiture of that resource.[148] The CDC further notes: "California's mines, regulatory agencies, and local governments must develop ways to increase the current amount of aggregate production, as well as to bring additional, already identified but not yet permitted mineral resources timely into production if they successfully are to meet the aggregate demands for the State's future projected development. The real bottom line is, more construction grade aggregate will be required to be delivered on a faster time frame to meet California's growing requirements."[149]

The CDC has classified large areas in MRZs relative to their understanding of the quality and potential quality of the aggregate resources. Designation is another step taken by the SMGB to propose certain areas classified as MRZ-2 zones as regionally significant and having a greater significance identified to the specific zone.[150] Portions of the project site are located within an area identified by the CDC as having a "high potential as an aggregate resource" and is thus

[147]/ *Ibid*., p. 7.
[148]/ *Ibid*., p. 19.
[149]/ California Department of Conservation, California Geological Survey, Aggregate Supply and Demand - The Evolving Picture (http://www.consrv.ca.gov/cgs/minerals/mlc/Pages/index.aspx).
[150]/ *Op. Cit*., Evaluation for Potential Loss of Mineral Resource Resulting from the Development of Lytle Creek Ranch, City of Rialto, pp. 7-8.

classified as a MRZ-2.[151] The project site lies within an areas designed by the State as being of "regional significance" (14 CCR 3550.8).[152]

With regards to non-aggregate mineral resources, the USGS reports: "Lytle Creek, named for Andrew Lytle, who settled in San Bernardino, Calif., in 1851, was the site of several mining operations. Placer mining by both hydraulic and hand methods, which reached a peak in the 1890's, extended from near the mouth of the canyon to near its headwaters. Gold was found in elevated high-river terraces in the lower part of Lytle Creek; by the turn of the century, much of the ore had been removed, and water consumption by nearby agricultural development hampered operations." [153]

A single mineral deposit (Lytle Creek mine) lies within the nearby Cucamonga Wilderness within the SBNF. Several other deposits are located near the boundary of or just outside the wilderness area.[154] As indicated by the USGS: "Minor copper production has come from the Lytle Creek mine in the central part of the Cucamonga Wilderness; an estimated 130 tons of mineralized rock containing copper-silver values remains. Small deposits of lead, zinc, silver, graphite, tungsten, and gem stones occur at the boundary of, or just outside the study area.[155] As indicated by the USGS, the "Cucamonga Wilderness has little potential for the production of mineral resources."[156]

Previous Geologic, Geotechnical, and Seismic Investigations

Excluding those investigations conducted from proximal off-site areas, including design-level studies conducted for the abutting the LCNPD, a number of previous geologic, geotechnical, and seismic investigations have been conducted addressing the project site or portions thereof. Those studies, which examined earlier site-specific development applications for the subject property, provide relevant background information concerning the existing geotechnical, geologic, and soils setting. The information contained in those studies is extensive and includes a broad array of geotechnical issues. Because of the comprehensive nature of those studies it is not practical to physically include all the data presented. As a result, a number of technical studies have been incorporated by reference herein.

As indicated in those studies, the project site is located primarily within the Peninsular Ranges Geomorphic Province, lies along the northeastern margin of the Perris Block, and extends northward into the Transverse Ranges. The Perris Block is bounded on the northeast by the San Jacinto fault zone, on the north by the Cucamonga fault zone and the San Gabriel Mountains, and on the southwest by the Elsinore fault zone and the Santa Ana Mountains. The

[151]/ *Op. Cit*., Mineral Land Classification of the Greater Los Angeles Area, Special Report 143, Part VIII, Plate 7.2, p. 3.

[152]/ As defined in Section 18.76.020(A) in Chapter 18.76 (Surface Mining and Land Reclamation) of the City Municipal Code, an "area of regional significance" mean "an area designated by the State Mining and Geology Board which is known to contain a deposit of minerals, the extraction of which is judged to be of prime importance in meeting future need for minerals in a particular region of the State within which the minerals are located and which, if prematurely developed for alternate incompatible land uses, could result in the premature loss of minerals that are of more than local significance."

[153]/ United States Geological Survey, Mineral Resources of the Sheep Mountain Wilderness Study Area and the Cucamonga Wilderness and Additions, Los Angeles and San Bernardino Counties, California, United States Geological Survey Bulletin 1506-E, 1982, pp. 85 and 87.

[154]/ *Ibid*., p. 89.

[155]/ *Ibid*., p. 85.

[156]/ *Ibid*., p. 1.

Perris Block is bounded by two grabens, the Elsinore Trough on the west (part of the Elsinore fault zone) and the Salton Trough on the east. The uplift of the Perris Block has been less than that of the bounding mountain ranges, resulting in lower relief.

Part of the project site may be located within the Cucamonga Block, a smaller block than the Perris Block with somewhat different characteristics. The Cucamonga Block is bounded on the south by the north-dipping Cucamonga reverse or thrust fault, on the northeast by the right-lateral strike-slip San Jacinto fault zone, and on the northwest by the left-lateral San Antonio fault (which may connect with the Chino and Elsinore faults to the south). The movements of the Cucamonga Block are aligned with the Peninsular Ranges Province, which is being forced northward into the Transverse Ranges by plate tectonic motion with the northern edge of the province being trust under the San Gabriel Mountains.[157]

Basement rocks of the Peninsular Ranges consist of Jurassic and Cretaceous granitoid rocks that have intruded prebatholitic metasedimentary rocks. Along its north and northeast edge, the Peninular Ranges block is bordered by a mylonitic belt of ductile deformation that separates lower plate Peninsular Ranges plutonic and metasedimentary rocks from broadly similar upper plate rocks that appear to be parautochthonous equivalents of the more typical Peninsular Ranges suite. The autochthonous and paraauhochthonous suites have been telescoped along the mylonite zone.

The San Gabriel Mountains form the southeastern and major part of the Central Transverse Ranges Geomorphic Province, along the northerly margins of the project site. This range is an eastward-elongated parallelogram-shaped area of crystalline basement rocks. These rocks were elevated in late Cenozoic time between the San Andreas and related faults on its northern margin, against the Mojave Desert and the San Gabriel and related faults on the southern margin, and against the coastal lowland of the Los Angeles area. The greatest amount of uplift was by northward tilt on north-dipping reverse faults along its southern margin.

The San Bernardino Mountains, part of the Transverse Range Geomorphic Province and located at their closest point about 3.5 miles to the northeast of the site, were elevated within and north of the San Andreas fault zone. They form a rectangular upland about 65 miles long east-west and about 20-miles wide. The major part of the San Bernardino Mountains is a block of basement rocks of the Mojave Desert region in part overlain by remnants of late Cenozoic valley deposits and basalt. It is located on the north side of the San Andreas fault zone and Pinto Mountain fault which bound it on the south.[158]

Most of the project site is underlain by fluvial sediments emanating from Lytle Creek and, to a lesser extent, Sycamore Flat. These sediments may reach a depth of 120 to 950 feet before basement rock is encountered. The heads of Lytle Creek and Sycamore Creek are located within the San Gabriel Mountains. Coalescing sediments deposited primarily from Lytle Creek have created a large alluvial fan that reaches from the City of Ontario on the southwest, east to City of Colton, and north to the base of the San Gabriel Mountains. Some of the on-site sediments may have also been deposited by Cajon Wash. The distal edges of the Lytle Creek Wash and Cajon Wash fans overlapped and interfingered during the Pleistocene and early Holocene. Alluvium was entirely deposited by Lytle Creek and, to a lesser extent, by Sycamore Creek, after drainage shifted westward and the fan beheaded owning to continued incision and

[157]/ GeoSoils, Inc., Preliminary Geotechnical Investigation Proposed Master Plan Development, The Villages at Lytle Creek, Lytle Creek Development, San Bernardino County, California, Volume I, October 31, 1994, p. 7.
[158]/ *Ibid*., p. 9.

uplift along the San Jacinto fault during the mid-Holocene. Geomorphically, the alluvial fan deposits exhibit characteristics associated with young to intermediate development, likely corresponding to sediments of Holocene and Pleistocene age.

In the northeastern highland margin of the property, alluvial fan deposits have been deposited on Tertiary and older basement rocks, consisting of schistose and granitic rocks of the Peninsular Ranges terrane. These schistose and granitic rocks have telescoped or displaced along faults associated with the San Jacinto fault zone. Terraces developed on older alluvial fan deposits westerly to easterly of the site, including the elevated northeasterly portion of the site, exhibit geomorphic characteristics associated with the development of older alluvial fans and may be older than 500,000 years, assuming no uplift of bounding faults. Alternatively, these terraces may have also been uplifted on the bounding faults, suggesting geomorphic characteristics indicative of the development of intermediate age alluvial fans and are likely pre-Holocene in age.[159]

In 1997, GSI prepared a geotechnical investigation and liquefaction evaluation for a proposed 50-acre school site within Neighborhood III, along Riverside Avenue.[160] This investigation included subsurface exploration consisting of the excavation and sampling of five hand-dug test pits. Also sampled were similar alluvial fan deposits at various depths in the geologically similar environment of the nearby open-pit mines. GSI documented that the proposed school site is underlain by alluvial fan deposits consisting of sandy gravel and gravelly sand typical of this geologic environment, locally overlain by undocumented fill. A liquefaction analysis concluded that liquefaction potential was low at that site and did not constitute an unacceptable risk even if the regional groundwater table should rise as a result of urbanization or perched groundwater. On a preliminary basis, GSI also indicated that dynamic settlements caused by the "design earthquake" were about 1 inch, with differential settlement of about ½-inch. GSI concluded that the proposed school site appeared suitable for its intended use provided the conclusions and recommendations presented in GSI's 1997 investigation were properly implemented.

Specific design-level geotechnical investigations have not been performed within the area of the LCRSP; however, a comprehensive geotechnical review for CEQA purposes was carried out by GSI in 2008. The findings of that geotechnical review are discussed below.

Program-Level Geotechnical Review

For the purpose of CEQA compliance, the Applicant submitted and the Lead Agency independently reviewed a number of technical studies conducted for the purpose of assessing the geotechnical feasibility of the proposed action. Those studies included, but were not limited to, a program-level review of applicable geologic, geotechnical, and seismic documents pertaining to the project site and Alquist-Priolo-level fault investigations in Neighborhoods II, III, and IV. A number of those studies have been cited in the introduction to this section while others are cited in each of the referenced technical reports.

In order to foster informed decision making, a number of relevant studies are included in Appendix III-A (Geotechnical Review) and serve to augment the information presented herein. Those studies, which themselves constitute only a portion of the database upon which this

[159]/ *Ibid*., p. 20.

[160]/ GeoSoils, Inc., Geotechnical Investigation and Liquefaction Evaluation for the Approximately 50-Acre School Site, South Village, The Villages at Lytle Creek Specific Plan, San Bernardino County, California, July 7, 1997.

analysis is derived, include: (1) "Updated Geological and Geotechnical EIR Level Review of Documents Pertaining to the Lytle Creek Ranch Land Use Plan, City of Rialto, County of San Bernardino, California" (Pacific Soils Engineering, Inc., September 3, 2008); (2) "EIR Level Geotechnical Review, Lytle Creek Ranch Land Use Plan, City of Rialto, San Bernardino County, California" (GeoSoils, Inc., May 22, 2008); (2) (3) "Addendum: Clarification Letter, EIR Level Geotechnical Review, Lytle Creek Ranch Land Use Plan, City of Rialto, San Bernardino County, California" (GeoSoils, Inc., July 31, 2008); (3) "Additional Fault Investigation, Planning Area 8, Sycamore Flat Area" (GeoSoils, Inc., July 1, 2008); (5) "EIR Level Geotechnical Review, Lytle Creek Ranch Land Use Plan, City of Rialto, San Bernardino County, California" (GeoSoils, Inc., May 22, 2008); (6) "Addendum to Supplemental Fault and Seismic Investigation, Lytle Creek Ranch, Neighborhood 1, Sycamore Canyon Area, Rialto, San Bernardino County, California" (GeoSoils, Inc., February 13, 2007, revised August 27, 2007); and (7) "Fault/Seismic Investigation, Lytle Creek Ranch, Neighborhoods II and III (Portions of Planning Areas 24, 54, 55, 56, 58, and 59 and all of Planning Areas 60, 61, and 62), Rialto, San Bernardino County, California" (GeoSoils, Inc., December 28, 2006).

As illustrated in Figure 4.3-36 (Project Relationship to the "San Bernardino County General Plan" Geologic Hazards Map), when the project site is mapped in relation to Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlays Map), it is evident that portions of the LCRSP are located within designated Alquist-Priolo earthquake fault zones. Based on those liquefaction susceptibility designations, as summarized in Table 4.3-9 (Liquefaction Susceptibility Hazards based on San Bernardino County Geologic Hazards Map) liquefaction susceptibility hazard potential ranges between non-susceptible to highly susceptible.

Table 4.3-9
LIQUEFACTION SUSCEPTIBILITY HAZARDS BASED ON SAN BERNARDINO COUNTY GEOLOGIC HAZARDS MAP

Neighborhood	Liquefaction Susceptibility Rating
I	Non-Susceptible and Highly Susceptible
II	Non-Susceptible and Highly Susceptible
III	Non-Susceptible to Highly Susceptible
IV	Non-Susceptible and Medium to Highly Susceptible

Source: GeoSoils, Inc.

As further shown in Figure 4.3-37 (Project Relationship to the Alquist-Priolo Earthquake Fault Zone Map), Neighborhoods I, II, and III are located partly within designated Alquist-Priolo earthquake hazard zones. In those areas subsequent design-level investigations will be required in order to prevent habitable structures (2,000 man-hours per year occupancy) from being placed astride State-defined active faults.

GSI preliminarily identified high potential for liquefaction in alleviated areas of Neighborhood I, consistent with the San Bernardino County Geologic Hazards Map. The high liquefactions susceptibility potential is based on the presence of shallow groundwater in alluvial areas of Neighborhood I and observation of paleoliquefaction features in some fault trenches. However, in constrast to the County's Geologic Hazards Map and Matti and Carson (1991), GSI's preliminary classified alluvial areas of Neighborhoods II, III, and IV as having low potential. At the design level, site-specific Special Publication 117 compliance assessments/investigations and special engineering foundation design and/or ground-improvement techniques are recommended, where applicable.

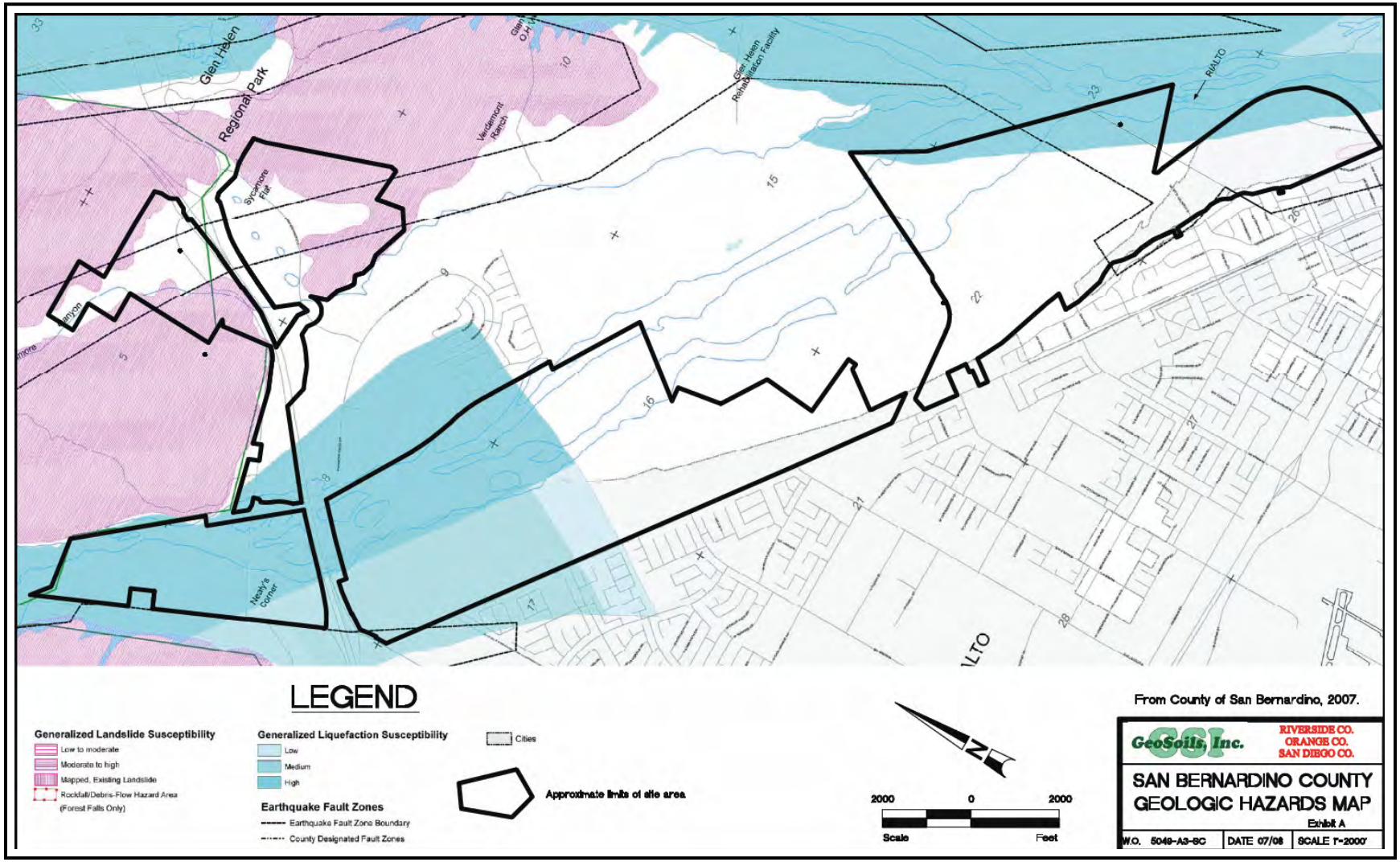

Figure 4.3-36
PROJECT RELATIONSHIP TO THE "SAN BERNARDINO COUNTY GENERAL PLAN" GEOLOGIC HAZARDS MAP
Source: GeoSoils, Inc.

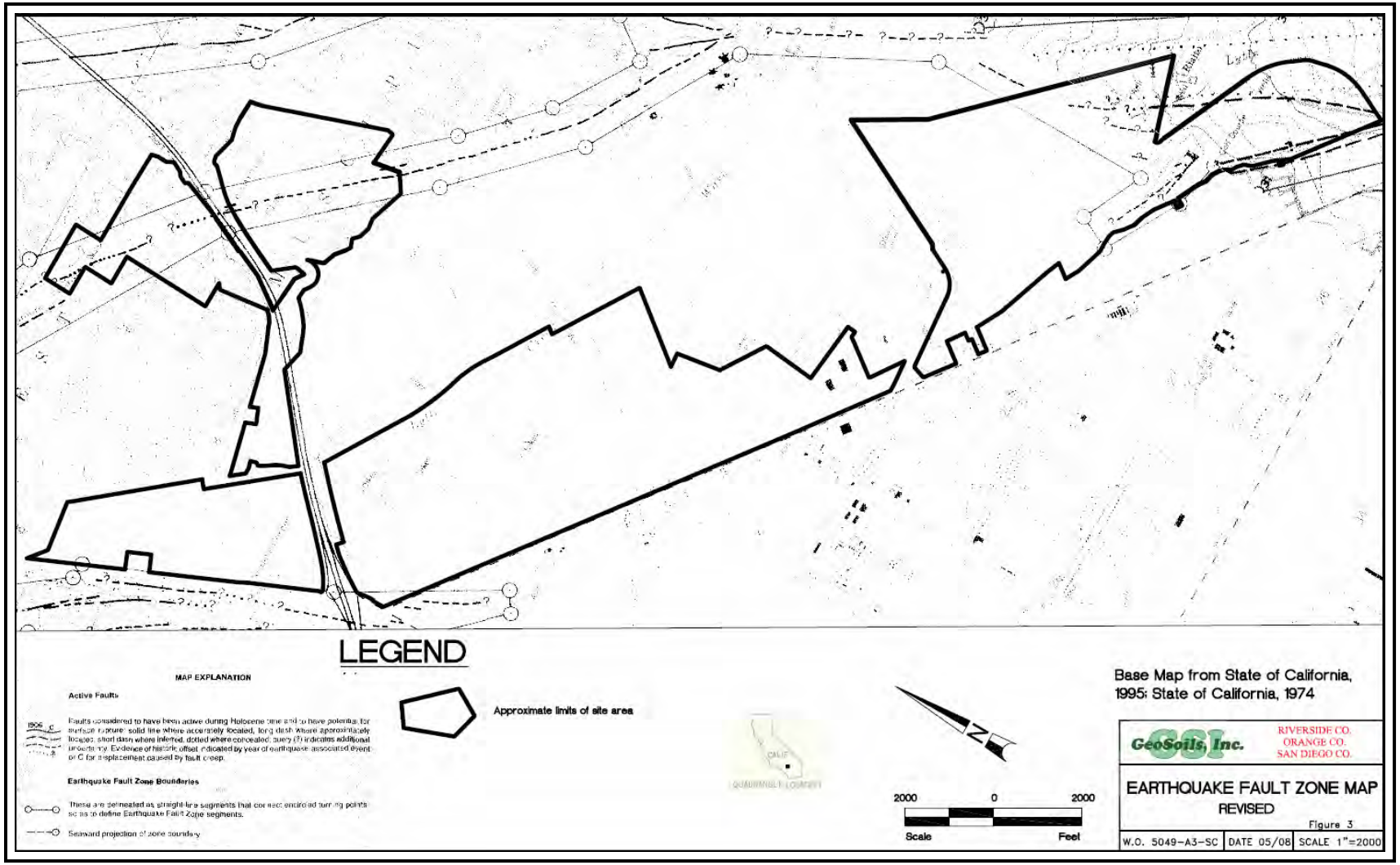

Figure 4.3-37
PROJECT RELATIONSHIP TO THE ALQUIST-PRIOLO EARTHQUAKE FAULT ZONE MAP
Source: GeoSoils, Inc.

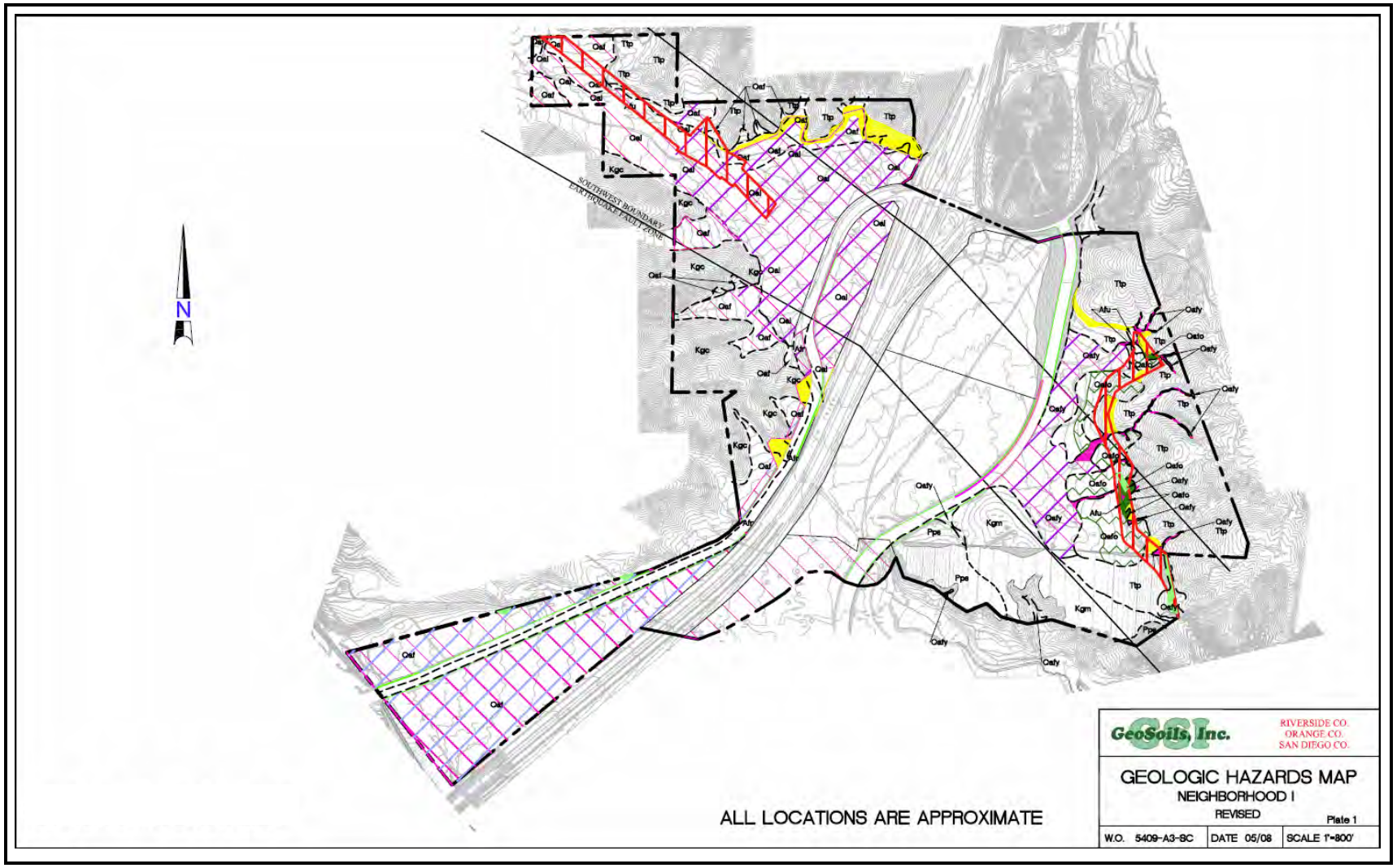

Figure 4.3-38 (1 of 4)
NEIGHBORHOOD I - GEOLOGIC HAZARD MAP
Source: GeoSoils, Inc.

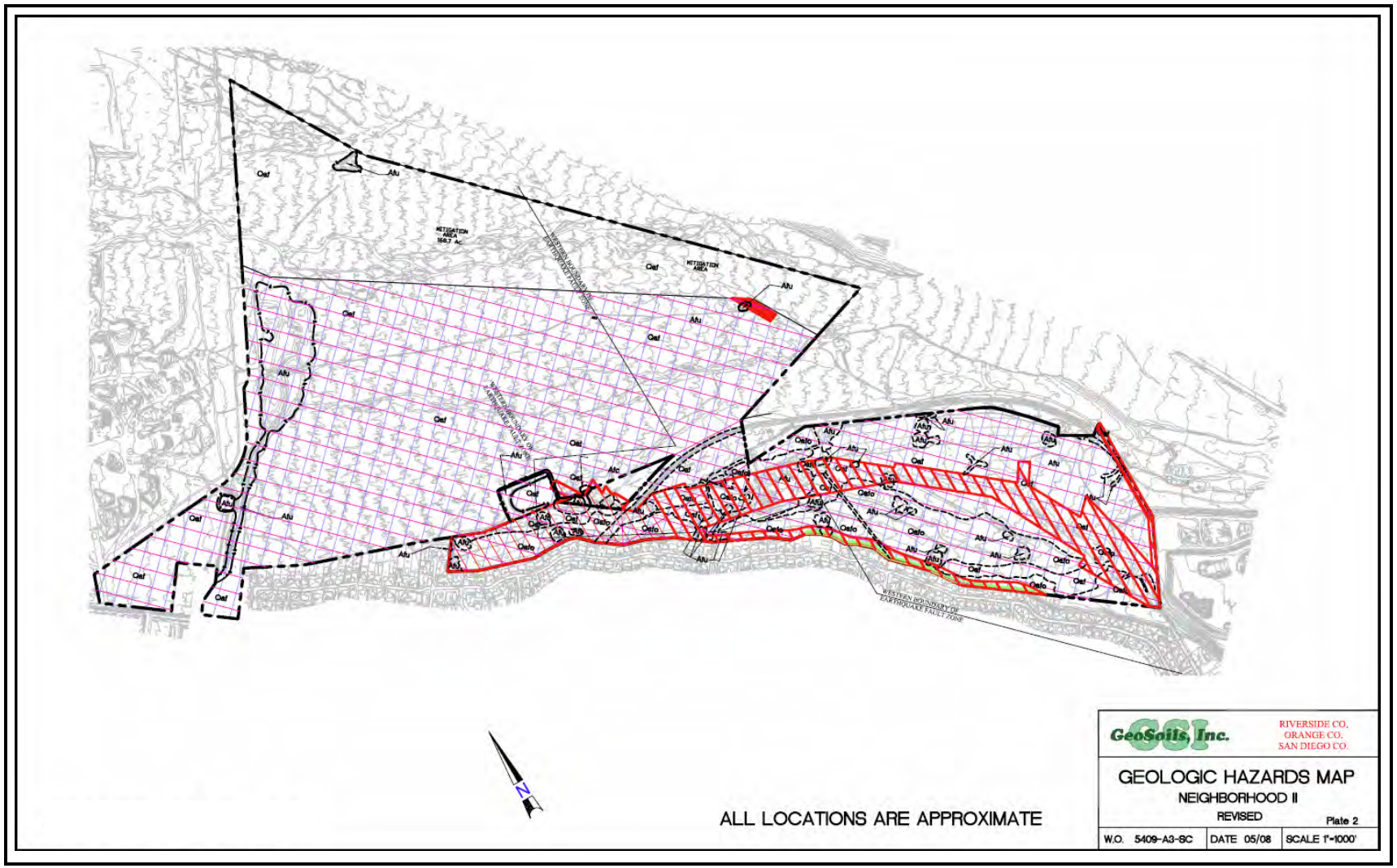

Figure 4.3-38 (2 of 4)
NEIGHBORHOOD II - GEOLOGIC HAZARD MAP
Source: GeoSoils, Inc.

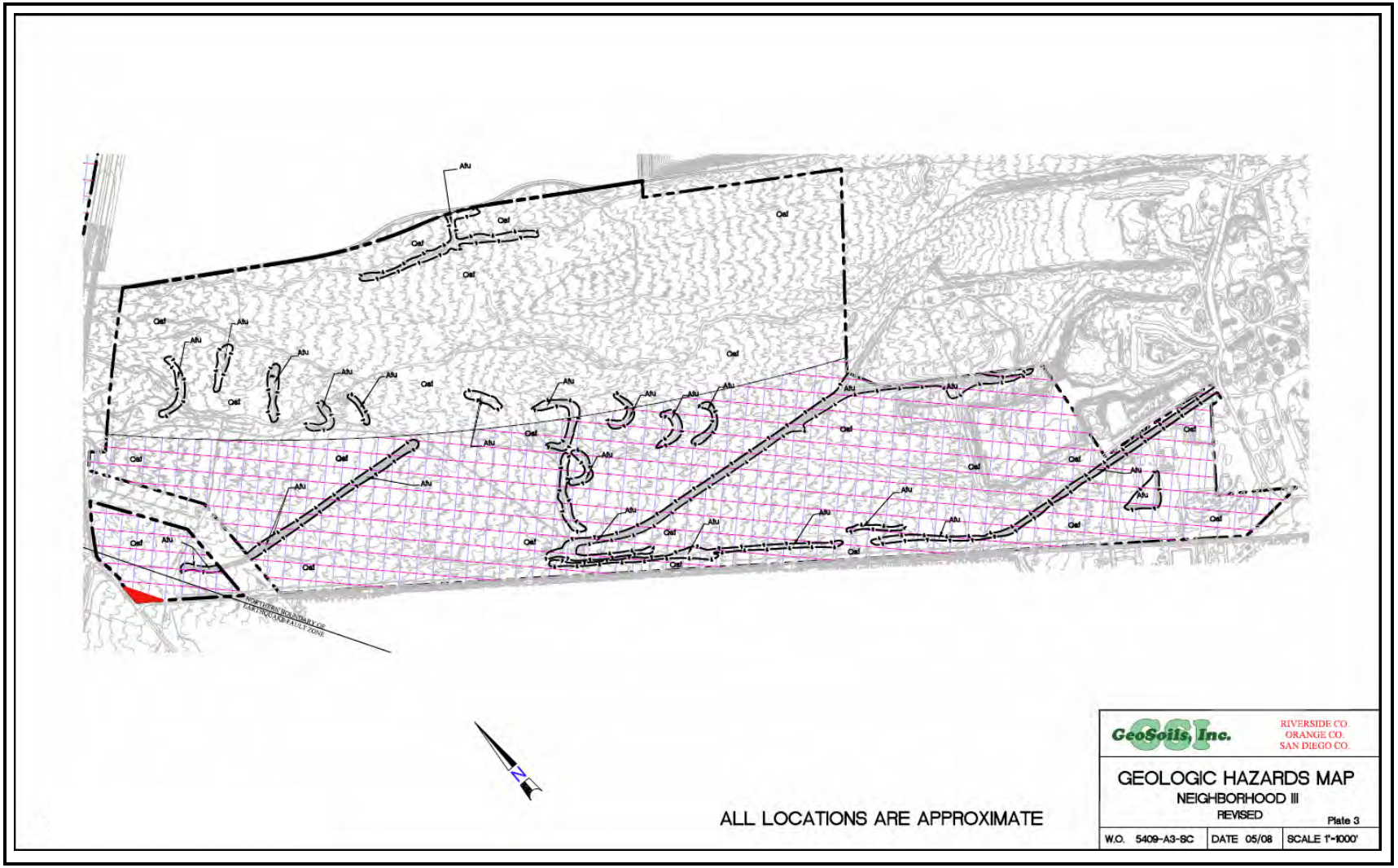

Figure 4.3-38 (3 of 4)
NEIGHBORHOOD III - GEOLOGIC HAZARD MAP
Source: GeoSoils, Inc.

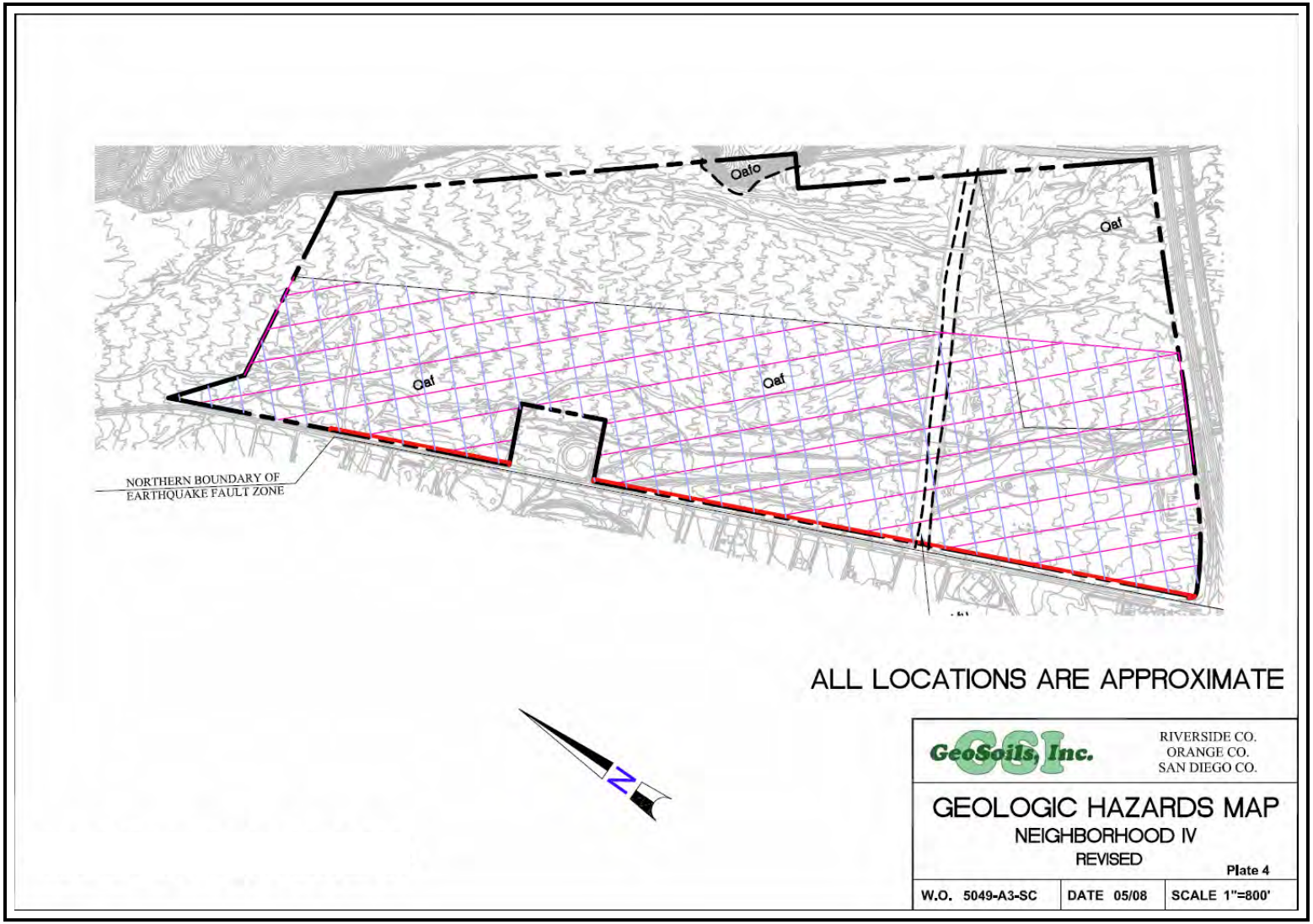

Figure 4.3-38 (4 of 4)
NEIGHBORHOOD IV - GEOLOGIC HAZARD MAP
Source: GeoSoils, Inc.

GSI further found that the low-lying alluvial areas of the project site have local potential for dry sand settlement and differential settlement (both static and seismic) and that the project area is not subsiding (the site area may, in fact, be uplifting based on rising groundwater levels). The effects of areal subsidence generally occurs at the transition between sediments with substantially different engineering properties. Based on available data, bedrock underlies all alluvial deposits throughout the site; therefore, this potential is considered low.

Ground fissures are generally associated with rapid groundwater withdrawal and associated subsidence or active faults. GSI's review did not indicate that rapid groundwater withdrawal is occurring at this time. In the site, should fault-induced subsidence (or uplift) occur, those conditions would be mitigated by the recommended setback zones.

Based on the findings of a geotechnical review, the investigating engineering geologist and soils engineer concluded that the project's development was feasible from a seismic perspective. As indicated in that site-specific investigation: "Based on GSI's previous and current field exploration, laboratory testing, our engineering and geologic analyses, and review of background information, it is GSI's opinion that the overall project is compatible and favorable with respect to the geologic constraints onsite, from a geologic and geotechnical viewpoint, provided our recommendations are properly incorporated in the planning, design, grading, and construction considerations. Owing to the site's location and proximity to active faults, GSI indicates that the proposed improvements at Lytle Creek Ranch may be subject to strong ground shaking during their design lives. Such strong shaking may lead to other secondary seismic hazards such as liquefaction, slope instability, ground deformation, etc."

Based on the program-level of review and the nature of the subject entitlements, the project is deemed to be feasible from a geologic and geotechnical perspective provided that the conditions enumerated in GSI's geotechnical review and PSE's third-party assessment are incorporated. PSE recommends that the following conditions be incorporated. These conditions deal mainly with the need for further exploration to better quantify possible geological and geotechnical constraints so that specific design measures can be implemented.

- Parts of the LCRSP may be subject to liquefaction; earlier investigations of it were either subjective or completed under standards less stringent than current standards. Based upon the possibility of the presence of liquefiable soils and, at least local shallow groundwater, GSI recommends further exploration and analyses as part of the mitigation process and preliminarily indicates that foundation designs and/or ground improvements would be implemented where required. Such investigations must be completed and incorporated into design using the then-current standards; and must be reviewed and approved by the controlling agency prior to plan approval.

- Geological/geotechnical issues, including expansive soils, slope stability (seismic and non-seismic) compressible soils, expansive soil, debris flows, ridge top shattering must be mitigated through a program of exploration, analyses, and resultant design based on actual development plans. Agency review and incorporation of same into design prior to plan approval must be undertaken.

- Much of the LCRSP is within 100-year flood zones. As recommended by GSI, the project civil engineer should evaluate the site for flooding associated with catastrophic failure of flood control devices and up-gradient water storage tanks during an earthquake. Further, GSI recommends that the project's civil engineer consider using

debris/flood/detention basins and/or debris impact walls with sufficient freeboard where swales or their watersheds intersect the proposed development.

- In Neighborhood I, GSI suggest that rock fall or ridge-top shattering might occur during a strong local earthquake. A mitigation process of exploration, analysis, and incorporation of specific remedial measures that could include compacted blanket fill and engineering design for mitigation of ridge-top shattering must be undertaken.

- PSE judges that GSI has investigated Neighborhoods I, I, and III relative to surface fault rupture hazards in accordance with now-current Alquist-Priolo policies and criteria and local standards of practices. Plates 1 through 3 (GSI, 2008), as presented in Figure 4.3-38 (Neighborhood Geologic Hazard Map) herein, show setback zones in Neighborhoods I, II, and III based on those investigations. The maps, however, show no specific grading configuration to evaluate.

  Specific recommendations regarding setback distances, including assessment of fault propagation through overlying fills and setback adjustments, should be based on actual proposed grading configurations and must be shown on the appropriate plans prior to approval. As part of the mitigation process, the consulting engineering geologist should map cleanouts and cut areas during grading to confirm the absence of active faults or, if same are encountered, to make mitigation recommendations.

- GSI (2008) indicates co-seismic ground deformation away from the actual surface faults could occur. The possibility of transitory ground lurching and associated ground cracks or small-scale deformation cannot be discounted nor can locations of same be foreseen. Mitigation will likely be widespread on the project. The GSI (2008) initial recommendations regarding strengthened foundations for the project site are considered valid. As the processing continues, specific mitigation recommendations should be based on proposed development, site conditions, and then-current engineering practices. GSI (2008) sets forth initial enhanced foundation designs. The project structural engineer, in consultation with the geotechnical consultants, should review actual design.[161]

4.3.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant geology, soils, and/or mineral resource impact if the project or if project-related activities were to:

- Directly or indirectly destroy a unique geologic feature.[162]
- Expose people or structures to potential substantial adverse effects,[163] including the risk of loss, injury, or death involving: (1) rupture of a known earthquake fault, as delineated

[161]/ Pacific Soils Engineering, Inc., Updated Geological and Geotechnical EIR Level Review of Documents Pertaining to the Lytle Creek Ranch Land Use Plan, City of Rialto, County of San Bernardino, California, September 3, 2008, pp. 12-14.
[162]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section V (Cultural Resources).

on the most recent Alquist-Priolo Earthquake Fault Zoning Act map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (2) strong seismic ground shaking; (3) seismic-related ground failure, including liquefaction; and/or (4) landslides.

- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property.[164]
- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.[165]

In addition, other standards relative to the exposure of people and property to potential seismic hazards have been formulated by other agencies, published in source documents, or reflect acceptable industry standards. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant impact if the project of if project-related activities were to:

- Result in the placement of habitable structures within an active fault zone, as delineated on the APEFZA map[166] or as delineated on "Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada"[167] without effective mitigation.
- Expose site occupants to a causative fault with a Maximum Movement Magnitude equal to or greater than 6.5 and a slip rate >2 millimeters per year.[168]
- Result in the placement of habitable structures in an area containing a factor of safety against liquefaction for potentially liquefiable soils of <1.3 or subject to lateral ground displacements due to liquefaction-related ground softening of >0.5 meters (1.6 feet).[169]
- Result in the placement of habitable structures in an area subject to an earthquake-induced deformation of >100 centimeters (3.3 feet) for an existing on-site landslide and/or containing an existing on-site landslide with stability factors of safety <1.5 under static conditions and 1.1 under seismic loading conditions.[170]
- Result in the placement of habitable structures in an area containing soils that have an Expansion Index >20, as determined in accordance with UBC Standard 18-2.[171]

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or other environmental

[163]/ Certain terms, such as "substantial adverse effect," are neither defined in CEQA nor in the State CEQA Guidelines and require a local determination whether a proposed action would meet or exceed the stated standard.
[164]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section VI (Geology and Soils).
[165]/ *Ibid*., Section X (Mineral Resources).
[166]/ Hart, E. W., Bryant, W.G., Special Publication 42, Fault Rupture Hazard Zones in California, California Department of Conservation, Division of Mines and Geology, 1992, revised 1997.
[167]/ *Op. C*it., Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada, February 1998.
[168]/ International Conference of Building Officials, Uniform Building Code, 1997.
[169]/ *Op. Cit*., Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California, adopted March 13, 1997, revised September 11, 2008.
[170]/ *Ibid*.
[171]/ *Op. Cit*., Uniform Building Code.

documents and used as the basis for assessing the significance or potential significance of project-related and cumulative geology, soils, and/or mineral resource impacts.

4.3.5 Impact Analysis

Project-related impacts have been categorized under the headings construction, operational, and cumulative impacts corresponding to either the time period in which the identified environmental effect is anticipated to occur or the perspective from which impacts are examined. The distinction between construction-term and operational impacts is not clear in all circumstances. In those cases where some overlap may exist, the Lead Agency has attempted to categorize each identified effect under the most appropriate and reasonable heading.

This is not, however, to suggest that a different categorization of impacts would not also be appropriate and reasonable. Any such recategorization, however, would neither be anticipated to result in a change in the severity of the corresponding environmental effect nor predicate the need for any additional conditions of approval or mitigation measures than otherwise identified herein based on the manner in which each identified impact has been categorized.

4.3.5.1 Construction Impacts

Seismic Considerations

> ***Environmental Impact 3-1****. The project site contains State-designated Alquist-Priolo Fault-Rupture Hazards Zones. Seismic events occurring along these active fault zones, as well as other seismic events reasonably predictable throughout the area and over the life of the project, will expose people and property to potential surface rupture, ground shaking, and other seismic risks.*
>
> ***Preliminary Determination 3-1****. Potentially significant unless mitigation incorporated.*[172]

As indicated in the County General Plan PFEIR: "Virtually the entire County is potentially subject to some level of strong seismic ground shaking with potential levels being greatest in the western portion of the County and at sites in close proximity to a known earthquake (i.e., active) or potentially active fault."[173] The potential risks associated with those hazards can be mitigated

[172]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Act map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) strong seismic ground shaking; (iii) seismic-related ground failure, including liquefaction; and/or (iv) landslides; (2) be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; (3) result in the placement of habitable structures within an active fault zone, as delineated on the APEFZA map or as delineated on "Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada" without effective mitigation; (4) expose site occupants to a causative fault with a Maximum Movement Magnitude equal to or greater than 6.5 and a slip rate >2 millimeters per year; and (5) result in the placement of habitable structures in an area containing a factor of safety against liquefaction for potentially liquefiable soils of <1.3 or subject to lateral ground displacements due to liquefaction-related ground softening of >0.5 meters (1.6 feet).

[173]/ *Op. Cit*., Final Program Environmental Impact Report for the County of San Bernardino 2007 General Plan, SCH No. 2005101038, p. IV-73.

below levels of significance through the incorporation of project-specific measures, such as application of appropriate design and construction criteria, data compilation and mapping, site-specific geotechnical evaluation, pertinent restrictions on facility design and location, coordination among regulating agencies, and increased public education and awareness efforts.

As illustrated in Figure 4.3-5 (Earthquake Fault Zones - Devore and San Bernardino North 7.5-Minute Topographic Quadrangle), the APEFZA maps for the Devore and San Bernardino North 7.5-minute quadrangles identifies a number of on-site and near-site State-designated earthquake fault zones. Figure 4.3-6 (City of Rialto General Plan – Local Seismicity) also shows the San Jacinto fault system as one of the State's designated Alquist-Priolo Fault-Rupture Hazard Zones. As indicated, the fault zone occurs within or in close proximity to each of the four proposed LCRSP neighborhoods.

Using standard-of-practice methodology, Figure 4.3-38 (Neighborhood Geologic Hazard Map) identifies active faults and habitable structure setback zones in Neighborhoods I, II, and III based on the Alquist-Priolo field investigations. GSI notes that active faults identified in previous investigations of Neighborhoods II and III project toward residential PA 98 (Neighborhood II) and open space/recreational PAs 95 and 97 (Neighborhood II). Future investigation in PA 98 is recommended to evaluate residential development constraints attributable to the possible presence of active faults. Additional investigations are also recommended in PAs 95 and 97 to evaluate potential constraints owning to active faults where structures for human occupancy (e.g., golf course club house and community centers) are proposed.

Owing to proximity to major active faults, LCRSP improvements could be subject to strong ground shaking during their design lives. GSI calculated possible on-site peak horizontal ground acceleration (Pga) that could hypothetically be generated by earthquakes on those faults. Based on the deterministic approach, which does not incorporate uncertainty in magnitude, location, and recurrence intervals, a suggested Pga on the order of 0.62 to 0.98g was calculated. Under the probabilistic method, which incorporates those uncertainties, a Pga of 0.9g with a 10-percent probability of being exceeded in 50 years was derived. The latter method is typically used in geotechnical engineering formulae for assessing liquefaction susceptibility and slope stability and for some kinds of structural engineering analysis.[174]

Based on the findings of the GSI geotechnical review, potential seismic hazards associated with an earthquake event are separately discussed below.

- **Ground rupture**. In recognition of the presence of active earthquake faults on the project site, the potential for ground rupture during a seismic event is greatest along the northeasterly corner of the propertye. Once more detailed studies have been conducted and development adequately setback from the fault zone, the potential for ground rupture affecting future residential uses would be remote. In the absence of that information, since development is now earmarked to occur within an Alquist-Priolo Fault-Rupture Hazard Zone, site development in the manner now proposed could expose people or structures to potential adverse effects, including those attributable to fault rupture and seismically-induced ground failure. Since such exposure would constitute a significant environmental effect, the introduction of residential uses within a designated Alquist-Priolo Fault-Rupture Hazard Zone would be deemed a significant impact.

[174]/ The current standard for earthquake resistant design of most structures is the 2007 UBC. Since ground motion numbers can vary slightly with distance from the fault, it is recommended that seismic design be re-evaluated during plan reviews and at the conclusion of grading.

In accordance with County policies, "critical" and "essential" facilities are restricted within designated special study zones. No critical facilities (e.g., hospitals and other emergency medical facilities) are proposed as part of the LCRSP. "Restricted" is defined as prohibited unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated. As further stipulated in the County General Plan, critical, essential, and high-occupancy structures and facilities shall not be located in special study zones unless there is no feasible alternative, in which case these facilities shall maintain a 150-foot setback from an identified fault and a 200-foot setback if the fault is inferred.[175]

- **Ground shaking**. Earthquakes that could occur throughout the region have the potential to produce substantial ground movement, generating maximum accelerations near 1.0g. Severe ground shaking, as is possible at the site, can damage structures or cause significant secondary seismic hazards. Some of the more common triggering mechanisms producing slope failure are undercutting of slopes by erosion or grading operations, saturation of marginally stable slopes by rainfall or on-site irrigation, and shaking of marginally stable slopes during earthquakes. In addition, ground shaking from an earthquake could cause surficial slumping. Ground shaking can also directly cause extensive structural damage through failure along bedding planes and through damage to improperly designed and constructed structures. In recognition of these conditions and in accordance with the threshold of significance criteria (e.g., expose people or structures to strong seismic ground shaking), the likely presence of sever ground shaking constitutes a significant environmental effect.

  Using standard-of-practice methodology, GSI identified active faults and habitable structure setback zones in Neighborhoods, I, II, and III, based upon approved APEFZA investigations. GSI notes that active faults identified in investigations in Neighborhoods II and III project toward PA 98 and PAs 95 and 97 (Neighborhood II). GSI recommended future investigations in PA 98, and in PAs 95 and 97, should structures for human occupancy be proposed in those areas. GSI also notes the potential for co-seismic ground deformation, such as ground lurching, ground cracks, and associated surface deformation or subsidence/uplift at active faults.

- **Liquefaction**. Preliminarily identified a high potential for liquefaction in alleviated areas of Neighborhood I. The high potential classification is based on the presence of shallow groundwater in alluvial areas of Neighborhood I and observation of paleo-liquefactions features in some fault trenches. GSI also preliminarily classified the alluvial areas of Neighborhoods II, III, and IV as having a low potential for liquefaction. In contrast, the "County of San Bernardino Geologic Hazard Overly Map," as presented in Figure 4.1-8 (San Bernardino County General Plan – Geologic Hazard Overlay Map) herein, places most of Neighborhoods III and IV in zones of generally high to medium liquefaction susceptibility. Similarly, the USGS has indicated that much of Neighborhood IV is potentially located in an area with high ground-failure potential susceptibility to liquefaction and that much of Neighborhood III is potentially located in a moderately high to moderate ground-failure potential liquefaction susceptibility area[176] The State of California has not zoned the LCRSP area under the SHMA.

[175]/ *Op. Cit*., San Bernardino County General Plan, Policy/Action GE-10(c), p. II-A1-7.
[176]/ *Op. Cit*., , Liquefaction Susceptibility in the San Bernardino Valley and Vicinity, Southern California – A Regional Evaluation, United States Geological Survey Bulletin 1898, Figure 13, p. 35.

GSI's initial program-level liquefaction potential assessment is based on site-specific information that may not have been available to the USGS and/or the County during the preparation of those agencies' liquefaction evaluations of larger geographic areas encompassing the project site. Based on its site specificity, GSI's initial assessments may, therefore, be better constrained.

- **Landslide, slope creep, and significant surficial failure**. No indications of seismically induced or deep-seated landsliding, slope creep, or significant surficial failures on the project site were observed during field work conducted by GSI in 1994, 2006, and 2007. However, slope failures have been recorded by LOR Geotechnical, Inc. (1994) in the Sycamore Canyon area of Neighborhood I, bordering the west side of PA 3. According to Morton and Matti (2001),[177] the greenstone facies of the Pelona Schist is landslide prone. Cohesionless natural sediments, and proposed fills within the LCRSP should be considered erosive.

  GSI (1999 and 2003) included slope stability evaluations for the nearby LCNPD (Tract 15900). The data and conclusions, regarding fill slope stability, discussed in these reports could generally be applied when evaluating fill slope stability for most of the project because of the similarity of the parent, alluvial sediments across a majority of the project area. However, the variable orientation of natural and proposed cut slopes and geologic structure does not allow the same application for areas outside of Tract 15900. According to GSI (1999 and 2003), calculated factors-of-safety greater than 1.5 or 1.15 were previously obtained for assumed maximum anticipated fill slopes, when analyzed from a static or pseudo-static (seismic) viewpoint, respectively. Previous surficial stability calculations also indicated a surficial safety factor greater than 1.5 for proposed fill slopes, under normal conditions of care, maintenance, and rainfall. GSI recommends that site-specific, geotechnical studies and slope stability evaluations be performed on significant fill, cut, and natural slopes, once actual grading plans have been prepared.

  Due to the non-cohesive materials that exist within most of the project site, caving and sloughing should be anticipated in all subsurface excavations and trenching. Appropriate safety considerations for potential caving and sloughing (e.g., shoring or layback cuts) should be incorporated into the construction design details. All excavations should be observed by an engineering geologist or soil engineer prior to workers entering the excavation or trench, and minimally conform to Cal-OSHA, State, and local safety codes.

  Although GSI's previous investigations generally did not indicate significant rockfalls within the areas of proposed development, many highly fractured outcrops occur in the highland areas of Neighborhood I. Large rocks may become dislodged due to erosion or significant seismic events and could potentially impact that area. Prior to development, this potential hazard should be evaluated by appropriate geotechnical studies.

  The project was also evaluated for the presence of "shattered ridges." Research from the San Fernando earthquake indicates shattered ridges are the manifestation of locally intense ground motion from an earthquake. Factors that contribute to ridge-top shattering generally include earthquake magnitude and proximity, topography, rock type,

[177]/ *Op. Cit*., Geologic Map of the Devore 7.5' Quadrangle, San Bernardino County, California, Open-File Report OF 01-173, United States Geological Survey, 2001.

and structure. GCI reports that, according to the CGS, the most extensive ridge-top cracking occurred as a result of M6.7, or greater, earthquakes. Amplification of seismic waves on ridge-tops is apparently due to a topographic focusing effect. CGS states that a majority of the sites that have exhibited ridge-top shattering are underlain by firm to weak sedimentary rocks of Late Cretaceous- and Cenozoic-ages. Typically, the beds of the formational sediments in shattered ridges are generally oriented parallel or sub-parallel to the trend of the ridgeline.

Based on observations and logging during GSI's investigations, each of those factors probably exist in Neighborhood I or have the potential to occur therein since: (1) the San Jacinto fault zone is capable of a M6.7 seismic event; ridgelines; (2) primarily Lower Lytle Creek Ridge-Verdemont Hills and, to a lesser extent, Penstock Ridge, are located within Neighborhood I; (3) formational sediments appear to vary in levels of induration (i.e., weakly to well indurated); and, (4) the recorded strikes of bedding are generally sub-parallel to the trend of the ridgeline, at least locally.

- **Debris flow, flooding, and inundation**. Much of the LCRSP is subject to debris flow, flooding, and inundations. As illustrated in Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlays Map), the County indicates that much of the project site is located within a 100-hear flood zone. GSI indicates that the potential for large debris flows within drainages and tributary canyons is moderate to high under present soil cover, vegetation, and excessive precipitation conditions and may be further exacerbated in burn areas. Further, low-lying areas of the project site are underlain by alluvial deposits that owe their origin, at least in part, to irregular flooding. In consideration of the potential for prolonged rainfall, possible brush fires, and vegetation denudation, GSI recommend that the project civil engineer consider using debris, desilting, and detention basins and/or debris impact walls with sufficient freeboard where swales or their watershed intersect the proposed development. GSI further recommends that the project;s civil engineer evaluate the site for flooding associated with catastrophic failure of flood control devices and up-gradient water-storage tanks and aqueduct during an earthquake.

- **Seiche**. Seiching refers to the periodic oscillation of an enclosed or semi-enclosed body of water which often occurs during, and following an earthquake. Considering that the site is located within and in close proximity to significant seismic zones and proposed development likely includes the construction of water features for the golf course, as landscape elements, as a component of the wetland filters and recirculating stream with pond biofiltration system, and/or as detention facilities, there is a high potential for seiching and associated down-gradient flooding within Neighborhood II. This potential should be evaluated when the location and the side and bottom configurations of any proposed water features become available. Seiche potential for any up-gradient or adjacent existing lakes should also be evaluated.

Surface fault rupture, and subsidence/uplift is inherently mitigated by the approved habitable structure setback zones (avoidance). The effects of seismic shaking and ground deformation can be mitigated by proper design and adherence to applicable building codes, as well as current standards of practice. The primary goal of seismic design is to protect life, not to eliminate all damage. GSI concludes that site-specific liquefaction and dynamic settlement evaluations based on specific development concepts should be performed, in accordance with Special Publication 117 and UBC requirements and in accordance with current standards of

practice. Mitigation of slope stability issues is typically obtained by one or a combination of the following: buttresses, catchment or stabilization fills, retaining walls, gabions, catchment berms, or slope laybacks, and constructing fill slopes with appropriate code-compliant factors of safety, in accordance with Special Publication 117, UBC standards, and local ordinances. Mitigation of debris flows, flooding, inundation, and seiching should be in accordance with current UBC and standards of practice and in accordance with the recommendations of the project design civil engineer. Geologic and geotechnical issues can be mitigated with a variety of accepted practices and designs.

Although GSI's geotechnical review and PSE's third-party review have independently determined that the project site can be feasibly developed from a geologic and geotechnical perspective, subject to the incorporation of those general recommendations (or their equivalent) contained in those analyses, more detailed design-level studies will be required prior to the approval of later subdivision maps, commencement of on-site grading operations, and prior to the issuance of any building permits and construction of any infrastructure improvements.

In recognition of the presence of potential geological and geotechnical hazards, a number of mitigation measures (Mitigation Measure 3-1 through Mitigation Measure 3-3) have been formulated to ensure that all development activities will be proceeded by design-level engineering studies acceptable to the City Engineer and that parcel-specific and use-specific conditions will be established which provide reasonable assurance of an acceptable level of structural integrity and protection to site occupants. Implementation of those measures will reduce potential geologic and geotechnical impacts to a less-than-significant level.

Geology/Soils Considerations

Environmental Impact 3-2*. Project implementation will involve extensive earthwork. Unless conducted in a manner in keeping with the existing characteristics of the site and in light of the nature of the proposed development, soil conditions could result in stability problems that would adversely impact the structural integrity of proposed improvements.*

Preliminary Determination 3-2*. Potentially significant unless mitigation incorporated*[178]

Grading activities, as required to create the site's "super pads," street system, utility network, and for the construction of requisite public facilities will alter not only the site's existing physiography but will modify near-surface geology through soil removal, reconfiguration of the site's existing topography, and compaction. As illustrated in Figure 2-15 (Lytle Creek Ranch Specific Plan – Conceptual Grading Plan), the earthwork required to implement the proposed development is estimated to be approximately 4.0 million cubic yards and, with the exception of the required removal of organic material and larger material that cannot or should not be used for fill, is intended to be balanced on the project site.

[178]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; and (2) result in the placement of habitable structures in an area containing a factor of safety against liquefaction for potentially liquefiable soils of <1.3 or subject to lateral ground displacements due to liquefaction-related ground softening of >0.5 meters (1.6 feet).

Grading activities will generally occur in four distinct phases. During Phase 1, mass grading will occur within all of Neighborhood I (PAs 1-15). During Phase 2, grading activities will occur within all of Neighborhood II (PAs 89-103), extending eastward from the existing Cemex USA's Lytle Creek Quarry to the Vulcan Materials Company's (CalMat) San Bernardino Sand and Gravel Plant (2400 W. Highland Avenue). During Phase 3, mass grading will occur within all of Neighborhood III (PAs 29-79). A levee will be extended eastward from the I-15 Freeway to the Cemex USA plant and a landscaped berm separating the project site from the Cemex USA mining operation will be constructed. During Phase 4, grading activities will occur within all of Neighborhood IV (PAs 20-27). A levee will be extended westward from the I-15 Freeway to the end of Neighborhood IV. Grading operations will primarily be confined to the areas of less than 15 percent slope gradient with development minimized in those areas directly adjacent to Sycamore Creek (PA 6) and those areas greater than 25 percent slope possessing moderate to high landslide susceptibility (PAs 2, 5, and 7).

Typical cut-and-fill grading techniques would be utilized to prepare the site for construction of approximately 56 mass graded pads that will accommodate proposed land uses. Conventional grading techniques would be used to bring the site to design grades. Although a portion of the project site will be retained as natural open space, grading activities will produce a substantial localized physical change to the property.

As evidenced by the site's MRZ-2 designation and the CSC's soil classifications of the site, some on-site soils contain rock and cobble. The presence of oversized materials can create compaction problems, increase the cost of grading operations, and necessitate the exportation of materials not suitable for construction base. Under typical engineering practices, the placement of oversized rock material in fill operations should be conducted under the direction of the soils engineer. Because of the presence of these materials, rock fill guidelines will need to be formulated by the Applicant's geotechnical engineer or engineering geologist and approved by the City and/or County prior to the commencement of grading operations.

While it is evident that substantial grading will occur upon the project site, the quantity of earthwork or characteristics of that grading are not, in and of themselves, a determinant whether the resulting physiographic changes to the project site constitute a significant environmental effect. Absent from the candidate threshold of significance criteria are any standards based upon the quantity of total earthwork. Relative to geology and soils, a project would normally be deemed to produce a significant environmental effect if it were to result in an unstable condition suitable for the proposed uses.

The young alluvial and wash deposits are generally course and may locally be considered susceptible to collapse upon wetting (hydrocompaction). Expansive soils are not well represented. With the exception of the Sycamore Canyon area, the site is underlain by alluvial and wash deposits or granular sedimentary deposits. Expansive soils are not likely to represent a significant hazard. Design-level geotechnical investigations should, however, be performed to verify soil condition, including assessment of collapsible and expansive soils, once detailed development plans are developed.

In the event that grading operations were not to occur in conformance with the project-specific recommendations formulated as part of a detailed geotechnical investigation, unstable soil conditions could materialize. Such factors as the continued presence of concentrations of organic and oversized materials, lack of adequate compaction, and inadequate drainage, could

result in soil conditions insufficient to support the proposed improvements. Such conditions would constitute a significant or potentially significant impact.

Since no detailed design-specific geotechnical and geological reports have been submitted for City and/or County review, it is not possible to determine the efficacy of any future recommendations, as submitted by the soils engineer and/or engineering geologist, which will be included in those detailed investigations. As a result, it is not possible to currently conclude, with certainty, that the proposed development will be located on a geologic unit or soil that is unstable or that could become unstable as a result of differential settlement or an anticipated seismic event. Prior to mitigation, the Lead Agency has concluded that the proposed earthwork could constitute a potentially significant environmental effect.

In recognition of the presence of potential geological and geotechnical hazards, a number of mitigation measures (Mitigation Measure 3-1 through Mitigation Measure 3-3) have been formulated to ensure that all development activities likely to occur on the project site will be proceeded by design-level engineering studies acceptable to the City Engineer and that parcel-specific and use-specific conditions will be established which provide reasonable assurance of an acceptable level of structural integrity and protection to site occupants. Implementation of those measures will reduce potential geologic and geotechnical impacts to a less-than-significant level.

> ***Environmental Impact 3-3****. On-site grading operations will disrupt surface soils and increase the potential for air and water-borne erosion.*
>
> ***Preliminary Determination 3-3****. Less-than-significant impact.*

Project grading activities will involve the removal of vegetative cover, excavation, fill, and recompaction. Impacts to soils include accelerated erosion and downslope deposition and increased potential for surficial sliding and slumping. Compaction of soils by heavy equipment may reduce the infiltration capacity of on-site soils and deprive soil and vegetation of water, thereby increasing the potential for runoff and erosion.

Sediment is the most common pollutant washed from work sites, creating multiple problems once it enters waterways. Grading activities must, therefore, occur in a manner that seeks to provide the maximum feasible sediment control. Sediment control is important for a variety of reasons, including: (1) eroded soils can enter waterbodies and channels, raising water levels and blocking culverts, and increasing the chances for flooding of surrounding properties; (2) sediment can get deposited onto streets and roadways by vehicles leaving the site or by storm water runoff, thereby making travel on those roadways more dangerous; (3) sediment carries petroleum and other pollutants into streams and other waterbodies, thereby affecting water quality; and (4) sediment reduces light penetration into aquatic areas, making photosynthesis more difficult for water plants and affecting other forms of aquatic life. The analysis of potential project-related water quality impacts is presented in Section 4.4 (Hydrology and Water Quality). As indicated therein, compliance with existing statutes and regulations will ensure that impacts attributable to water-borne erosion do not elevate to a level of significance.

Additionally, from an air quality perspective, grading activities generate fugitive dust that can be transported from the project site onto adjoining properties. Fugitive dust can act like an abrasive and, in sufficient quantities, impair visibility. The analysis of potential project-related air quality impacts is presented in Section 4.7 (Air Quality).

Groundwater/Subsidence/Liquefaction Considerations

Environmental Impact 3-4*. Liquefaction susceptibility within the proposed development area is classified as non-susceptible and highly susceptible in Neighborhoods I and II, non-susceptible to highly susceptible in Neighborhood III, and non-susceptible and medium to highly susceptible in Neighborhood IV.*

Preliminary Determination 3-4*. Potentially significant unless mitigation incorporated.*[179]

Historical well water data fro the near-site wells indicate that regional groundwater levels have significantly fluctuated in the past, depending upon the amount of up-gradient precipitation. High groundwater stands and artesian conditions have been recorded within parts of the El Rancho Verde Royal Vista Golf Course area of Neighborhood II. Historic groundwater levels in a well near Neighborhood II ranged from 25 to 171-feet deep between 1928 and 2000. Historic groundwater depths in a well near Neighborhood III fluctuated between 237 and 267 feet between January and July 1992. Historic groundwater levels in a well near Neighborhoods I and IV indicated that groundwater levels alternated between about 19 and 108 feet between 1919 and 2000.

Seeps and standing water (likely perched water) were encountered in previous subsurface explorations at the site. During GSI's most recent fault investigation, localized perched groundwater was encountered within younger alluvial areas in PA 8 (Sycamore Flat) of Neighborhood I at depths as shallow as about 8½ feet. Elsewhere within PA8, perched groundwater was encountered along discontinuities in the bedrock and older fan deposits or along unconformable contacts within permeability contrasts (i.e., relatively permeable sediments underlain by aquitards).

The effects of areal subsidence generally occur at the transition between sediments with substantially different engineering properties. Based on available data, bedrock underlies all alluvial deposits throughout the site; therefore, this potential is considered low. The stereoscopic aerial photographs also show no features generally associated with areal subsidence (i.e., radially-directed drainages flowing into a depression[s], linearity of depressions associated with mountain fronts). Any subsidence in the study area would be associated with active faults within the identified APEFZs northeast of the site and would be mitigated through recommended setbacks.

The City General Plan notes that, although liquefaction is unlikely to occur in most parts of the City, liquefaction is a "concern" in the Lytle Creek Wash area where there are sandy soils and a high water table. As further illustrated in Figure 4.1-8 (San Bernardino County General Plan – Geologic Hazard Overlay Map) and described in Table 4.3-8 (Liquefaction Susceptibility

[179]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Act map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) strong seismic ground shaking; (iii) seismic-related ground failure, including liquefaction; and/or (iv) landslides. (2) be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (3) result in the placement of habitable structures in an area containing a factor of safety against liquefaction for potentially liquefiable soils of <1.3 or subject to lateral ground displacements due to liquefaction-related ground softening of >0.5 meters (1.6 feet).

Hazards based on San Bernardino County Geologic Hazards Map), liquefaction susceptibility within the proposed project site is classified as non-susceptible and highly susceptible in Neighborhood I, non-susceptible and highly susceptible within Neighborhood II, non-susceptible to highly susceptible within Neighborhood III, and non-susceptible and medium to highly susceptible within Neighborhood IV.

GSI evaluated the potential for liquefaction to occur at a proposed school site in Neighborhood III. That liquefaction analysis concluded that liquefaction potential was low at the subject property and did not constitute an unacceptable risk. That 1997 evaluation, however, pre-dated the 2008-update of Special Publication 117 which provides currently accepted guidelines for evaluating liquefaction and, therefore, does not provide a definitive basis upon which any broader assumptions can be derived.

In 1999, GSI reported that paleo-liquefaction features may have been misidentified as faults by LOR Geotechnical. Inc.[180] within the Sycamore Flat area of Neighborhood I. However, GSI observed paleo-liquefaction in older, alluvial deposits in Neighborhood II during filed work conducted in 2006 and in mid-Holocene and younger, alluvial deposits within the Sycamore Canyon area of Neighborhood I during field work conducted in 2007. It is, therefore, recommended that site-specific and design-specific, liquefaction analyses be performed within the overall project area. Depending on the magnitude of the overall liquefaction-induced settlement, engineered foundation design and/or ground-improvement techniques are considered acceptable mitigation measures of this potential condition.

In recognition of the presence of potential geological and geotechnical hazards, a number of mitigation measures (Mitigation Measure 3-1 through Mitigation Measure 3-3) have been formulated to ensure that all development activities likely to occur on the project site will be proceeded by design-level engineering studies acceptable to the City Engineer and that parcel-specific and use-specific conditions will be established which provide reasonable assurance of an acceptable level of structural integrity and protection to site occupants. Implementation of those measures will reduce potential geologic and geotechnical impacts to a less-than-significant level.

Mineral Resources

Environmental Impact 3-5*. A substantial portion of the project site is designated MRZ-2, indicating that the project site contains aggregate resources of regional significance. The proposed project will impact the MRZ-2 classified resources by less than one (0.4) percent. This resource elimination will not affect other available resources in the region. As such, the project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.*

Preliminary Determination 3-5*. Less-than-significant impact.*

The project site includes mineral resources that have been classified by the DMG under SMARA as MRZ-2. This classification was recognized in an "opinion letter" of material suitability provided to the County by the Lytle Creek Land and Resource Company's geotechnical consultant in connection with preparation of the Lytle Creek North FEIR. As

[180]/ LOR Geotechnical Inc., Geologic Fault Investigation, Sycamore Flats Area, San Bernardino County, California, September 30, 1994.

indicated therein, based on a review of previous subsurface exploration programs, laboratory testing, and observations of site sediments, it was the geotechnical consultant's opinion that "the lowlands area of the subject site are correctly classified as a MRZ-2 zone, and that significant deposits of sand and gravel exist for mining and commercial purposes."[181]

Citing the American Geological Institute, the State Mining and Geology Board reports that about 229 tons of aggregate are used for the typical 1,000 square foot ranch house or 2,000 square foot two-story house.[182] If that 229 tons/unit estimate is applied to the 8,407 dwelling units authorized on the project site, excluding non-residential uses and associated infrastructure improvements (e.g., roads, sidewalks, water and sewer conduits), approximately 1.93 million tons of aggregate will be consumed during residential construction. If not first extracted from the project site, those resources will need to be imported from other near-site and/or more distant permitted and active mining sites.

About 2,030 acres of the LCRSP property is currently designated as MRZ-2. Based solely on surface acreage, the site represents about 29.6 percent of the 10.7 square mile area comprising Sector B (Lytle Creek Wash)[183] and approximately 2.7 percent of the 116 square mile MRZ-2-designated area located within the entire San Bernardino P-C Region.[184,185] Within the SBPC Region, 10.5 billion tons of aggregate resources have been identified.[186]

Although no evidence of historic mining operations was noted within the project boundaries, directly adjacent or in close proximity to LCRSP Neighborhoods II and/or III are a number of active sand and gravel mining operations (i.e., Cemex USA Lytle Creek Plant and Vulcan Materials Company's [CalMat] San Bernardino Sand and Gravel Plant). Excluding the Sycamore Flat and Sycamore Canyon areas, those hydrogeologic conditions that have made the Cemex USA and Vulcan Materials Company's properties feasible for sand and gravel mining operations are assumed to also exist on those adjoining portions of the project site which are also designated MRZ-2.

At its topographic apex, Lytle Creek drains approximately 50 square miles of the San Gabriel Mountains, which are composed of highly fractured rock at steep slopes. Erosion from the watershed produces a high yield of very course sediment. The fan is one of a series that consist of unconsolidated alluvial deposits to the south of the Sierra Madre fault zone. The piedmont is a complex bajada with several trenched and untrenched alluvial fans. The alluvial fan formed by Lytle Creek is composed of gravelly and bouldery granitic alluvium and other sediment, including limestone, schist, and volcanic fragments of the San Gabriel Mountains to the north. The soil is composed of stony loamy sand deposited on alluvial fans.[187]

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[181]/ John P. Franklin, Engineering Geologist, GeoSoils, Inc., letter to Jan C. Dabney, Lytle Creek Land and Resources, October 19, 1999.

[182]/ California Department of Conservation, State Mining and Geology Board, A Report on Mineral Land Classification and Designation under the Surface Mining and Reclamation Act of 1975, SMGB Information Report 2008-05, July 2008, p. 5.

[183]/ *Ibid*., p. 24.

[184]/ *Ibid*., pp. xi and 21.

[185]/ *Op. Cit.,* Mineral Land Classification of the Greater Los Angeles Are, Special Report 143, Part VII, p. 21.

[186]/ *Ibid.,* p. xii.

[187]/ Committee of Alluvial Fan Flooding, Water Science and Technology Board, Commission on Geoscience, Environment, and Resources, National Research Council, Alluvial Fan Flooding, National Academy Press,1996, p. 96.

Aggregate material found on the project site is composed of light brown to gray, slightly indurated, poorly sorted Holocene-age material. Rock types, which make up the deposits, include several different species of granite and feldspathic gneisses with subordinate biotite schists and mafic rocks. Aggregate material has been mined within the general project area (although not directly on the project site) since 1955.

Since that time, significant development of housing has and continues to occur to the east and west of that area. To the east and northeast is the Hyundai Pavilion at Glen Helen (formerly the Glen Helen Blockbuster Pavilion). The north portion of this section is now bisected by the I-15 freeway and housing development exists to the south. Large expanses of undeveloped land and other rural areas that once existed when the initial SR 143 VII Report was created no longer exist. In addition, substantial channeling of active Lytle Creek has occurred, defining the channel with significant flood control activity.

Portions of the proposed development are within the overlay zone of MRZ-2, specifically within Sector B-1 and Sector B-5, as depicted in the SR 143 VII Report. A neighborhood-based evaluation of the proposed project's potential impacts on mineral resources is presented below.

- **Neighborhood I**. As indicated in Table 4.3-7 (Data on Resource Areas and Sectors - San Bernardino P-C Region), the CDC estimates the presence of 45.4 million short tons of aggregate resources within "Sector B-1." As illustrated in Figure 4.3-35 (Regionally Significant Construction Aggregate Resource Areas in the San Bernardino PC-Region), "Sector B-1" includes portions of Neighborhoods I and IV.

  Neighborhood I consists of approximately 417.2 acres. About 56 acres lie within "Sector B-1." Of that acreage, approximately 50 acres are planned for development and six areas will be retained an open space preserve. The 50 acres planned for development are comprised of a very narrow parcel bounded by steep hillside and National Forest boundary to the north and north-east and the I-15 Freeway to the south. To the west is a narrow section of the Lytle Creek channel. In this area, Lytle Creek travels under the I-15 Freeway bridge. The parcel is bisected by Glen Helen Parkway running through the length of the parcel.

  Although the existing aggregate resources located within that approximately 50-acre portion of "Sector B-1" located in Neighborhood I would be retained in situ, development would threaten the potential to extract minerals in that area.

  Independent of the proposed LCRSP, existing site constraints, including the irregularity and narrow features of this parcel, the parcel's proximity to the I-15 Freeway and bridge, and the presence of Glen Helen Parkway, severely limit the potential to feasibly institute mining operations within this area. The existence of these constraints, in combination with regulatory setbacks and the 1:1 gradient for pit-slope walls (as assumed in the SR 143 VII Report), would minimize the potential aggregate yield that could reasonably be extracted from this area. Implementation of mining operations within the area of Neighborhood I is, therefore, not considered feasible.

- **Neighborhood II**. As indicated in Table 4.3-7 (Data on Resource Areas and Sectors - San Bernardino P-C Region), the CDC estimates the presence of 709.2 million short tons of aggregate resources within "Sector B-5." As illustrated in Figure 4.3-35

(Regionally Significant Construction Aggregate Resource Areas in the San Bernardino PC-Region), "Sector B-5" includes portions of Neighborhoods II and III.

An approximately 581-acre portion of Neighborhood II is located within "Sector B-5." Neighborhood II consists of approximately 801.8 acres, of which approximately 626 acres would be developed and approximately 176 acres to be retained as open space. Although the existing aggregate resources located within the approximately 622-acre portion of "Sector B-5" which is located in Neighborhood II would be retained in situ, development would threaten the potential to extract minerals in that area.

About 168 acres of the 176 acres of retained open space was previously set aside as part of an environmental settlement instituted following the County's approval of the "Lytle Creek North Planned Development Project." Because they constitute existing environmental mitigation, those lands should be assumed to be unavailable for mineral extraction due to regulatory requirements to protect and preserve this floodway area and its associated habitat. In addition, Neighborhood II also includes the El Rancho Verde Royal Vista Golf Course.[188]

In Neighborhood II, there remains approximately 300.6 acres which, from an engineering perspective, could potentially be mine.[189] Those lands are, however, bordered on the east by the existing San Bernardino kangaroo rat (SBKR) preserve. To the east, the San Gabriel Valley Water District operated water conveyance pipelines.

Extracting the available aggregates from this sector would require significant engineering and would likely result in limited depth due to the active Lytle Creek floodway to the east, the San Gabriel Water District pipelines to the north and existing sensitive receptors to the west of Riverside Avenue. Floodway protection would require significant flood control infrastructure, large setbacks to mining, and limited depth to ensure protection from flooding along the northerly and easterly perimeters of the proposed development.

Cemex USA currently operates a large-scale mining operation, including the manufacture of ready mix concrete, north of Neighborhood II. Absent the consideration of potential environmental impacts affecting off-site areas and proposed land uses within the adjoining portion of the LCRSP area, those operations could potentially be expanded southward to encompass additional lands and additional resources within the project boundaries. From an engineering perspective alone, mineral extraction operations could feasibly be implemented within a portion of Neighborhood II.

- **Neighborhood III**. Neighborhood III consist of approximately 968.8 acres located south of the I-15 Freeway, east of Riverside Avenue, and extending southward to the entrance gate to the Cemex USA facility. Neighborhood III lies entirely within "Sector B-5." Approximately 573 acres within Neighborhood III are proposed for development. Although the existing aggregate resources located within that portion of "Sector B-5" which is located in Neighborhood III would be retained in situ, development would threaten the potential to extract minerals in that area.

[188]/ With the exception of "public facilities," a "golf course" is not identified in SMARA as an "incompatible" land use (14 CCR 3675).

[189]/ Cortner, Steve C., Evaluation for Potential Loss of Mineral Resource Resulting from the Development of Lytle Creek Ranch, City of Rialto, May 2008.

Approximately 395 acres would be set aside as retained open space. The open space is primarily within the Lytle Creek floodway and includes habitat for the SBKR and the slender horned spine flower, both designated federally endangered species. An approximately 214-acre preservation area, within Lytle Creek, would be retained for the purpose of protecting the SBKR. The United States Department of Fish & Wildlife Service (USFWS) has indicated that mining anywhere around the 214-acre preserve would negatively impact the SBKR.[190]

Downstream from the I-15 Freeway and the I-15 Freeway bridge crossing is the Cal-Nevada pipeline. A segment of the subterranean pipeline carries fuel product across Lytle Creek, traversing the approximately 214-acre SBKR protected area. The pipeline's presence would present substantial limitations to any mining activities conducted within the Neighborhood III area. In addition, within this sector, an approximately 58-acre area currently includes existing and operational industrial uses. The existence of those uses further limits the availability of lands available for construction aggregate extraction.[191]

In Neighborhood III, from an engineering perspective alone, approximately 239.5 acres of land, generally located in the northern part of this neighborhood and east of Riverside Avenue, are feasibly available for mining operations.[192] Housing developments, which constitute sensitive receptors, are located along Riverside Avenue to the south and southwest of this area. The extraction of construction aggregates would require significant setbacks along Riverside Avenue, the I-15 Freeway, and the existing industrial uses. In addition, extensive flood control protection would have to occur along the Lytle Creek floodway in order to protect from flood flow intrusion into the mining area. The relatively narrow and linear aspects of this parcel, excluding those open spaces which serve as habitat preserves, would reduce the depth of mining operations and reduce the quantity of materials that could feasibly be extracted.

- **Neighborhood IV**. Neighborhood IV consists of approximately 259.5 acres, of which about 99.4 acres are proposed for development and about 160 acres would be retained as open space. All of Neighborhood IV is within "Sector B-1." Although the existing aggregate resources located within the approximately 100-acre portion of "Sector B-1" which is located in Neighborhood IV would be retained in situ, development would threaten the potential to extract minerals in that area.

  The majority of the open space portion of this neighborhood lies in the main Lytle Creek north of the I-15 Freeway bridge. This part of Lytle Creek is much more restricted and of

[190]/ As indicated in the Federal Register: "Sand and gravel mining operations have degraded San Bernardino kangaroo rat habitat in all of the proposed revised critical habitat units, with major operations occurring in the Santa Ana River and Lytle Creek washes. Mining activities directly affect the PCEs [primary constituent elements] for the subspecies by altering soil composition and structure, and by stripping away vegetative cover. Furthermore, flood control structures are often built to protect mining operations from flood damage. This alters the hydrology essential for maintaining proper soil and alluvial sage scrub habitat for the San Bernardino kangaroo rat. Special management considerations or protection may be required to minimize effects of mining activities on alluvial sage scrub habitat and the natural hydrological processes that maintain proper alluvial sage scrub conditions for the San Bernardino kangaroo rat. Such management may include restoring habitat in areas degraded from past mining activities to conditions suitable for this subspecies" (June 19, 2007, 72 FR 33813).

[191]/ With the exception of "public facilities" and "geographically limited but impact intensive industrial, and commercial" uses, neither privately-operated "pipelines" nor general "industrial uses" are identified in SMARA as "incompatible" land uses (14 CCR 3675).

[192]/ *Op. Cit*., Evaluation for Potential Loss of Mineral Resource Resulting from the Development of Lytle Creek Ranch, City of Rialto, May 2008.

higher flow velocity. The remaining portion lies northerly of Lytle Creek Road and situated around the Sierra Avenue freeway ramps.

Mining the 160.0-acre open space area would likely result in significant Caltrans-imposed restrictions due to the close proximity to its I-15 Freeway bridge structure and grade protection to prevent scouring that could occur downstream and to the bridge structure itself. The narrow character of the drainage in this area, together with a shallow aggregate to basement rock depth or thickness and the freeway's proximity, would limit the quantity of materials that could feasibly be extracted from this area.

The feasibility of extracting construction aggregate from the remaining approximately 99.4-acre portion of Neighborhood IV is limited by the presence of Lytle Creek Road, the I-15 Freeway, the Sierra Avenue freeway ramps, the I-15 Freeway bridge structure, and the narrow and linear character of the property's configuration. Physical constraints and regulatory guidelines, in combination with existing hydrogeologic conditions, indicate that the area of Neighborhood IV would not be feasible to mine.

In addition to those constraints already described herein, additional constraints affecting the estimation of potentially recoverable construction aggregate resources include, but are not limited to, the following factors: (1) regulatory design standards and restrictions (e.g., slope angles, the maximum depth of extraction, mine setbacks, screening and landscaping, property buffer requirements, sensitive species, and other environmental mitigation) impose physical limitations; (2) the San Bernardino County Flood Control District has imposed general restrictions to preserve and protect the flood control dynamics within the active Lytle Creek area; the implementations of large levees, grade control structures, depth limitations are all factors that would effectively minimize potential aggregate extraction; (4) Caltrans has jurisdiction on mining activities occurring within one mile of the I-15 Freeway bridge[193]; most of the proposed development would occur within this Caltrans' jurisdictional area; and (5) the CalNev pipeline (crossing Lytle Creek downstream of the I-15 Freeway) and the San Gabriel Water District water conveyance lines (crossing Lytle Creek further downstream) impose limitations on where aggregate extraction activities could reasonably occur. With regards to those pipelines, other than through detailed assessment and discussions with individual pipeline operators, the Lead Agency cannot ascertain the feasibility of any major pipeline relocation.

In addition, under the provisions of a recorded "declaration of covenants, conditions and restrictions," as recorded with the County Clerk of the County of San Bernardino on July 29, 1992 (Instrument No. 92-314964), the Applicant's rights and the rights of subsequent holders of real property interests, to engage in surface mining activities on all or portions of the project site may have been restricted for a period of 35 years from the date of execution of that agreement. That 35-year period would generally end on July 28, 2027.[194]

[193]/ Section 2770.5 of SMARA states: "Whenever surface mining operations are proposed in the 100-year flood plain for any stream, as shown in Zone A of Flood Insurance Rate Maps issued by the Federal Emergency Management Agency, and within one mile, upstream or downstream, of any state highway bridge, the lead agency receiving the application for the issuance or renewal of a permit to conduct the surface mining operations shall notify the Department of Transportation that the application has been received. The Department of Transportation shall have a period of not more than 45 days to review and comment on the proposed surface mining operations with respect to any potential damage to the state highway bridge from the proposed surface mining operations. The lead agency shall not issue or renew the permit until the Department of Transportation has submitted its comments or until 45 days from the date the application for the permit was submitted, whichever occurs first."

[194]/ The Lead Agency makes no representations as to the currency or enforceability of that private agreement but merely discloses it existence since its existence could and would likely have considerable baring on the feasibility of instituting mining operations on portions of the project site.

With regards to non-permitted aggregate resources located on the project site, those areas located in Neighborhoods I and IV within "Sectors B-1" are considered infeasible to mine due to infrastructure, physical, and regulatory constraints. Within the proposed project boundaries, however, two areas within "Sector B-5" have been identified wherein mining activities could potentially occur. As illustrated in Figure 4.3-39 (Conceptual Mining Plan - Neighborhood II) and Figure 4.3-40 (Conceptual Mining Plan - Neighborhood III), those areas include a 300.6-acre area within Neighborhood II and/or a 239.5-acre area within Neighborhood III. Absent the proposed development, without further consideration of potential environmental and economic constraints, these areas could be considered technically feasible to mine.[195]

As illustrated, the "Conceptual Mining Plan – Neighborhood II" abuts the southeastern boundary of the existing Cemex USA quarry and encompasses a surface area of approximately 300.6 acres. The maximum depth of excavation is approximately 47 feet and the estimated volume of raw material that could be extracted is about 11.37 million cubic yards (18.11 million short tons). The "Conceptual Mining Plan – Neighborhood III" abuts the northwesterly boundary of the Cemex USA quarry and encompasses an area of approximately 239.5 acres. The maximum depth of excavation is approximately 77 feet and the estimated volume of raw material that could be extracted is about 14.29 million cubic yards (22.76 million short tons).[196]

Both areas were identified as possible mining sites because they are out of the active floodway and do not conflict with current environmental preserves for the protection of sensitive species. These conceptual mining plans would appear to conform to reasonable regulatory constraints and appear to be in general conformity to those standard conditions that would likely be imposed by the City and/or the County for reasonable flood protection relative to flood control practices and normal and standard buffer and setback requirements. Based on existing and absent additional physical, social, environmental, and/or regulatory constraints, the reasonable recovery of construction-grade aggregates within these resource sectors is estimated to total approximately 25.66 cubic yards (40.87 million short tons).

The Lead Agency acknowledges that it may be possible to remove or reduce the presence of some or all of those existing constraints which now limit the potential recoverability of existing on-site aggregate resources. Any detailed investigation of the potential removal or reduction of those constraints is, however, outside the scope of this CEQA analysis. In the event that those constraints could be removed, the estimated quantity of recoverable aggregate resources within the project area might increase. For the purpose of this analysis, the 40.87 million short ton estimate represents a reasonable estimation of recoverable on-site resources.

As proposed, the LCRSP does not contain plans for the excavation of aggregate materials with the intent of salvaging these materials for commercial application. Although the majority of the site's underlying mineral resources will be retained in-situ, the project may potentially remove an estimated 41 million tons of aggregate resources from the MRZ-2 zone. As stated, the SR 143 VII Report identified 10.5 billion tons of MRZ-2 resources in the SBPC Region. When comparing the approximate 10.5 billion tons of resources (non-permitted) to the 41 million tons of aggregate resources potentially removed from the MRZ-2 zone by the proposed project, the

[195]/ Since open pit mining operations would generate its own set of potential environmental effects, feasibility cannot be limited to technological considerations only. Similarly, at the time of this writing, no economic information has been presented to the Lead Agency to ascertain the economic feasibility of new or expanded mining operations.

[196]/ *Op. Cit*., Evaluation for Potential Loss of Mineral Resource Resulting from the Development of Lytle Creek Ranch, City of Rialto, May 2008.

project represents about 0.4 percent of the total estimate of MRZ-2 resources identified within the SBCP Region. The project's impact on aggregate resources would, therefore, be less than significant.

As specified under Section 2763(b) of SMARA, an agency's land-use decisions involving areas designated as containing Statewide or regionally significant resources shall be in accordance with the agency's mineral resource management policies and shall consider the importance of the mineral resources to the State and to the nation as a whole. Although both the City and the County have adopted mineral resource policies, neither agency explicitly identifies the LCRSP property as an existing or future mineral extraction area.

With regards to mineral resources, an assessment of the proposed project's consistency with the City General Plan is presented in Section 4.1 (Land Use) herein. While acknowledging that the proposed project would threaten the potential to extract minerals in an area classified by the State Geologist as an area containing a "regionally significant" resource, that action would not be deemed to be inconsistent with the City General Plan.[197] Independent of that determination, the proposed project's impacts on a "regionally significant" mineral resource must be examined in the context of the relevant threshold criteria identified by the Lead Agency. Those threshold standards most applicable to this topical issue are separately examined below.

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.

  The CEQA criteria does not specify either an amount (e.g., specified tonnage) or impose a quantifiable (e.g., substantial) standard. The criterion is whether there occurs a loss of availability of a known mineral resource of value to the region. The value to the region, however, must be examined in the context of what resources will remain available if the project is developed, whether the on-site mineral resources can feasibly be extracted, and whether the region's need can be adequately served without the project resources.

  The "MRZ-2" (areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists) and "regionally significant" (14 CCR 2790) designations for portions of the project site documents the presence of known mineral resources of value to the region.

  Section 2726 of SMARA define an "area of regional significant" as "an area designated by the board pursuant to Section 2790 which is known to contain a deposit of minerals, the extraction of which is judged to be of prime importance in meeting future needs for minerals in a particular region of the State within which the minerals are located and which, if prematurely developed for alternative incompatible land uses, could result in the permanent loss of minerals that are of more than local significance." "Incompatible land uses" include, but are not limited to, high-density residential uses and low-density residential uses with high unit value (14 CCR 3675).

[197]/ Determination of consistency or inconsistency primarily rest with the City Council. Prior to certification by the City Council, if so certified, statements presented herein constitute preliminary determinations and remain subject to change or other modification based on the City Council's consideration of the information presented in the project's administrative record.

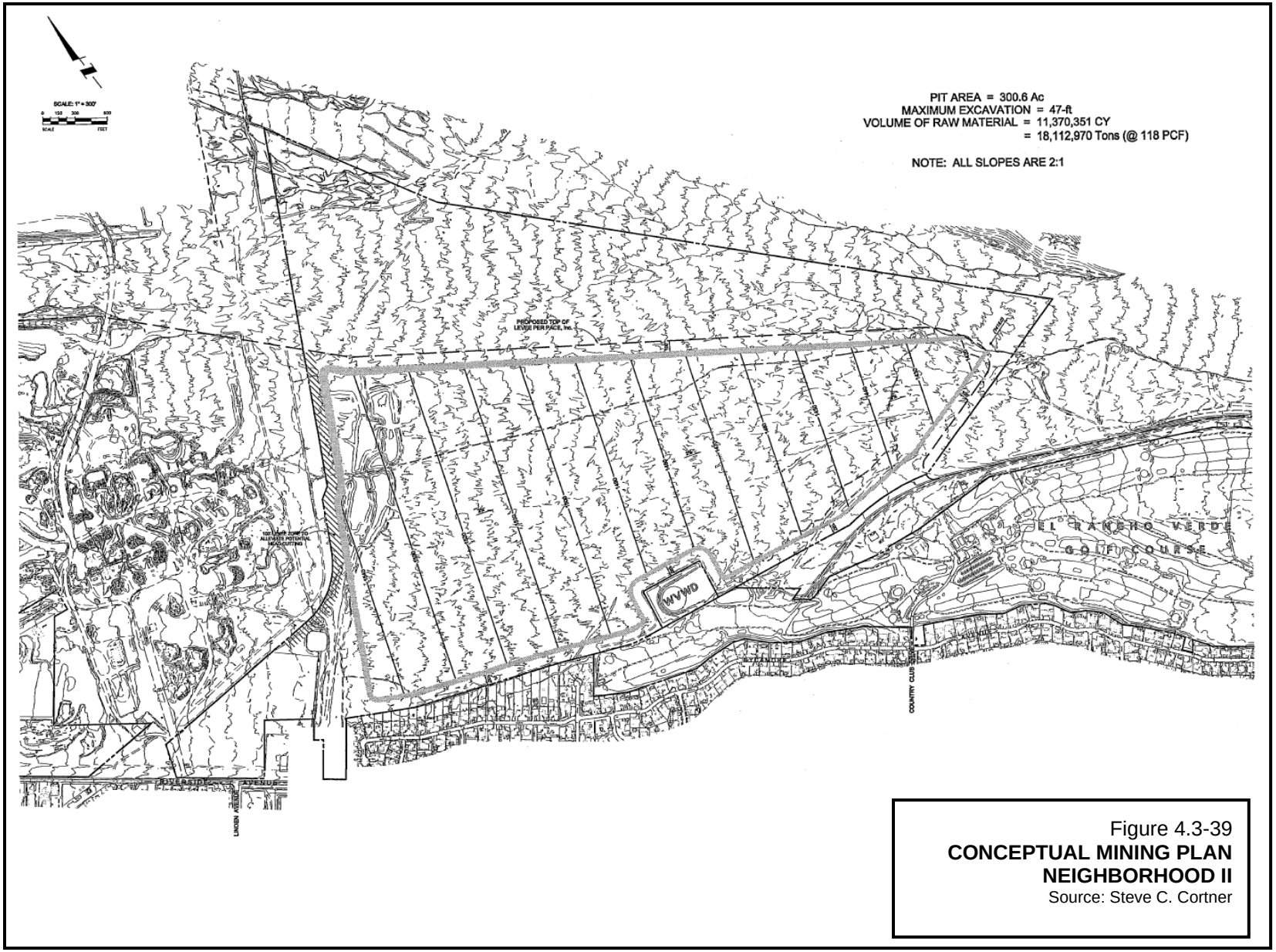

Figure 4.3-39
CONCEPTUAL MINING PLAN NEIGHBORHOOD II
Source: Steve C. Cortner

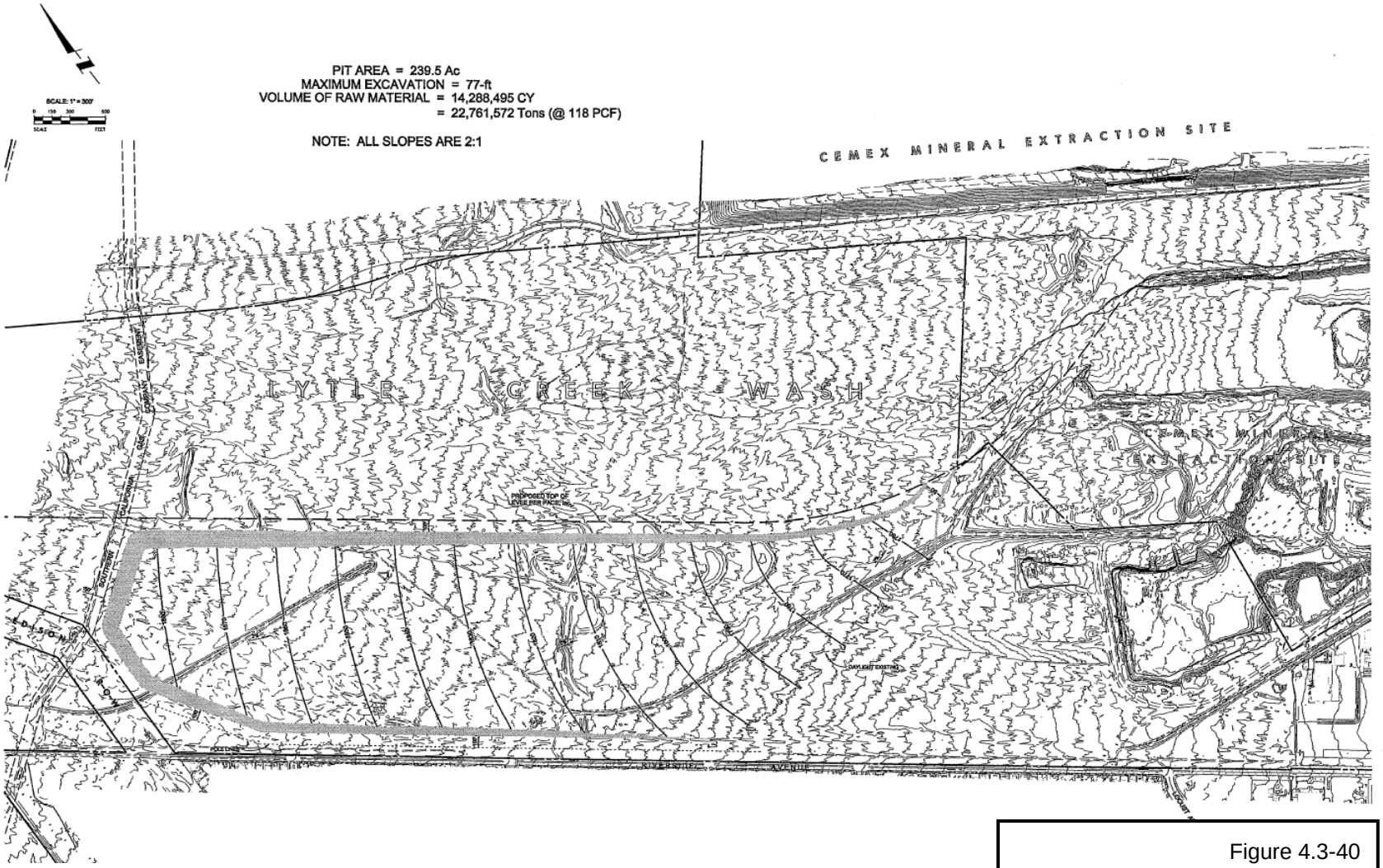

Figure 4.3-40
CONCEPTUAL MINING PLAN NEIGHBORHOOD III
Source: Steve C. Cortner

Since on-site aggregate resources would generally be preserved in-situ, it may not be correct to state that there would be a "loss" of those resources should the proposed project be permitted. The resources would still exist and, from a purely technological perspective, still could be extracted. The introduction of "incompatible land uses" (14 CCR 3675) affects not the presence of those resources but the potential for their recovery. The introduction of new homes and other land uses would increase the social, environmental, and economic costs of resource extraction and would likely make such extraction infeasible. Based on the Lead Agency's analysis, the recovery of 40.87 million short tons of aggregate from the project site is presently considered feasible. Once developed, because access would be reduced, the recovery of those same resources would likely become infeasible. The potential consequence of the project, therefore, is the resulting change in feasibility and accessibility rather than the actual loss of the resource itself.

If "loss of availability" is deemed to equate to feasibility and accessibility, the proposed project would: (1) produce a "loss of availability"; and (2) affect a "known mineral resource. The proposed project may potentially remove an estimated 41 million tons of aggregate resources from the MRZ-2 zone. The SR 143 VII Report identifies 10.5 billion tons of MRZ-2 resources in the SBPC Region. When comparing the approximate 10.5 billion tons of aggregate resources (non-permitted) to the 41 million tons of aggregate resources (non-permitted) potentially removed from the MRZ-2 zone by the proposed project, the project represents about 0.4 percent of the total estimate of MRZ-2 resources identified within the SBCP Region. While the on-site resource would not be available for extraction, given the relatively small amount of the on-site resources when compared against the resources which are available throughout the SBCP Region, the proposed project's impact on recoverable aggregate resources would be less than significant.

- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

  As illustrated in Figure 4.3-7 (City of Rialto General Plan – Mineral Resource Sectors), the City General Plan acknowledges the existence of a State-designated mineral resource upon a portion of the project site. The mere acknowledgement of the existence of that resource, however, neither constitutes a policy declaration specifying the presence of a "locally-important mineral resource" nor represents a policy identifying the affected property as a "resource recovery site."

  As discussed above, based on the analysis presented herein, the development of the project site absent the extraction of the identified resources is not inconsistent with the City General Plan. The resulting impact would, therefore, be deemed to be less-than-significant based on this CEQA criterion.

Prior to the initiation of any grading activities that may result in the loss or reduction of mineral resources, the Applicant is required to petition the SMGB for the removal of the project site from the inventory of properties designated as possessing Statewide and/or regionally significant resources. The determination of the SMGB relative to that petition is not, however, determinant of the feasibility of the project and no discretionary actions of the Lead Agency hinge thereupon.

4.3.5.2 Operational Impacts

Seismic Considerations

Environmental Impact 3-6*. During the life of the project, lands and structures within the project site will be subject to periodic seismic events from localized and regional earthquake faults, producing the potential for damage to property, to the improvements located thereupon, and resulting in health and safety risks to site occupants.*

Preliminary Determination 3-6*. Potentially significant unless mitigation incorporated.*[198]

When a structure is built, the underlying soil layers can undergo a certain amount of compression due to the deformation or relocation of soil particles, expulsion of water or air from the void spaces, and for other reasons. Some of this settlement occurs immediately following the application of a structural load, while other settlement occurs over an extended time period. Earthwork and building construction performed in accordance with the design recommendations formulated for the project and contained in a detailed geotechnical investigation, as well as associated UBC requirements, will reduce the potential settlement to acceptable levels.

Conversely, development projects that fail to fully consider the geotechnical and geologic conditions and seismic forces affecting the site upon which those improvements are constructed may be unable to withstand a substantial seismic event. In order to ensure that development occurs in a manner consistent with potential site constraints, site-specific or use-specific geotechnical investigation are typically prepared as a precursor to the issuance of later grading and building permits. When constructed in accordance therewith, all improvements should prove capable of withstanding the maximum design forces applicable to an individual project site. A number of mitigation measures (Mitigation Measure 3-1 through Mitigation Measure 3-3) have been previously identified which will ensure that construction activities are conducted in recognition of existing on-site and near-site seismic hazards. Ongoing construction inspection will further ensure that the resulting construction fully conforms to all applicable UBC and associated design and development requirements and conditions.

During the life of the project, on-site structures will be subjected to seismic events. As required by State law, certain California Department of Real Estate (DRE) disclosure obligations are imposed which serve to inform perspective purchasers of the presence of on-site and near-site conditions that could materially affect either the value of property or the wellbeing of site occupants. In accordance with those pre-existing requirements, perspective purchasers will receive notification of the presence of those geologic, geotechnical, and seismic conditions that affect both the site and the region. So informed, purchasers will be able to make an informed decision concerning their voluntary election to purchase property within the proposed development.

Unless the transfer of the property is subject to an exemption from State-imposed disclosure requirements, the seller or the seller's agent for this purpose must make appropriate disclosures if the property is in one or more of the following zones or areas: (1) Zone A or Zone V (Special Flood Hazard Area) as designated by the FEMA (Section 8589.3, CGC); (2) an area of potential

[198]/ Prior to mitigation, the applicable or potentially applicable threshold standard relative to this preliminary determination is, but may not be limited to, the initial conclusion that the proposed project could has environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

flooding, as shown on a map as an area which will be inundated if a dam fails (Section 8589.4, CGC); (3) a designated very high fire hazard severity zone (Section 51183.5, CGC); (4) a designated wildland area (State Responsibility Area) that may contain substantial forest fire risks and hazards (Section 4136, PRC); (5) an earthquake fault zone (Section 2621.9, PRC); (6) a seismic hazard zone (Section 2694, PRC). These disclosures must be made on the Natural Hazard Disclosure Statement (NHDS) or on the Local Option Real Estate Transfer Disclosure Statement (Local Option Disclosure), if the local jurisdiction has mandated use of a Local Option Disclosure for the same disclosure purposes and the information and warnings are substantially the same as on the NHDS.[199]

As noted, DRE disclosure requirements presently include, but are not limited to, the presence of an Alquist-Priolo earthquake fault zone and seismic hazard maps, as prepared by the State Geologist under the provisions of the Seismic Hazard Mapping Act (Sections 2690-2698.6, PRC). The project site is located in the USGS's Devore 7.5-Minute Topographic Quadrangle. Seismic hazard zone maps encompassing the project site have not yet been prepared for that quadrangle by the State Geologist.

As such, prospective purchasers may not receive sufficient information concerning the presence of potential seismic hazards affecting the general project area. Based on the current absence of a State-issued seismic hazard maps, pending the development of seismic hazard zone maps encompassing the project site by the State Geologist, a mitigation measure (Mitigation Measure 3-5) has been formulated requiring that, at a minimum, prospective purchasers of real property within the LCRSP be provided a copy of San Bernardino County General Plan – Hazard Overlay Map, as illustrated, in part, in Figure 4.1-8 (San Bernardino County General Plan – Geologic Hazard Overlay Map) herein or be provided with similar information disclosing the potential presence of proximal earthquake faults, seismic hazards, liquefaction susceptibility, and earthquake-induced landslide susceptibility. The inclusion of this recommended measure does not replace, negate, or otherwise alter any existing obligations between sellers, their agencies, and prospective purchases as may be established by the DRE or under State law.

Geology/Soils Considerations

Beyond those construction-term impacts identified herein, from an earth science perspective, no additional operational impacts on geology/soils have been identified herein or raised in comments received by the City following the release of the NOP. No additional potentially significant operational impacts on geology/soils would be anticipated during the operational life of the proposed project. Operational geology/soils impacts would, therefore, be less than significant.

Groundwater/Subsidence/Liquefaction Considerations

Beyond those construction-term impacts identified herein, from an earth science perspective, no additional potentially significant project-level operational impacts on groundwater/subsidence/ liquefaction would be anticipated during the operational life of the proposed project. Operational groundwater/subsidence/liquefaction impacts would, therefore, be less than significant.

[199]/ California Department of Real Estate, Disclosure in Real Property Transactions, Sixth Edition, 2005, Section 1(A)(4).

Mineral Resources

Beyond those construction-term impacts identified herein, from a geology and soils perspective, no additional significant or potentially significant project-related operational impacts on mineral resources would be anticipated during the operational life of the proposed project. Operational mineral response impacts would, therefore, be less than significant.

4.3.5.3 Cumulative Impacts

Environmental Impact 3-7*. Other projects located within proximity of the proposed development will be subjected to similar seismic forces and their associated hazards, subjecting those structures, improvements, and site occupants to potential seismic risks.*

Preliminary Determination 3-7*. Less-than-significant impact.*

Those geotechnical impacts identified herein, including those affecting the southern California area as a whole, are generally site-specific in nature. Implementation of the proposed project would, therefore, not result in any significant cumulative geologic, geotechnical, or seismic impacts affecting or potentially affecting other off-site areas. Similarly, implementation of other related projects would neither result in any further project-related geologic or geotechnical impacts nor increase the severity of those impacts addressed in this EIR.

Adequate control measures have been formulated by State and local governmental entities to ensure that all public and private structures are constructed and maintained in recognition of site-specific, area-specific, and regional geologic, geotechnical, and seismic conditions. With regards to seismicity, geologic, geotechnical, and soils considerations, compliance with applicable UBC standards, local ordinances, and associated permit-agency requirements will mitigate any potential cumulative impacts to below a level of significance.

Environmental Impact 3-8*. With increased urbanization, the inventory of recoverable sand and gravel resources within the San Bernardino Production-Consumption Region diminishes; however, the resource elimination that will occur as a result of the proposed project will impact the MRZ-2 classified resources by less than one percent and remaining available resources in the SBPC Region exceed the projected 50-year aggregate demand.*

Preliminary Determination 3-8*. Less-than-significant impact.*

Natural aggregate made from crushed stone and deposits of sand and gravel is a vital element of the construction industry in the United States. Although natural aggregate is a high volume/low value commodity that is relatively abundant, new sources of aggregate are becoming difficult to find and develop because of rigid industry specifications, political considerations, development and transportation costs, and environmental concerns.

In 1967, the California State Legislature, through a Senate Resolution, requested a review for uniform controls and standards for surface mining. The Senate Committee on Natural Resources and Wildlife subsequently requested the SMGB to review the resolution and advise the Legislature as to the nature of the problem and the need for legislation.

The SMGB subsequently suggested that a State review of surface mining would be of value in view of the burgeoning public concern over land use and related environmental considerations. The SMGB advanced, by resolution, its proposal for a Statewide examination of surface mining and reclamation. In November 1968, the Secretary of the Resources Agency requested seven representatives of industry, State and local government, and the academic community to undertake an inquiry to determine "such regulations as may be needed to avoid 'collision' between urbanization and the mining industry".[200]

The chairman of the Surface Mining Committee summarized the threat of urbanization on mineral resource as follows: "Recognizing that increase in population inevitably means increasing urbanization, and recognizing too that increase in our standard of living inevitably places increasing demands on the mineral industry, it is to be expected that in some places these two developments are likely to find themselves on a 'collision course.'"[201]

As indicated in Table 4.3-8 (Comparison of 50-Year Demand and Permitted Aggregate Resources – San Bernardino Production-Consumption Region)., permitted aggregates in the SBPC Region is sufficient to meet 24 percent of the needed aggregate supply to meet the State criteria for the region's 50-year demand. The SBPC Region is projected to require 1,074 million tons of construction aggregate over the next 50 years and currently has only 262 million tons permitted. The 41 million tons of non-permitted aggregate resources which could be feasibly extracted from the project site, based solely on an engineering perspective, represents about 16 percent of the currently permitted resources and about 5 percent of the SBPC Region's projected shortfall with regards to the region's anticipated 50-year demand.

Map Sheet 52 shows that there exist around 74 billion tons of un-permitted aggregates within the State. Thus, the projected aggregate supply in relation to its 50-year demand is a function of the inability to permit the necessary construction grade aggregate, as opposed to a depletion issue. California would only have to permit a fraction of the non-permitted aggregate resources throughout the State to meet its 50-year demand. Considering the vast amount of resource availability within the SBPC region, there are ample resources to permit and develop aggregate reserves, notwithstanding the 41 million tons of aggregate resources on the project site were eliminated. Thus, the impact of the project on the availability of aggregate resources is considered less than significant. To the extent that other related projects are also located within areas designated by the DMG as containing State or regionally significant aggregate resources, the proposed project would not contribute to a loss of those resources and, therefore, would not be deemed to be cumulatively significant.

Based on the amount of aggregate resources present on the site as compared to the aggregate resources remaining in the SBPC Region, the loss of availability of on-site resources is not considered cumulatively significant. To the extent that other related projects are also located within areas designated by the DMG as containing State or regionally significant aggregate resources, the collective loss of those resources would not be deemed to be cumulatively significant on account of the proposed project's minimal loss of aggregate resources.

[200]/ Hearing before the Senate Subcommittee on Minerals, Materials, and Fuels, November 16, 17, 1971 and December 2, 1971 (http://www.osmre.gov/legishistory/hearing111671part2.htm).

[201]/ *Op. Cit.*, Significant Mineral Resources – What are they and how do they Affect Local Land Use Regulation, Public Law Journal, An Official Publication of the State Bar of California Public Law Section, p. 3.

4.3.6 Recommended Mitigation Measures

- **Mitigation Measure 3-1**. Unless otherwise waived or superceded, all development activities conducted on the project site shall be consistent with the recommendations contained in the following studies: (1) "EIR Level Geotechnical Review, Lytle Creek Ranch Land Use Plan, City of Rialto, San Bernardino County, California" (GeoSoils, Inc., May 22, 2008) and "Updated Geological and Geotechnical EIR Level Review of Documents Pertaining to the Lytle Creek Ranch Land Use Plan, City of Rialto, County of San Bernardino, California" (Pacific Soils Engineering, Inc., September 3, 2008); or (2) such alternative recommendations as may be approved by the City Engineer based on the findings of a project-specific geologic and geotechnical investigation.

- **Mitigation Measure 3-2**. Prior to the approval of a tentative "B' level subdivision map for residential or commercial development (excluding any "A' level subdividion map for financing purposes only), a subsequent site-specific and design-specific geotechnical and geologic report shall be submitted to and, when acceptable, approved by the City Engineer documenting the feasibility of each proposed use and the appropriate geotechnical, geologic, and seismic conditions associated with that use. Unless otherwise modified, any conditions, recommendations, or mitigation measures contained therein, including the imposition of specified setback requirements for proposed development activities within Alquist-Priolo Earthquake Fault Zones, shall become conditions of approval for the requested use.

- **Mitigation Measure 3-3**. In recognition of the potential lateral forces exerted by predicted seismic activities, no habitable structures that may be located on the project site and which are located within the defined Alquist-Priolo Fault-Rupture Hazard Zones shall be over two stories in height. Habitable structures of greater height within defined Alquist-Priolo Fault-Rupture Hazard Zones may only be authorized following the submittal of a subsequent site-specific and design-specific geotechnical and geologic report acceptable to the City Engineer and, at a minimum, the imposition of both the recommendations contained therein and such additional conditions as may be imposed by the City Engineer.

- **Mitigation Measure 3-4**. At a minimum, pending the development of seismic hazard zone maps encompassing the project site by the State Geologist under the Seismic Hazard Mapping Act (Sections 2690-2698.6, Public Resources Code), prospective purchasers of real property within the LCRSP shall be provided a copy of San Bernardino County General Plan – Hazard Overlay Map or similar information disclosing the potential presence of seismic hazards, including liquefaction susceptibility and earthquake-induced landslide susceptibility. This condition does not replace, negate, or otherwise alter any existing obligations between sellers, their agencies, and prospective purchases as may be established by the California Department of Real Estate or under State law.

4.3.7 Significant Unavoidable Adverse Effects

Although a geotechnical feasibility assessment has determined that the project can be developed from a geologic, geotechnical, and seismic perspective subject to the incorporation of those general recommendations (or their equivalent) contained therein, more detailed parcel-specific and design-specific studies will be required prior to the approval of final subdivision

maps, commencement of any on-site grading operations, the issuance of any building permits, and construction of any infrastructure improvements. Any conditions, recommendations, or mitigation measures contained therein, or their equivalent, as may be determine by the City Engineer, will be imposed as conditions of map recordation and/or permit issuance. Preparation of more detailed geotechnical investigations and incorporation of those conditions, recommendations, and mitigation measures, as identified therein, will reduce potential geologic, geotechnical, and seismic impacts to below a level of significance.

The approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative geology and soils impacts.

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4.4 HYDROLOGY AND WATER QUALITY

4.4.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- C.H.J. Incorporated, Update to Slope Stability Investigation – Proposed Amended Reclamation Plan, North and South Quarries, Cemex Lytle Creek Wash Quarry, Rialto Area of San Bernardino County, California, December 29, 2008.
- City of Rialto, Hazard Mitigation Plan, Community of City of Rialto, CA, August 29, 2004.
- Geoscience Support Services, Evaluation of Ground Water Impacts from the Proposed Lytle Creek Ranch Development, September 30, 2008 (see Appendix III-C-B).
- Glenn Lukos Associates, Jurisdictional Delineation for the Lytle Creek Ranch Property, 2,447.30-Acre Property Located in the City of Rialto and Unincorporated Portions of San Bernardino County, California, February 8, 2008, revised October 9, 2008, revised March 25, 2009, revised April 20, 2009 (see Appendix III-E).
- PACE Advanced Water Engineering, Technical Memorandum: Lytle West DEIR Comments Regarding Watershed Drainage Boundaries, September 21, 2009 (see Appendix III-C-A).
- PACE Advanced Water Engineering, Revetment Design for Lytle Creek North Development: Hydraulic Report, Draft, June 2004.
- Pacific Advanced Civil Engineering, Inc., Preliminary Master Plan of Drainage and Stormwater Management, Lytle Creek Ranch Project, November 2007, revised June 2008, revised November 2008 (see Appendix III-C-D).
- Pacific Advanced Civil Engineering, Inc., Revetment Design for Lytle Creek North Development Hydraulic Report, January 2004 (see Appendix III-C-D)
- Pacific Advanced Civil Engineering, Inc. Water Quality Management Plan (WQMP) for Lytle Creek Ranch Neighborhood I-4, February 2008 (see Appendix III-C-C).

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.4.2 Regulatory and Policy Setting

4.4.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Federal Clean Water Act**. The Federal Water Pollution Control Act of 1972 (33 U.S.C. 1251 *et seq*.), commonly known as the Clean Water Act (CWA), established a national policy designed to "restore and maintain the chemical, physical and biological integrity of the Nation's waters." The CWA requires states to develop water quality standards consisting of a detailed description of the hydrologic descriptions of the waterbodies, the beneficial uses which apply to each waterbody, and the water quality criteria (objectives) which will protect those uses. As specified, "[e]ach state must specify appropriate water uses to be achieved and protected. The classification of the waters of the state must

take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish, and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation (40 CFR 131.11[a]).

In 1972, the CWA was amended to require National Pollutant Discharge Elimination System (NPDES) permits for the discharge of pollutants to waters of the United States (WoUS) from any point source.[1,2] In 1987, the CWA was amended to establish a framework for regulating urban runoff. The 1987 amendment required that the USEPA establish regulations for permitting (under the NPDES permit program) of municipal and industrial storm water discharges. The USEPA published final regulations regarding storm water discharges on November 16, 1990 (40 CFR Parts 122, 122, and 124). The regulations require that discharges from the municipal separate storm sewer system[3] (MS4) to surface waters be regulated by a NPDES permit.[4] Under the 1987 CWA amendment and implementing regulations, storm water runoff pollution must be controlled to the maximum extent practicable.

Section 402 of the CWA precludes discharge of pollutants from point sources to jurisdictional waters of the United States unless an NPDES permit is first obtained. The CWA defines a point source water pollutant as “any discernible, confined and discrete conveyance. . .from which pollutants are or may be discharged” (33 U.S.C. 1362[14]). Any source that is not a point source is a nonpoint source (NPS).[5,6]

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[1]/ A “point source” is defined as "any discernible, confined, and discrete conveyance" of pollutants to a water body. The definition of discrete conveyance includes, but is not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

[2]/ On September 22, 1989, the USEPA granted the State of California, through the State Water Resources Control Board and the California regional water quality control boards, the authority to issue NPDES permits pursuant to Part 122 and Part 123 of Title 40 of the Code of Federal Regulations.

[3]/ “’Municipal Separate Storm Sewer System (MS4)” means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, alleys, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned by a State, city, county, town or other public body, that is designed or used for collecting or conveying storm water, which is not a combined sewer, and which is not part of a publicly owned treatment works, and which discharges to Waters of the United States.

[4]/ The CWA requires that MS4 permits effectively prohibit non-stormwater discharges into the storm sewers as well as reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and other provisions appropriate for the control of such pollutants (Source: United States Environmental Protection Agency, Preliminary Data Summary of Urban Storm Water Best Management Practices, August 1999).

[5]/ As defined in the “General Construction Activity Storm Water Permit” (Order No. 99-08-DWQ: NPDES No. CAS000002), a nonpoint source pollutant “refers to diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Nonpoint sources include but are not limited to urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. NPS pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants from these numerous, diffuse sources and deposits them into rivers, lakes, and coastal waters or introduces them into groundwater” (p. 54).

[6]/ Congress addressed the problem of NPS water pollution in the 1972 amendments under Sections 208 and 303(e). Section 208 of the CWA required each state to identify the boundaries of each area with water quality problems and to develop an areawide waste management plan for each identified area. In the 1987 amendment to the CWA, Congress added Section 319, which specifically addresses the creation of NPS management programs. Section 319(a) requires each state to submit to the USEPA an assessment report that identifies the navigable waters within the state that will not meet state water quality standards without additional NPS pollution controls. The state must identify the categories, subcategories, and individual nonpoint sources that contribute to water quality impairment and describe a program for the development of Best Management Practices (BMPs) to control identified nonpoint sources of pollution. Under Section 319(b), states are to develop state management programs and submit those programs to the USEPA for approval.

The CWA requires states to adopt (and the USEPA to approve) water quality standards for water bodies.[7] Water quality standards consist of designated beneficial uses for a particular water body, along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents or narrative statements that represent the quality of water that supports a particular use. Because California has not established a complete list of acceptable water quality criteria, the USEPA established numeric water quality criteria for certain toxic constituents in the form of the California Toxics Rule (CTR) (40 CFR 131.38).[8] Water bodies not meeting water quality standards are deemed "impaired" and, under Section 303(d) of the CWA, are placed on a list of impaired waters for which a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a "factor of safety" included). Once established, the TMDL is allocated among current and future pollutant sources to the water body. TMDL is a number that represents the assimilative capacity of water for a particular pollutant or the amount of a particular pollutant that water can receive without impact to its beneficial uses.

The primary receiving water for the project is Lytle Creek (also referred to as Lytle Creek Wash herein) which is within the Santa Ana River (SAR) watershed. As shown in Figure 4.4-1 (Santa Ana River Watershed), Lytle Creek, in turn, drains into Reach 4[9] of the SAR. As illustrated in Figure 4.4-2 (Santa Ana River Watershed – Impaired Water Bodies)[10] and indicated in Table 4.4-1 (2002 Clean Water Act Section 303(d) Listing), both Lytle Creek and a downstream reach of the SAR (Reach 4) are identified as Section 303(d) impaired water bodies.[11] As noted, Sycamore Creek is not listed as a Section 303(d) impaired water body.

- **National Flood Insurance Reform Act**. The Federal Emergency Management Agency (FEMA), a part of the Department of Homeland Security, has prepared flood insurance rate maps (FIRM) in order to identify those areas that are located within the 100-year

[7]/ In California, the USEPA has delegated responsibility for implementation of portions of the CWA to the State Water Resources Control Board and its nine regional water quality control boards. The Regional Water Quality Control Board, Santa Ana Region is the local board with jurisdiction over the project site.

[8]/ In the absence of Statewide surface water quality standards for toxics, as required by the CWA, the USEPA has issued the California Toxics Rule (CTR), as published in the Federal Register (65 FR 31682-31719, May 18 2000), which sets federal criteria for surface waters in the State. In March 2000, the SWRCB adopted an Implementation Policy for the CTR.

[9]/ Reach 4 of the Santa Ana River is the portion from Mission Boulevard bridge in Riverside to the San Jacinto Fault (Bunker Hill Dike) in San Bernardino. There is perennial flow in this reach of the river, mostly from the upstream discharge of treated municipal wastewater. Much of this reach is also operated as a flood control facility. This reach of the river is posted to warn against water contact recreation due to microbial problems. Lytle Creek and Cajon Creek are major tributaries to this reach of the river (Source: California Regional Water Quality Control Board, Santa Ana Region, Fact Sheet: Waster Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County within the Santa Ana Region, Storm Water Management Program San Bernardino County, Order No. 01-16 [NPDES No. CA S618036]), September 14, 2001, pp. 7-8).

[10]/ Water bodies that do not meet water quality standards are identified as impaired and are place on the 303(d) List of Water Quality Limited Segments. A water body remains on the list until a "total maximum daily load" (TMDL) is adopted and the water quality standards are attained or there are sufficient data to demonstrate that water quality standards have been met and delisting should take place. The exhibit shows the location of impaired water bodies where the SARWQCB has yet to begin the process of developing TMDLs (Source: Santa Ana Watershed Project Authority, 2009 Integrated Watershed Plan: An Integrated Regional Water Management Plan – Moving Toward Sustainability, January 29, 2009, Figure 6.2-2, pp. 155-156).

[11]/ State Water Resources Control Board, Resolution No. 2003-0009, February 4, 2003, pp. 181-183.

floodplain boundary,[12] termed "Special Flood Hazard Areas" (SFHAs). A 100-year flood does not refer to a flood that occurs once every 100 years but refers to a flood level with a one percent chance of being equaled or exceeded in any given year.[13] The SFHAs are subdivided into insurance risk rate zones. Areas between the 100 and 500-year flood boundaries are termed "moderate flood hazard areas." Areas located outside the 500-year flood boundary, are termed "minimal flood hazard areas."

Table 4.4-1
2002 CLEAN WATER ACT SECTION 303(D) LIST[1]

Waterbody (Calwater Watershed[3])	**Pollutant[2]**				
	Bacteria Indicators/ Pathogens	**Metals**	**Nutrients**	**Organic Enrichment**	**Sedimentation/ Siltation**
Lytle Creek (80141000)	X	-	-	-	-
Santa Ana River Reach 4 (80127000)	X	-	-	-	-

Notes:
1. Summary of the 2002 303(d) Listed Water Bodies and Associated Pollutants of Concern from SARWQCB, Region 8.
2. Chlorides, pesticides, salinity, total dissolved solids (TDS), toxicity, and trash are listed impairments within the 303(d) table, however, they are not impairments in the above water bodies.
3. Calwater Watershed is the SRCB hydrological subunit area or smaller area delineation.

Source: California Regional Water Quality Control Board, Santa Ana Region

If a property is located within a SFHA, as shown on a flood map published by FEMA, the National Flood Insurance Reform Act of 1994 requires mortgage lenders and servicers to require flood insurance for any loan secured by property with a building located in a SFHA. The purpose of the National Flood Insurance Program (NFIP) designations is to encourage state and local governments to wisely use the lands under their jurisdictions by considering the hazard of flood when rendering decisions on the future use of such lands, thereby minimizing flood damage.

Areas designated as "Zones A, A0, AH, A1-A30, and A99" on FIRMs are SFHAs and reflect those areas subject to inundation by the 100-year flood. Mandatory flood insurance purchase requirements apply within those designated areas. Areas designated as "Zone B"[14] have been identified in the community flood insurance study as areas of moderate or minimal hazard. Flood insurance is available in participating communities but is not required by regulation in that zone. Areas designated as "Zone C" (minimal flooding) do not have known flood hazards.

[12]/ As defined in the Standard Flood Insurance Policy (SFIP), "flood" is defined as "[a] general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters or from the unusual and rapid accumulation or runoff of surface waters from any source."

[13]/ Modern hydrologists tend to define floods in terms of probability, as expressed in percentage rather than in terms of return period (recurrence interval). Return period (the N-year flood) and probability (p) are reciprocals, that is, p = 1/N. A flood having a 50-year return frequency (Q_{50}) is commonly expressed as a flood with the probability of recurrence of 0.02 (2 percent chance of being exceeded) in any given year.

[14]/ Areas between limits of the 100-year flood and 500-year flood or certain areas subject to 100-year flooding with average depths of less than one foot or where the contributing drainage area is less than one square mile or areas protected by levees from the base flood.

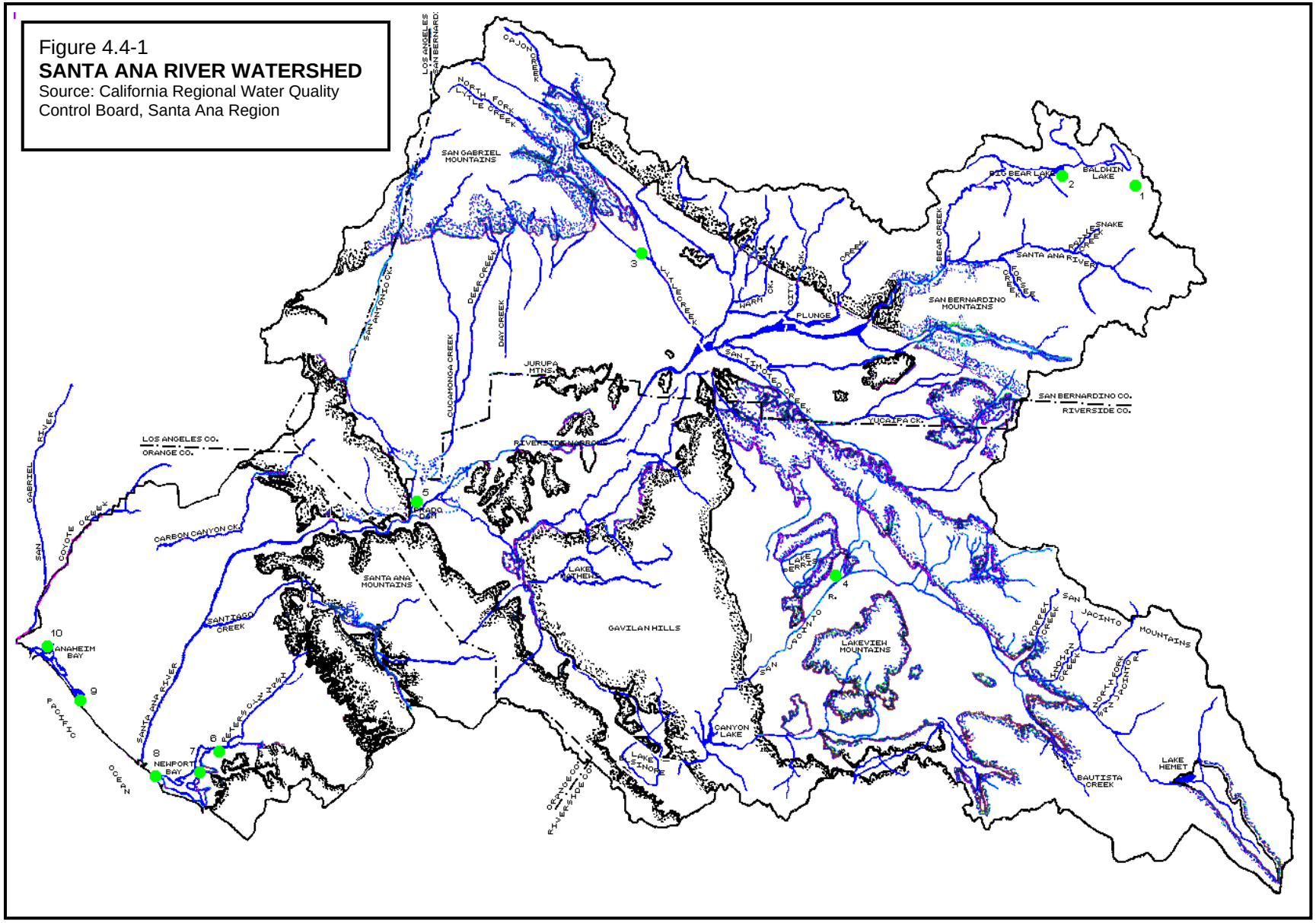

Figure 4.4-1
SANTA ANA RIVER WATERSHED
Source: California Regional Water Quality Control Board, Santa Ana Region

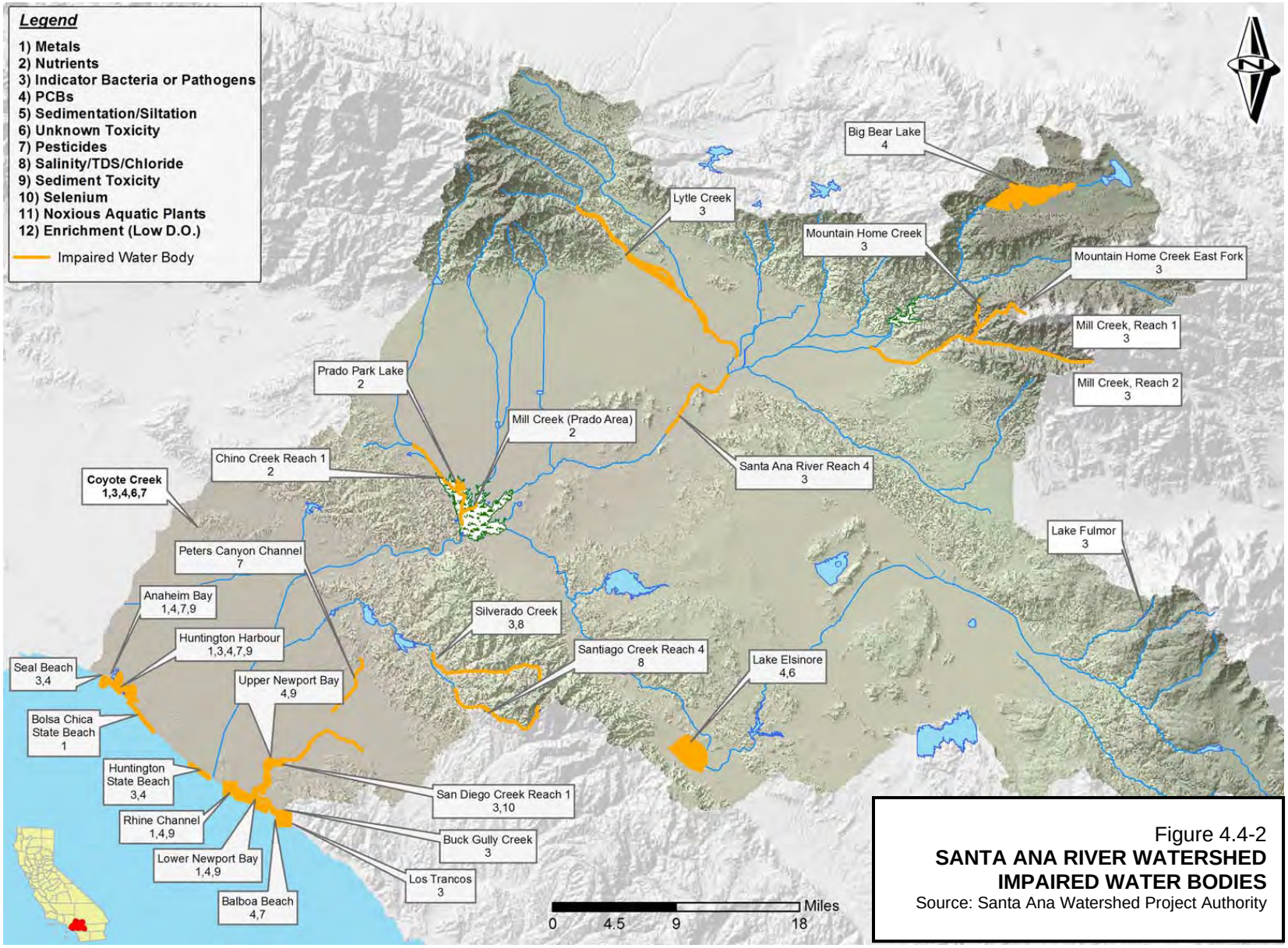

Figure 4.4-2
SANTA ANA RIVER WATERSHED IMPAIRED WATER BODIES
Source: Santa Ana Watershed Project Authority

As illustrated in Figure 4.4-3 (Portions of Flood Insurance Rate Maps for a Portion of San Bernardino County), four FIRM sheets (dated August 28, 2008) encompass the general project area (i.e., Panel Nos. 06071C7905H, 06071C7910H, 06071C7920H, and 06071C7940H). As indicated therein, portions of the project site are designated as "Zone A" (Areas of 100-Year Flood – No Base Flood Elevation Determined)[15] and "Zone X" (Areas Determined to be Outside 500-Year Floodplain).[16] As evidenced in FIRM Panel Nos. 06071C7920H and 06071C7940H, with regards to that segment of Lytle Creek located to the south of the I-15 Freeway and within the project boundaries, flood waters are currently confined by the existing groin and levee system. With regards to Sycamore Creek, which discharges to Lytle Creek near its confluence with Cajon Creek, FIRM Panel No. 06071C7910H shows that no levee system now exists along that watercourse.

As required by FEMA regulations (44 CFR 60.3[b]), when an area has been designated as a special flood hazard (Zone A) but neither water surface elevation data nor a floodway or coastal high hazard area has been identified, the community shall: (1) require permits for all proposed construction and other developments within Zone A; (2) require that all subdivision proposals and other proposed developments greater than 50 lots or five acres, whichever is less, include base flood elevation data; (3) use such data as criteria for requiring that new construction meet designated flood protection standards; and (4) require the application of the standards in 44 CFR 60.3(a)(2)-(6) to development within Zone A.

On June 28, 2005, FEMA published an "interim rule" listing communities (including the City) where modification of the base flood elevations (BFEs), defined as a one percent annual-chance of occurrence, was deemed appropriate because of new scientific or technical data.[17] The modified BFEs are the basis for the floodplain management measures that the community is required to either adopt or to show evidence of being already in effect in order to qualify or to remain qualified for participation in the NFIP. The modified BFEs, together with the floodplain management criteria required by 44 CFR 60.3, are the minimum that are required.

- **Executive Order 11988 – Floodplain Management**. The purpose of Executive Order 11988, as issued by President Jimmy Carter on May 24, 1977, is to prevent agencies from contributing to the "adverse impacts associated with the occupancy and modification of floodplains" and the "direct or indirect support of floodplain development." Federal agencies "shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains." Before proposing, conducting, or allowing an action within a 100-year floodplain, each federal agency is to determine if planned activities will affect the floodplain and evaluate the potential effects of the intended actions on its functions. Agencies shall avoid siting development in a floodplain "to avoid adverse effects and incompatible development in the floodplains."[18]

[15]/ Defined as areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no base flood elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements apply.

[16]/ Areas between the limits of the base flood and the 0.2 percent-annual-chance flood.

[17]/ Federal Register, Volume 70, No. 128, June 28, 2005, pp. 37048-37054.

[18]/ As defined therein, the term "floodplain" means "the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year."

4.4.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.[19]

- **State Constitution**. Article X, Section 2 of the State Constitution prohibits waste or unreasonable use of the state's waters, stating, in relevant part: "It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent to which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

- **California Water Code**. As declared in Section 100 of the California Water Code (CWC), it is policy of the State that the State's water resources be put to beneficial use to the fullest extent of which they are capable, the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such water be exercised with a view to their reasonable and beneficial use in the interest of the people and public welfare.

  Under Section 13000, in enacting the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the people of the State "have a primary interest in the conservation, control, and utilization of the water resources of the State, and that the quality of all the waters of the State shall be protected for use and enjoyment by the people of the State. The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the State shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible."

  Section 13260(a) of the CWC requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State, must file a report of waste discharge (ROWD). This report must outline the types of wastes to be discharged in order to determine appropriate waste management unit design, operation, monitoring, closure and post-closure maintenance requirements.

- **California Government Code**. Under California's Planning and Zoning Law, city and county general plans are required to include specified mandatory elements. Assembly Bill 162, as approved by the Governor on October 10, 2007 and adding (Section 65300.2 and 65302.7) and amending (Sections 65302, 65303.4, 65352, 65584.04, and 65584.06) of the CGC, specifies that the land-use element identify and annually review those areas covered by the general plan that are subject to flooding, as identified by floodplain

[19]/ Assembly Bill 70 (Jones), in part, added Section 8307 to the CWC and stipulated: "A city or county may be required to contribute its fair and reasonable share of the property damage caused by a flood to the extent that the city or county has increased the State's exposure to liability for property damage by unreasonably approving new development in a previously undeveloped area that is protected by a State flood control project. However, a city or county shall not be required to contribute if, after the amendments required by Sections 65302.9 and 65860.1 of the Government Code have become effective, the city or county complies with Sections 65865.5, 65962, and 66474.5 of the Government Code as applicable with respect to that development."

mapping prepared by FEMA or the California Department of Water Resources. The CGC, as amended, also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan shall identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and storm water management. AB 162 requires, upon the next revision of the housing element, on or after January 1, 2009, that the safety element to identify information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives, based on specified information for the protection of the community from, among other things, the unreasonable risks of flooding. The bill provides that the determination of available land suitable for urban development may exclude lands where the flood management infrastructure designed to protect the jurisdiction is not adequate to avoid the risk of flooding, such that the development of housing would be impractical due to cost or other considerations.

- **California Fish and Game Code**. The California Fish and Game Code (CFGC) contain several provisions that regulate nonpoint source discharges. As specified under Section 5650 of the CFGC, except as authorized by a State or federal permit, “it is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this State” any “petroleum or residuary product of petroleum, or carbonaceous material or substance,” any “sawdust, shavings, slabs, edgings,” and any “substance or material deleterious to fish, plant life, or bird life.”

- **California Porter-Cologne Water Quality Control Act**. As California's population grew and the adverse environmental impacts associated with that growth were recognized, the State Legislature enacted numerous laws to protect California's water resources. In 1961, the State Legislature enacted the Porter-Dolwig Groundwater Basin Protection Law, finding "that the greater portion of the water used in this State is stored, regulated, distributed and furnished by its groundwater basins, and that such basins are subject to critical conditions of. . .degraded water quality causing great detriment to the peace, health, safety and welfare of the people of the State."[20]

  The law governing the protection of water quality changed significantly in 1969 with the passage of the Porter-Cologne Water Quality Control Act (Division 1, Chapter 2, Article 3, Section 13000 *et seq*., CWC). Porter-Cologne is a comprehensive plan for protecting the quality and maximizing the beneficial use of the State’s waters. As indicated therein, the State “Legislature finds and declares that. . . the quality of all the waters of the State shall be protected for use and enjoyment by the people of the state. . .activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable."[21] Under Porter-Cologne, the State’s water quality control boards were required to: (1) formulate and adopt water quality control plans[22]; (2) establish water quality objectives that "will ensure the reasonable protection of beneficial uses"[23] of State’s waters; and (3) prescribe waste discharge requirements governing discharges to land and waters within the regions.

  Porter-Cologne establishes the principal State program for water quality control. Under Porter-Cologne, the State Water Resources Control Board (SWRCB) is mandated to

[20]/ Section 12922.1, CWC.
[21]/ Section 13000, CWC.
[22]/ Section 13240, CWC.
[23]/ Section 13241, CWC.

implement the provisions of the CWA. To implement and enforce the provisions of Porter-Cologne and the CWA, Porter-Cologne divides the State into nine regional boards that, under the guidance and review of the SWRCB, implement and enforce the provisions of both the State and federal statutes. Porter-Cologne provides for the development and periodic review of water quality control plans to regulate water quality.

The proposed project is located within Region 8 (Santa Ana) and falls under the jurisdiction of the California Regional Water Quality Control Board, Santa Ana Region (SARWQCB). The SARWQCB is the smallest of the State's nine regions. Most of the region is comprised of the watershed of the SAR and its tributaries. The Santa Ana Region "is one of the most densely populated. . .Both the reason for development and the source of the problems has been the large population increase. Of the 448 river miles assessed, 109 miles are impaired by nutrients, pesticides, metals and/or pathogens, originating from agriculture, urban areas, and wastewater discharges.

The SARWQCB is focusing its efforts on preventing further degradation where it exists and developing management strategies to improve the quality of the impaired water bodies. Water quality impairment resulting from municipal and storm drain sources make up approximately two-thirds of the impaired river miles and agricultural type impairments make up the remaining third of the impaired river miles.[24] The SARWQCB's "Water Quality Control Plan for the Santa Ana River Basin"[25] (Basin Plan) designates water quality objectives (WQOs) for water bodies in the Santa Ana region, identifies existing and potential beneficial uses for the area's surface and groundwaters, and contains quantitative and narrative criteria for a range of water quality pollutants in receiving waters.

- **Antidegradation Policy**. California's Antidegradation Policy[26] restricts degradation of surface and groundwaters. In particular, this policy protects waterbodies where existing quality is higher than necessary for the protection of beneficial uses. Under the Antidegradation Policy, any actions that can adversely affect water quality in any surface or groundwater must: (1) be consistent with maximum benefit to the people of the State; (2) not unreasonably affect present and anticipated beneficial use of the water; and (3) not result in water quality less than that prescribed in water quality plans and policies. Any actions that can adversely affect surface waters are also subject to the Federal Antidegradation Policy (40 CFR 131.12) developed under the CWA.

- **California Toxic Rule**. As required under Section 303(c)(2)(B) of the CWA, the USEPA promulgated the final California toxic rule (CTR) on May 18, 2000. As codified in 40 CFR 131, the CTR established numeric criteria for water quality standards for priority toxic pollutants for the State and provided water quality criteria for toxic constituents in waters with human health or aquatic life designated uses in California. On March 22, 2000, the SWRCB adopted "Resolution 2005-15: Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California" (CTR Implementation Policy). The CTR Implementation Policy established: (1) provisions for

[24]/ State Water Resources Control Board, California's Rivers and Streams, Working Toward Solutions, Chapter 10 (Region-by-Region Summary), Region 8, Undated.

[25]/ California Regional Water Quality Control Board, Santa Ana Region, Water Quality Control Plan – Santa Ana River Basin (8), January 24, 1995.

[26]/ Formally known as the "Statement of Policy with Respect to Maintaining High Quality Waters in California" (SWRCB Resolution No. 68-16).

priority pollutant criteria promulgated by the USEPA through the National Toxic Rule (NTR) and the CTR and for priority pollutant objectives established in the Basin Plan; (2) monitoring requirements for 2,3,7,8-TCDD (tetrachlorodibenzo-p-dioxin) equivalents; and (3) chronic toxicity control provisions.

- **Nonpoint Source Pollution Control Program**. As required under Section 319 of the CWA, California's "Plan for California's Nonpoint Source Pollution Control Program"[27] (NPS Program Plan) was approved by the USEPA on July 17, 2000. NPS pollution (polluted runoff) is the leading cause of water quality impairments in California. NPS, including natural sources, are the major contributors of pollution to impacted streams, lakes, wetlands, estuaries, marine waters, and groundwater basins and are important contributors of pollution to harbors and bays.

  The major sources of NPS pollution in California are related to land-use activities that occur throughout watersheds and include agriculture, forestry (silviculture), urban runoff, (e.g., construction sites, roads, highways, septic systems), marinas and boats, hydromodification activities, and resource extraction. Atmospheric deposition is also a source of NPS pollution. Examples of pollutants associated with specific land-use activities include: (1) excess pesticides and fertilizers from agricultural lands, urban lawns, and parks; (2) oil, grease, heavy metals, and chemicals from urban streets, parking lots, and industrial sites; (3) sediment from improperly managed construction sites, forest lands, abandoned roads, and eroding streambanks; (4) bacteria and nutrients from livestock, pet wastes, and faulty septic systems; and (5) other pollutants.[28]

  Among other features, the NPS Program Plan: (1) adopts 61 management measures (MMs) as goals for six NPS categories, including agriculture, forestry, urban areas, marinas and recreational boating, hydromodification, and wetlands/riparian areas/ vegetated treatment systems; (2) provides a 15-year strategy for implementing the MMs; and (3) relies on the use of existing authorities and regulatory processes to achieve implementation, allowing for the adoption of the MMs as regulation after each five-year cycle if adequate progress in NPS pollution control has not been demonstrated. MMs serve as general goals for the control and prevention of polluted runoff. Site-specific BMPs are then used to achieve the goals of each MM.

- **Water Quality Control Plan for the Santa Ana River Basin**.[29] The project site is located within the Upper SAR watershed. The watershed is bounded on the south by the Santa Margarita watershed, on the east by the Salton Sea and Southern Mojave watersheds, and on the north and west by the Mojave and San Gabriel watersheds. The highest elevations (upper reaches) of the SAR watershed occur in the San Bernardino (San Gorgonio Peak, 11,485-feet AMSL) and eastern San Gabriel Mountains (Mt. Baldy, 10,080-feet AMSL). Downstream, the Santa Ana Mountains and the Chino Hills form a topographic high before the SAR flows into the coastal plain and into the Pacific Ocean.

[27]/ State Water Resources Control Board, Nonpoint Source Program, Strategy and Implementation Plan, 1998-2103, Volumes I-II, January 2000.

[28]/ *Ibid*., Volume I, p. 5.

[29]/ The water quality control plan for the Santa Ana River Basin was adopted by the SARWQCB in 1975 and amended in 1983. An updated Basin Plan was adopted by the SARWQCB on March 11, 1994, approved by the SWRCB on July 21, 1994, and approved by the Office of Administrative Law on January 24, 1995. The Basin Plan has been amended numerous times since 1995.

Section 303 of the CWA defines water quality standards as consisting of both the uses of the surface (navigable) waters and the water quality criteria which are applied to protect those uses. Under Porter-Cologne, these concepts are separately considered as beneficial uses and water quality objectives. As specified, beneficial uses and water quality objectives are to be established for all waters of the State. As indicated in Section 13241 of the CWC, "[w]ater quality objectives must ensure that the water will be suitable for the beneficial uses which have been designated for protection." In addition, the SARWQCB must assure that its regulatory actions implement the Basin Plan.

The project site is located within the Santa Ana River Hydrologic Unit (HU 801.00). Portions of the project site are located in Hydrologic Unit Subareas 801.43, 801.44, and 801.59. For each hydrologic unit and subarea, the Basin Plan provides a list of beneficial uses that serve to define the existing and potential future uses of surface and groundwaters within the SAR watershed. The information presented in Table 4.4-2 (Beneficial Uses of Inland Surface and Groundwaters – Upper Santa Ana River Basin) is extracted from the Basin Plan. As indicated therein, the intermittent beneficial uses for the valley reaches of Lytle Creek include: (1) Municipal and Domestic Supply (MUN); Groundwater Recharge (GWR); (3) Water Contact Recreation (REC1); (4) Non-Contact Water Recreation (REC2); and (5) Warm Freshwater Habitat (WARM).[30]

The prescribed water quality objectives (WQOs) for inland surface and groundwaters are presented in Table 4.4-3 (Water Quality Objectives for Inland Surface and Groundwaters – Upper Santa Ana River Basin). Those WQOs correspond with the beneficial use designations in the Basin Plan. Narrative water quality objectives have also been identified. Where more than one WQO is applicable, the stricter objective applies.

The Basin Plan divides Lytle Creek into distinct Mountain and Valley Reaches, with the division occurring at the base of the San Gabriel Mountains. That portion of Lytle Creek traversing the project site is located within the Valley Reach. Most of the inland surface waters in the region have beneficial uses specifically designated for them. Those waters not specifically listed are designated with the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary. This is commonly referred to as the "tributary rule." The tributary rule would likely be applicable to Sycamore Creek.

As illustrated in Figure 4.4-4 (Management Zone Boundaries – San Bernardino Valley and Yucaipa/Beaumont Plains), groundwater management zones were defined on the basis of: (1) separation by impervious rock formations or other groundwater barriers; (2) distinct flow systems defined by consistent hydraulic gradients that prevent widespread

[30]/ Municipal and Domestic Supply (MUN) - Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water. Groundwater Recharge (GWR) - Uses of water for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting salt water intrusion into fresh water aquifers. Water Contact Recreation (REC-1) - Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs. Non-Contact Water Recreation (REC-2) - Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities. Warm Freshwater Habitat (WARM) - Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates (Source: State Water Resources Control Board, Report in Support of U.S. Environmental Protection Agency's Review of California's Continuing Planning Process, May 2001, Appendix B).

intermixing, even without a physical barrier; and (3) distinct differences in water quality. Groundwater flow, whether or not determined by a physical barrier, was the principal characteristic used to define each groundwater management zone.[31] The majority of the project site is located within the Lytle Management Zone (LMZ). Along Riverside Avenue, a portion of the site may be located within the Rialto Management Zone (RMZ).

- **Water Management Initiative**. In 1997, then Governor Pete Wilson proposed a "watershed management initiative." In June 1998, the SWRCB issued a draft "Integrated Plan for Implementation of the Watershed Management Plan"[32] (Integrated Plan). According to the Integrated Plan, it is the State's goal to achieve water quality in all of California's watersheds by "supporting the development of local solutions to local problems." The plan, which calls for better coordination and integration of the water quality activities of the SWRCB, the nine Regional Water Quality Control Boards (RWQCBs) and the USEPA, consists of one chapter for each of the RWQCBs, the SWRCB, and the USEPA. Each chapter describes the organization's goals, and priorities, and annual and 5-year strategies to be used to achieve those goals.[33]

  The SWRCB's "Strategic "Plan"[34] is a watershed management approach to water resources protection. The plan articulates the goals, strategies, objectives, and performance measures used to guide on-going decision-making and help ensure that the mission of the State and regional boards is accomplished. Specific objectives are associated with the boards' goals and strategies and these objectives are monitored on a regular basis in order to assess performance.[35] The "Strategic Plan" superseded the "SWRCB Chapter" and the "USEPA Chapter" is no longer part of the Integrated Plan.

  The SARWQCB's watershed management initiative (WMI) is an integrated planning process designed, in part, to more effectively direct State and federal funds to the highest priority water quality activities. The WMI serves to integrate various federal, State, and regional programs on a watershed basis. The "Santa Ana Regional Water Quality Control Board Watershed Management Initiative Chapter"[36] is the SARWQCB's component of the Integrated Plan and both describes the board's approach to watershed planning and serves as a tool for making budgetary decisions.

  The SARWQCB region is too large and complex to be managed as a single watershed and, as illustrated in Figure 4.4-5 (Santa Ana Region Watershed Management Areas), has been divided into ten watershed management areas (WMAs). These WMAs are based on sub-watersheds and used as the basis for watershed planning and directing resources. Lytle Creek and Cajon Creek are part of the Upper Santa Ana River WMA,[37] shown in Figure 4.4-6 (Upper Santa Ana River Watershed Management Area).

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[31]/ California Regional Water Quality Control Board, Santa Ana Region, Resolution No. R8-2004-0001, Attachment, January 22, 2004, p. 1.

[32]/ State Water Resources Control Board and Regional Water Quality Control Boards, Integrated Plan for Implementation of the Watershed Management Initiative, June 1998.

[33]/ Ruffolo, Jennifer, TMDLs – The Revolution in Water Quality Regulations, California Research Bureau, April 1999, pp. 8 and 29.

[34]/ State Water Resources Control Board and Regional Water Quality Control Boards, Strategic Plan, November 15, 2001.

[35]/ State Water Resources Control Board, Report in Support of U.S. Environmental Protection Agency's Review of California's Continuing Planning Process, May 2001, p. 3.

[36]/ California Regional Water Quality Control Board, Santa Ana Region, Santa Ana Regional Water Quality Control Board Watershed Management Initiative Chapter, revised November 2004.

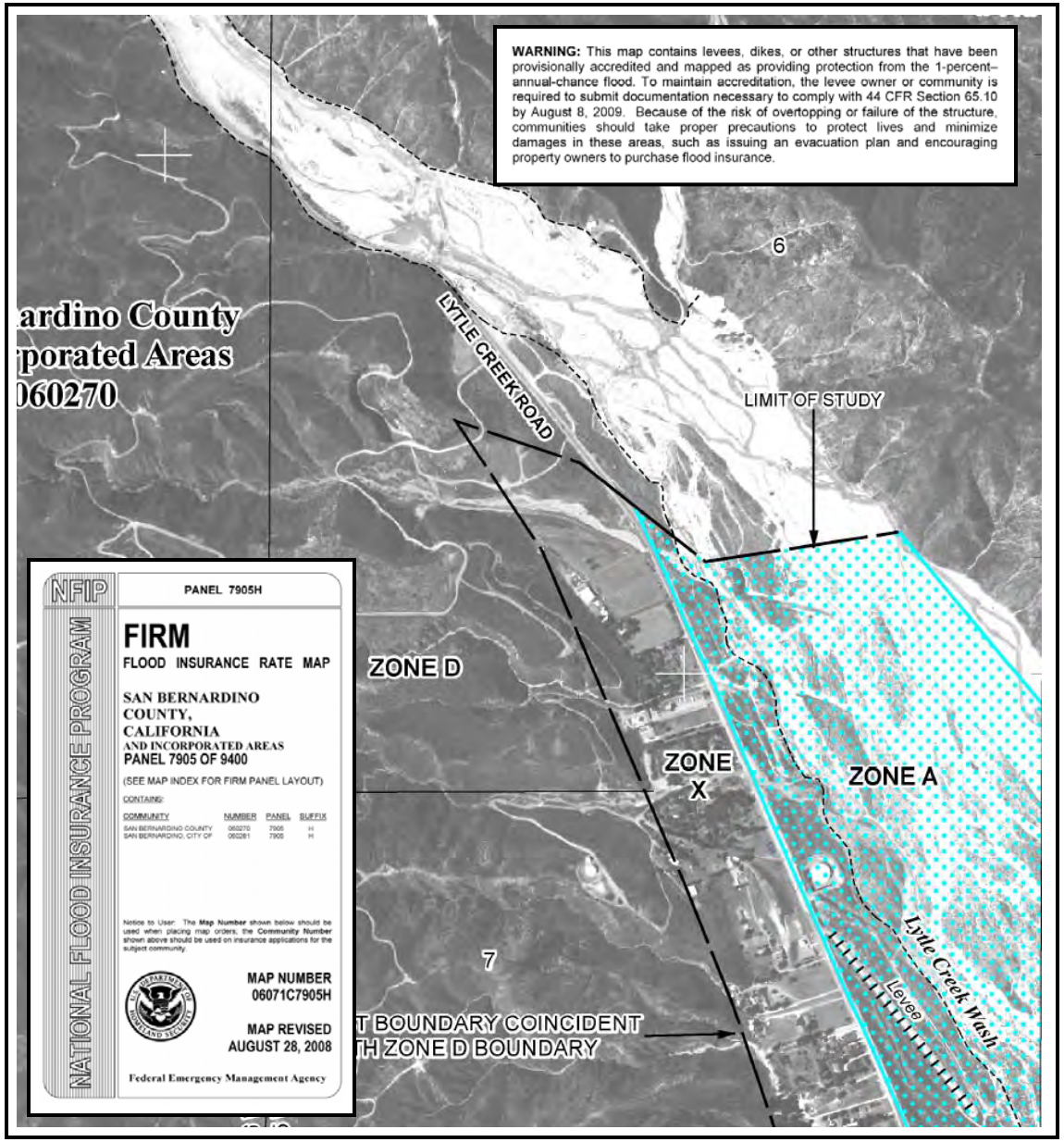
[37]/ *Ibid*., p. 3-26.

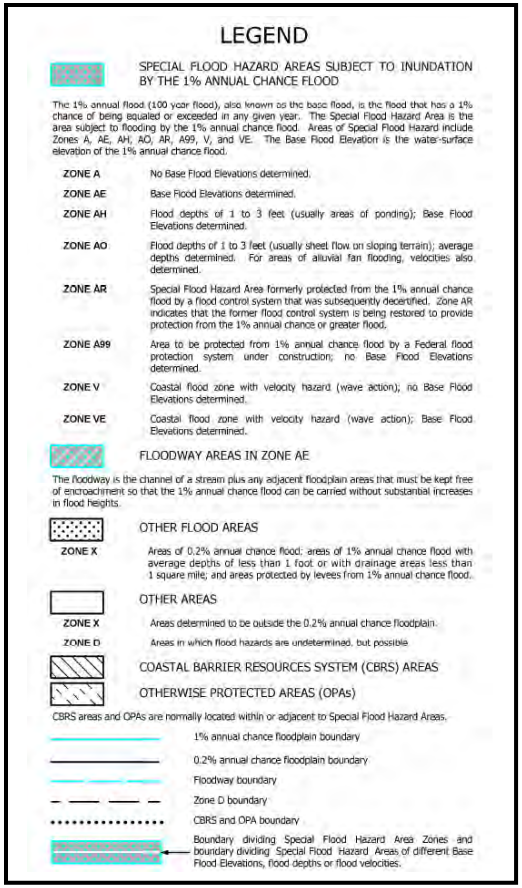
Table 4.4-2
BENEFICIAL USES OF INLAND SURFACE AND GROUND WATERS
UPPER SANTA ANA RIVER BASIN

	Hydrologic Unit		Beneficial Use[1,2]																			
	Primary	Secondary	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL	EST
Inland Surface Streams																						
Upper Santa Ana River - Reach 4 (Mission Blvd. in Riverside to San Jacinto Fault in San Bernardino)	801.27	801.44	+	X			X			X[3]	X		X				X					
Upper Santa Ana River - Reach 5 (San Jacinto Fault in San Bernardino to Seven Oaks Dam)	801.52	801.57	X	X			X			X[3]	X		X				X	X				
Lytle Creek (Mountain Reaches)	801.41	801.42	X	X	X	X																
Lytle Creek (Valley Reaches)	801.21		I				I			I	I		I				I					
Groundwater Management Zones																						
Lytle Creek	801.59	801.42	X	X	X	X																
Rialto	801.44	801.21 801.43	X	X	X	X																

Notes:
1. Beneficial uses defined: (1) MUN (Municipal and Domestic Supply); (2) AGR (Agricultural Supply); (3) IND (Industrial Service Supply); (4) PROC (Industrial Process Supply); (5) GWR (Ground Water Recharge); (6) NAV (Navigation); (7) POW (Hydropower Generation); (8) REC1 (Water Contact Recreation); (9) REC2 (Non-Contact Water Recreation); (10) COMM (Commercial and Sportsfishing); (11) WARM (Warm Freshwater Habitat); (12) LWRM (Limited Warm Freshwater Habitat); (13) COLD (Cold Freshwater Habitat); (14) BIOL (Preservation of Biological Habitats of Special Significance); (15) WILD (Wildlife Habitat); (16) RARE (Rare, Threatened, or Endangered Species); (17) SPWN (Spawning, Reproduction, and/or Early Development); (18) MAR (Marine Habitat); (19) SHEL (Shellfish Harvesting); and (20) EST (Estuarine Habitat).
2. X = Present or Potential Beneficial Use; I = Intermittent Beneficial Use; + = Excepted from MUN.
3. Access prohibited in some portions of the San Bernardino County Flood Control.

Source: California Regional Water Quality Control Board, Santa Ana Region





LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

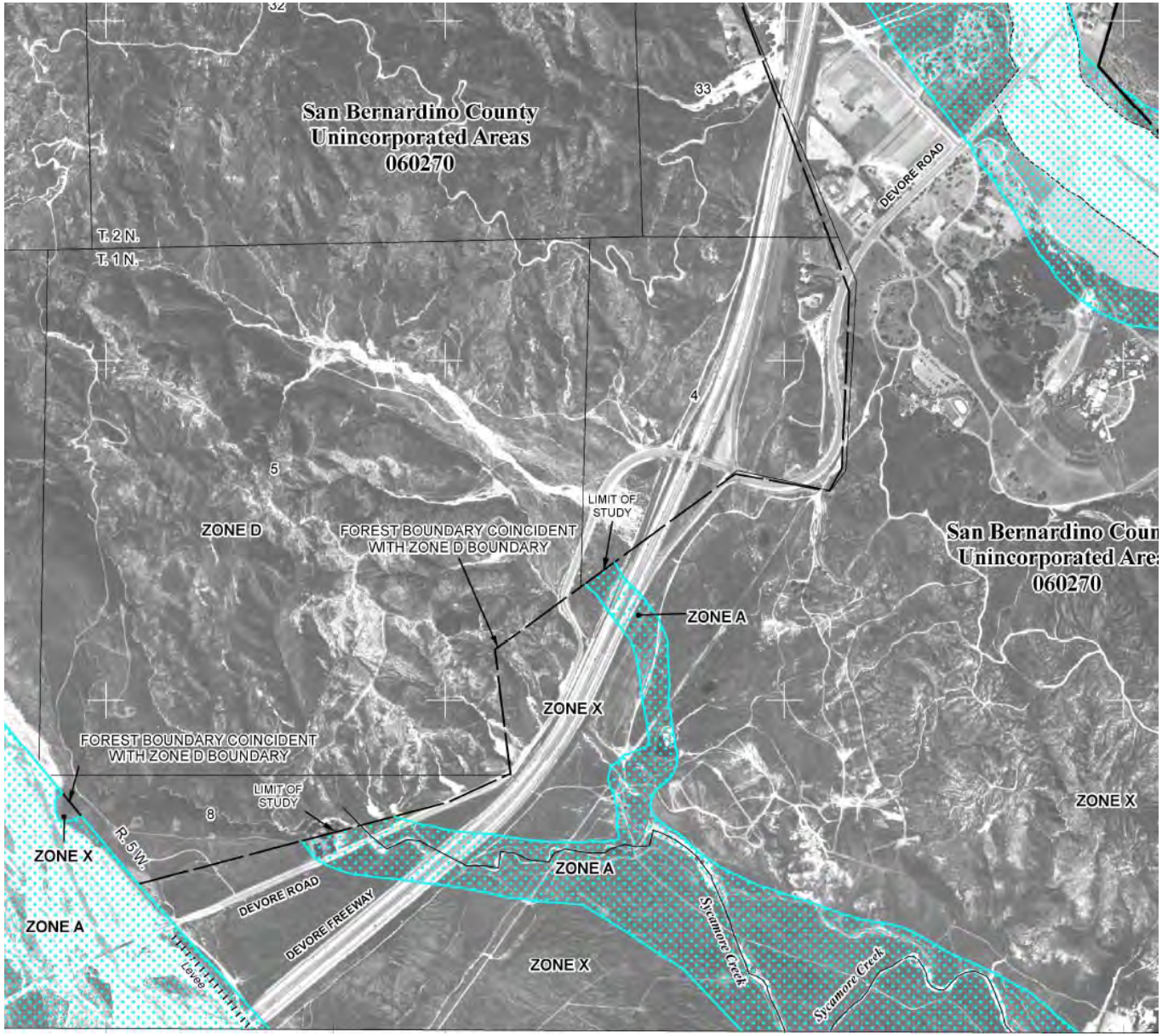
Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

Figure 4.4-3 (1 of 5)
PORTION OF FLOOD INSURANCE RATE MAPS FOR A PORTION OF SAN BERNARDINO COUNTY FIRM PANEL NO. 0607C7905H
(August 28, 2008)
Source: Federal Emergency Management Agency



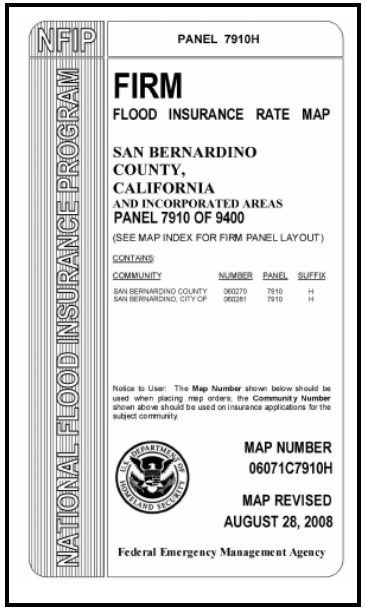
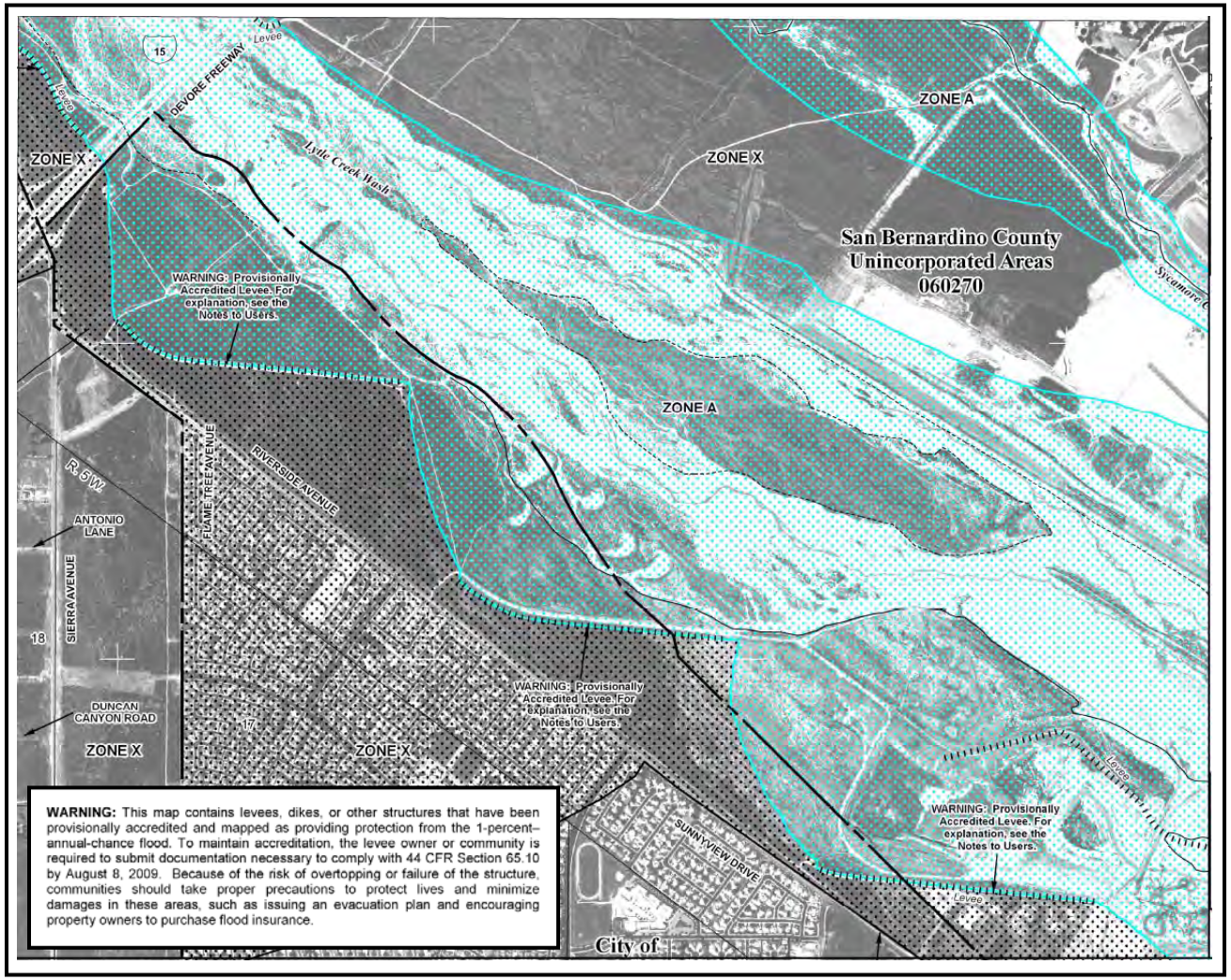


Figure 4.4-3 (2 of 5)
PORTION OF FLOOD INSURANCE RATE MAPS FOR A PORTION OF SAN BERNARDINO COUNTY FIRM PANEL NO. 0607C7910H
(August 28, 2008)
Source: Federal Emergency Management Agency



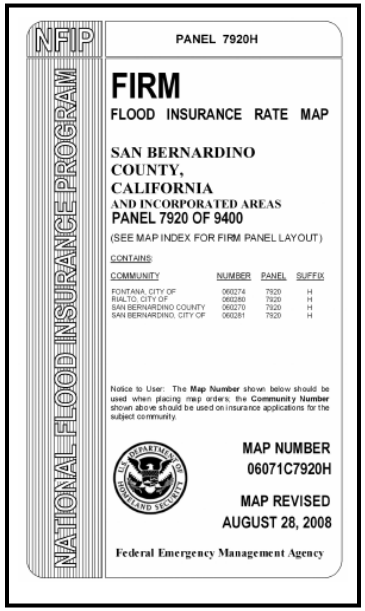


Figure 4.4-3 (3 of 5)
PORTION OF FLOOD INSURANCE RATE MAPS FOR A PORTION OF SAN BERNARDINO COUNTY FIRM PANEL NO. 0607C7920H
(August 28, 2008)
Source: Federal Emergency Management Agency

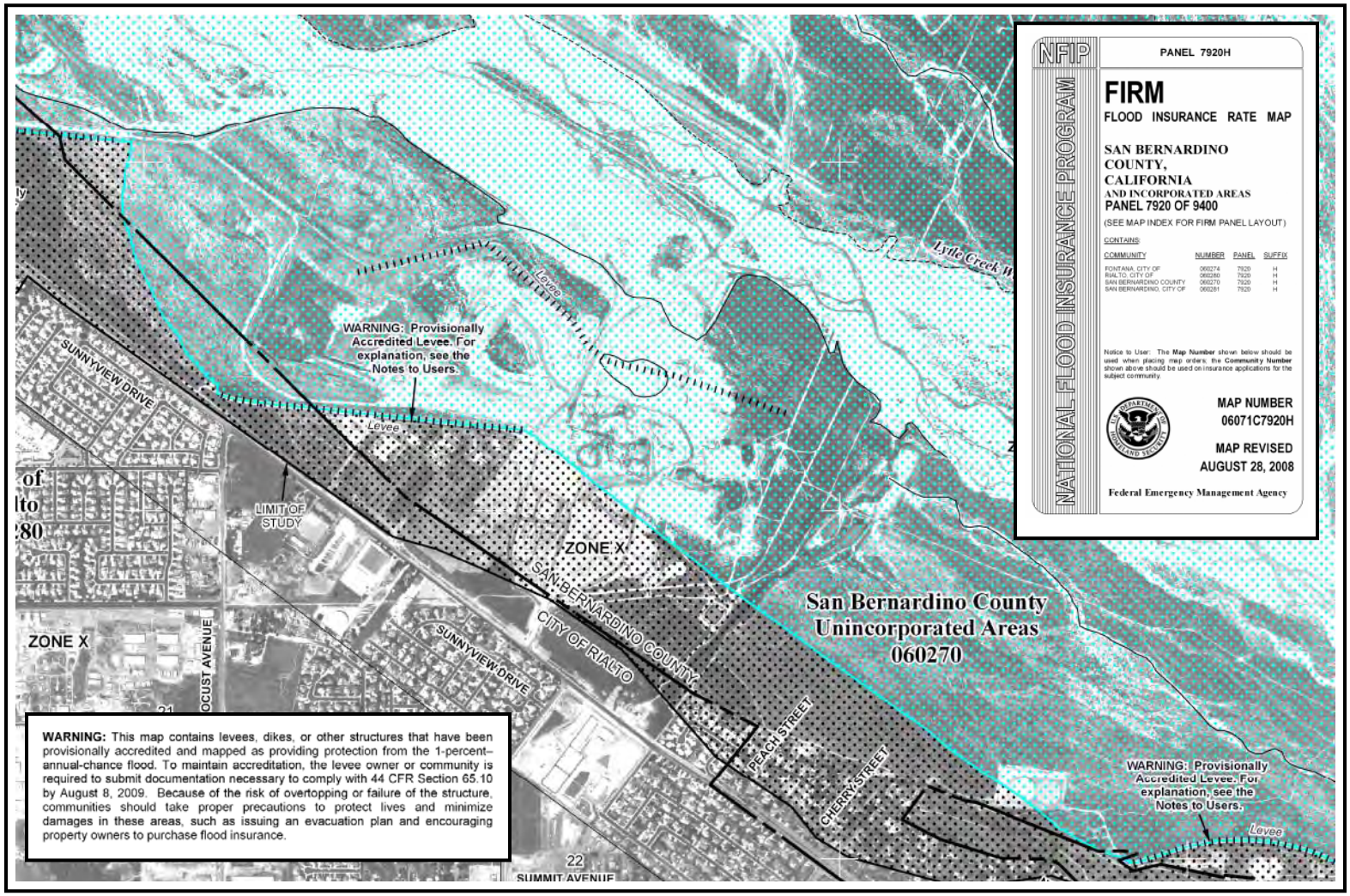
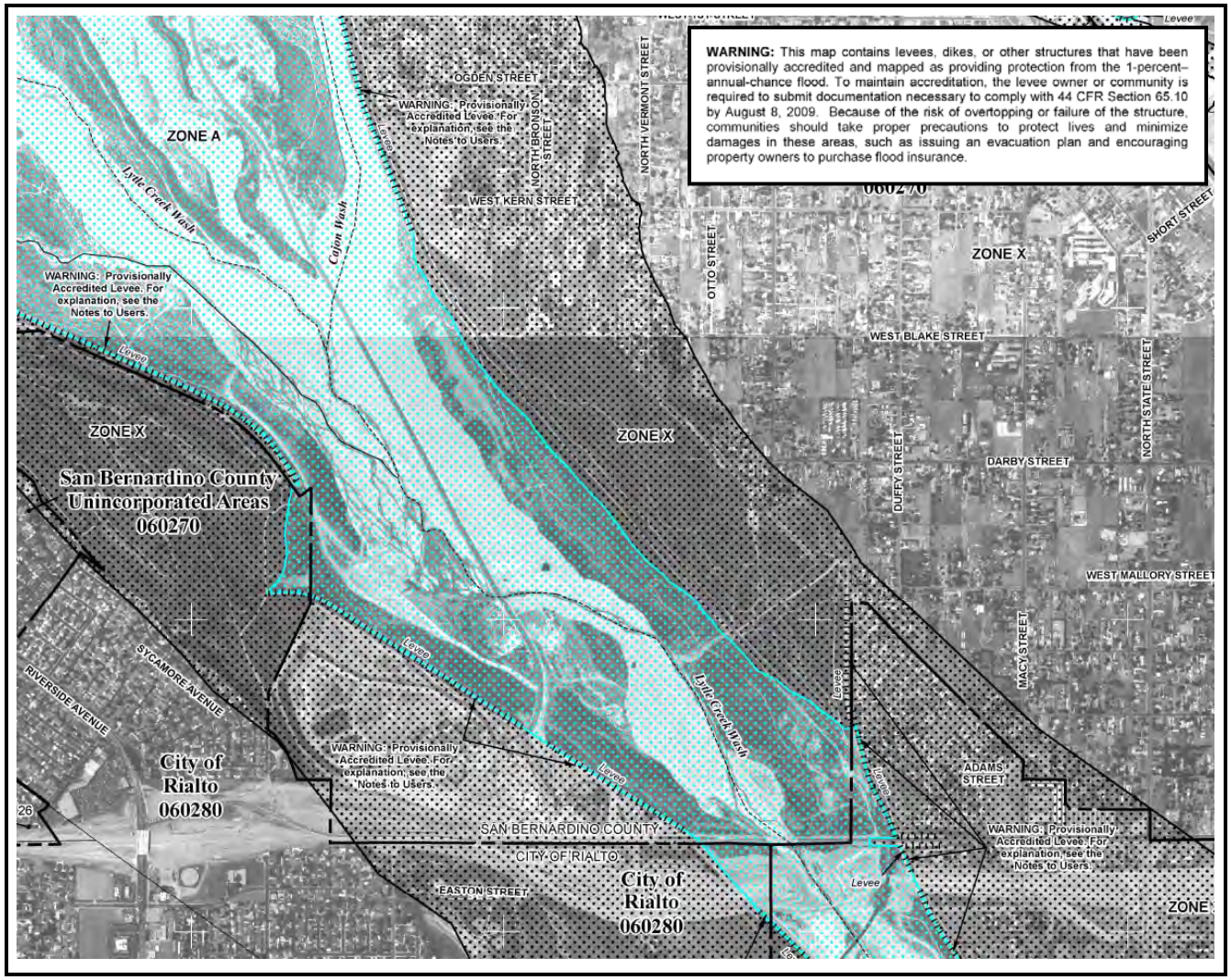


Figure 4.4-3 (4 of 5)
PORTION OF FLOOD INSURANCE RATE MAPS FOR A PORTION OF SAN BERNARDINO COUNTY FIRM PANEL NO. 0607C7920H (August 28, 2008)
Source: Federal Emergency Management Agency



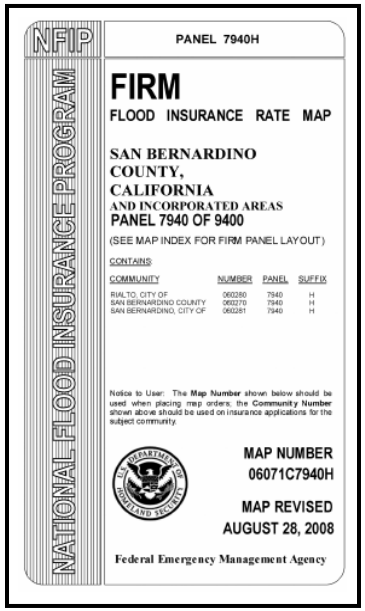
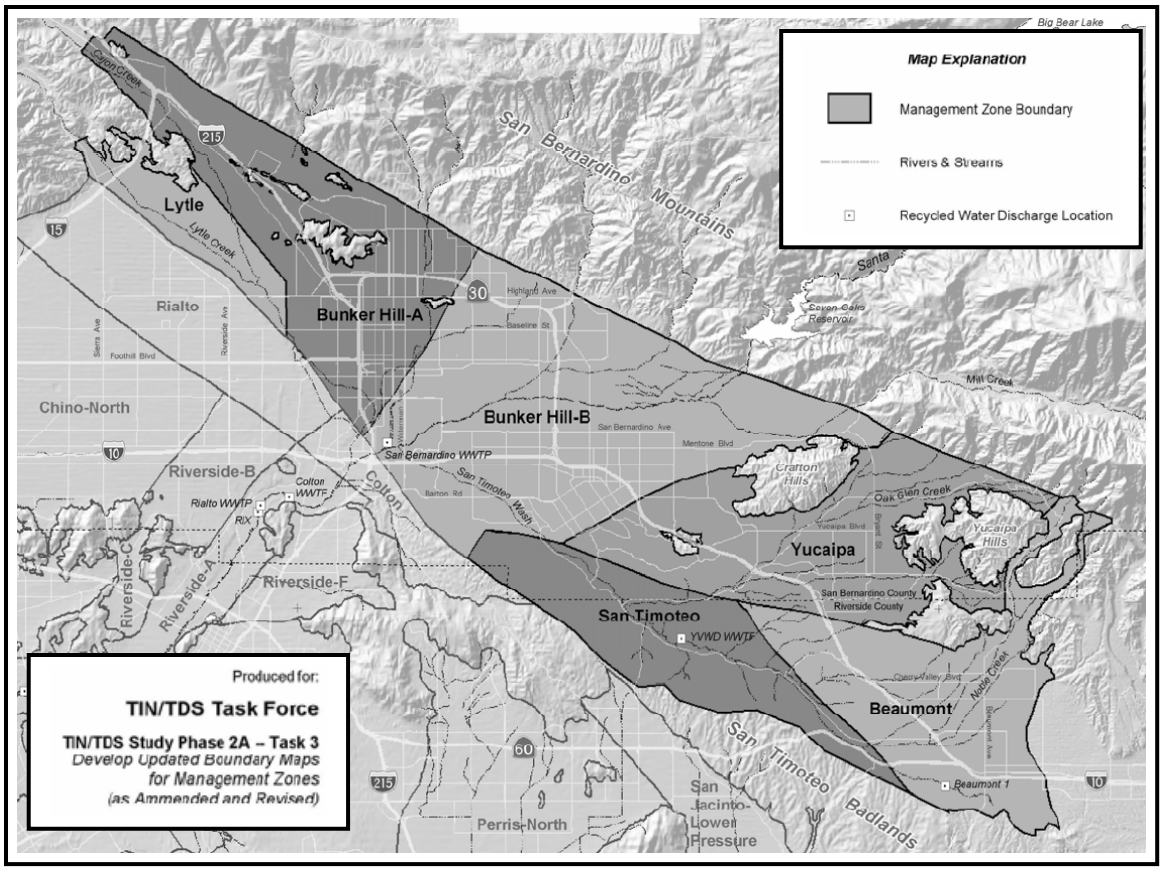


Figure 4.4-3 (5 of 5)
PORTION OF FLOOD INSURANCE RATE MAPS FOR A PORTION OF SAN BERNARDINO COUNTY FIRM PANEL NO. 0607C7940H
(August 28, 2008)
Source: Federal Emergency Management Agency



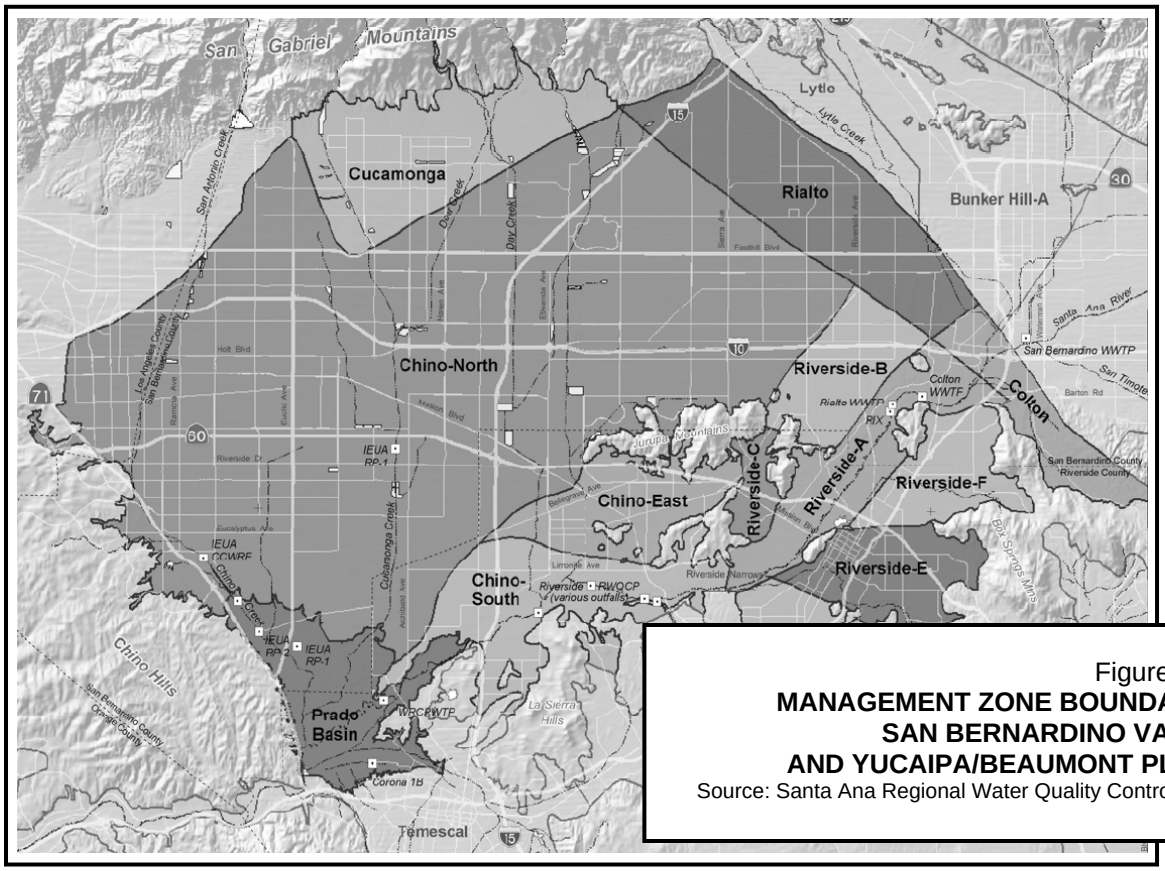


Figure 4.4-4
MANAGEMENT ZONE BOUNDARIES SAN BERNARDINO VALLEY AND YUCAIPA/BEAUMONT PLAINS
Source: Santa Ana Regional Water Quality Control Board

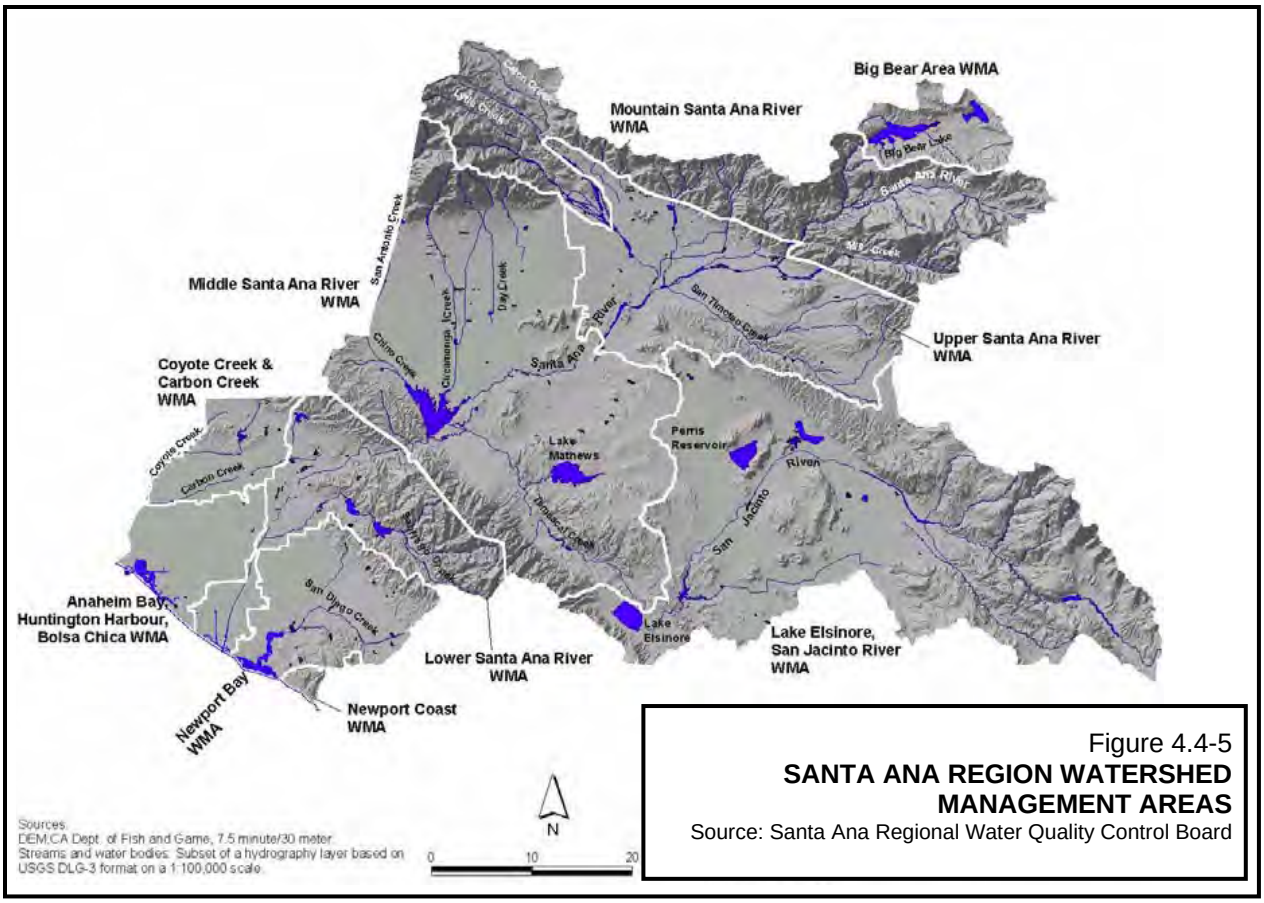


Figure 4.4-5
SANTA ANA REGION WATERSHED MANAGEMENT AREAS
Source: Santa Ana Regional Water Quality Control Board

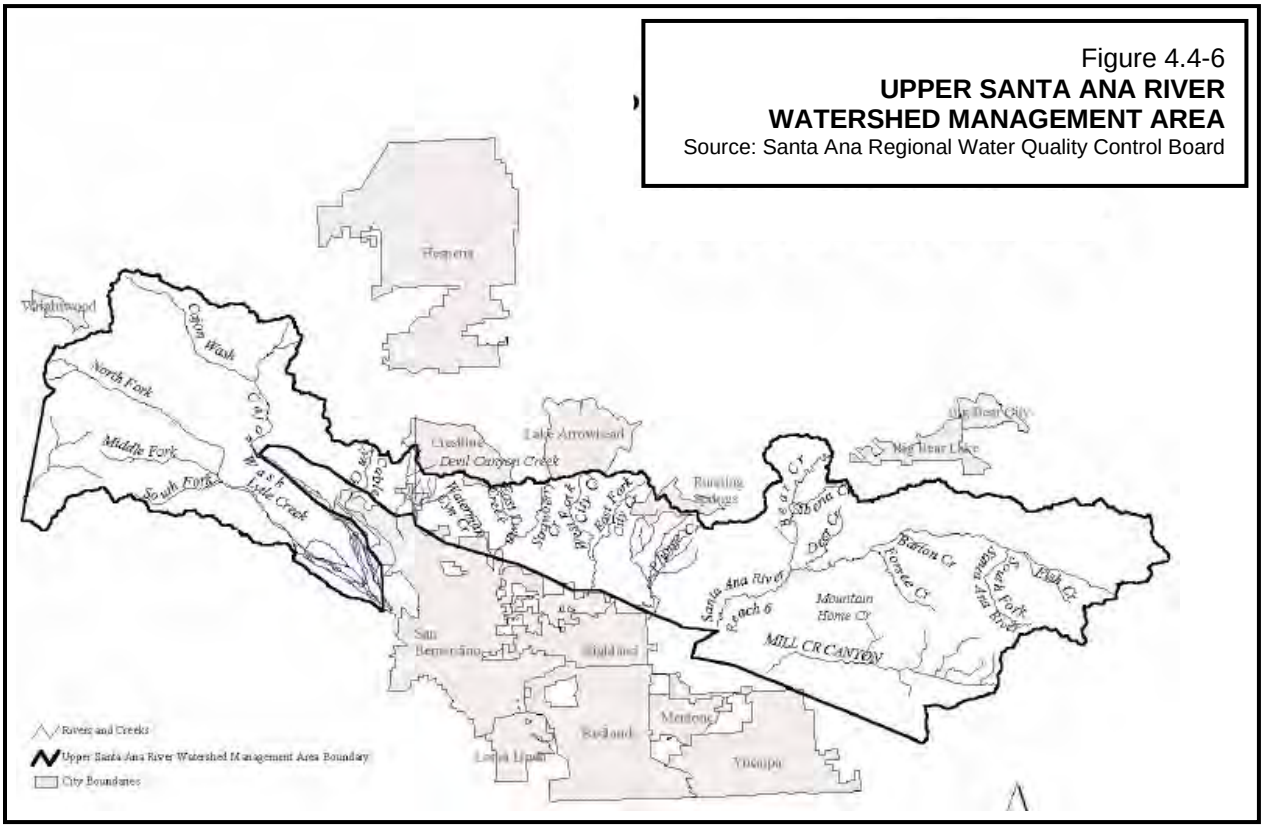


Figure 4.4-6
UPPER SANTA ANA RIVER WATERSHED MANAGEMENT AREA
Source: Santa Ana Regional Water Quality Control Board

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Table 4.4-3
WATER QUALITY OBJECTIVES FOR INLAND SURFACE AND GROUNDWATERS UPPER SANTA ANA RIVER BASIN

Waterbody	Hydrologic Unit		Water Quality Objectives (mg/L)							
	Primary	Secondary	TDS	NO_3-N	Hardness	Na	Cl	TIN	SO_4	COD
Inland Surface Waters										
Lytle Creek (South, Middle, and North Forks)	801.41	801.42 801.52 801.59	200	-	100	30	10	1	20	5
Lytle Creek (Valley Reaches)	801.21	Water quality objectives correspond to underlying Groundwater basin objectives.								
Groundwater Management Zones										
Lytle Creek	801.41	801.42	260	1.5	175	15	10	1	30	
Rialto	801.41	801.42	230	2.0	95	35	35	2	40	

Notes:
1. Constituents include: (1) TDS (total dissolved solids); (2) NO_3-N (nitrate-nitrogen); (3) Hardness (as $CaCO_3$); (4) Na (active nitrate); (5) Cl (chloride); (6) TIN (total inorganic nitrogen); (7) SO_4 (sulfate); and (8) COD (chemical oxygen demand).

Source: California Regional Water Quality Control Board, Santa Ana Region

With the exception of the Blue Cut area which is incised with steep side slopes and bed material composed of gravel, cobbles, and rock, Cajon Creek is generally a wide alluvial channel of coarse sand bed material. In general, Cajon Creek is characterized as a "non-sinuous braided" creek. Creeks of this nature are typically highly braided (e.g., network of converging and diverging flow lines separated from each other by narrow strips of sand and gravel) and have moderate rates of lateral migration at random places where one of the multiple branches impinges against a bank. Primary causes of braiding include upstream or tributary sediment over loading, which results in deposition of sediment. Sediment transport through the canyon and smaller tributary drainages typically occur during somewhat infrequent, moderate to high flood events.[38]

Within the Upper Santa Ana River WMA, groundwater and surface water quality are affected by high levels of nitrogen and dissolved minerals. Wastewater reclamation, invasive species, and protection of threatened and endangered species are concerns.[39]

In contrast, the County's "Conservation Background Report" indicates that the non-mountainous segment of Lyle Creek is located within the "Middle Santa Ana River Watershed Management Area."[40] As indicated therein: "The Middle Santa Ana River WMA groundwater and surface water quality are affected by high levels of nitrogen and dissolved minerals. Wastewater reclamation and protection of threatened and

[38]/ United States Army Corps of Engineers, Los Angeles Branch, Section 404(b)(1) Evaluation and Public Interest Review, Permit Application No. 200600615, February 2007, p. 11.

[39]/ *Op. Cit.*, Santa Ana Regional Water Quality Control Board Watershed Management Initiative Chapter, p. ES-3.

[40]/ *Op. Cit.*, Conservation Background Report, p. 6-142.

endangered species are concerns within this WMA. Non-native plants, specifically the giant reed and saltceder, which have significantly affected the beneficial uses of the Santa Ana River and its tributaries, are also a concern. Strategies to address these problems include Basinwide groundwater quality planning activities sponsored by water purveyors and waste dischargers, and participation in Basinwide exotic species eradication efforts."[41]

- **National Pollution Discharge Elimination System Permit**. The SARWQCB's "National Pollution Discharge Elimination System Permit, Order No. R8-2002-0012, NPDES Permit No. CAS618036"[42] (NPDES Permit) identifies post-development urban runoff discharge requirements for new development and significant redevelopment projects. Specific requirements include the use of applicable structural and non-structural BMPs to reduce the discharge of pollutants to the maximum extent practicable (MEP).[43]

  Permittee and/or co-permittees are required to implement all program elements including: (1) management and monitoring programs, implementation plans, and all BMPs outlined in the "San Bernardino County Report of Waste Discharge" (ROWD) and take such other actions as may be necessary to meet the MEP standard; and (2) prohibit illicit connections and illegal discharges (non-storm water) from entering MS4 systems unless such discharges are authorized by separate NPDES permit or as otherwise specified.[44]

  As indicated in the NPDES Permit, Reach 4 of the SAR (Mission Boulevard in Riverside to the San Jacinto fault in San Bernardino) is a 303(d) listed impaired water body for pathogens from nonpoint sources. These elevated levels may in part be attributed to discharges from the MS4 system.[45] Perennial flow in Reach 4 of the SAR is mostly from the upstream discharges of treated municipal wastewater. Due to microbial problems, this reach is posted to warn against water contact recreation. The NPDES Permit requires the permittees to investigate other sources (e.g., transient population living along this stretch of the river, wildlife, storm water and dry-weather runoff) to determine the cause of the microbial contamination. Lytle Creek and Cajon Creek are the other major tributaries to this reach.[46]

- **General Construction Activity Storm Water Permit**. On September 22, 1989, the USEPA granted the State, hence the RWQCBs, the authority to issue general NPDES permits pursuant to 40 Code of Federal Regulations (CFR) Sections 122-123. NPDES regulations (40 CFR 122.28) provide for the issuance of general permits to regulate discharges of waste which result from similar operations, are the same type of waste, require the same effluent limitations, require similar monitoring, and are more appropriately regulated under a general permit than an individual permit.

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[41]/ *Ibid*., p. 6-143.

[42]/ California Regional Water Quality Control Board, Santa Ana Region, National Pollution Discharge Elimination System Permit (Order No. R8-2002-0012, NPDES Permit No. CAS618036), April 26, 2002.

[43]/ Guidance for permit conformance and implementation of appropriate water quality management programs is provided in the permit text and related documentation, including the County's "Model Water Quality Management Plan Guidance."

[44]/ The SARWQCB's "De Minimus Permit, NPDES CAG998001, Order No. R8-2003-0061" (De Minimus Permit) identifies discharges that are not prohibited, such as landscape irrigation, diverted stream flows, rising groundwater, and flows from riparian habitats and wetlands.

[45]/ *Ibid*., p. 13.

[46]/ *Ibid*., Fact Sheet, pp. 6-7.

Construction activities are regulated by the Statewide "General Construction Activity Storm Water Permit, Order No. 99-08-DWQ, NPDES No. CAS000002"[47] (2001 General Construction Permit or 2001 GCASP).[48] Under the 2001 General Construction Permit[49] discharges of storm water from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits or be covered by the provisions of the 2001 GCASP. To obtain authorization for proposed storm water discharge to surface waters, pursuant to the 2001 GCASP, the discharger must submit a "Notice of Intent" (NOI) and the appropriate fee to the SWRCB.

Each applicant under the 2001 GCASP must ensure that a storm water pollution prevention plan (SWPPP) is prepared prior to commencement of grading and implemented during construction.[50] The receiving water limitations of the 2001 GCASP require that the SWPPP be designed and implemented so that storm water discharges and authorized non-storm water discharges do not cause or contribute to an exceedance of any applicable water quality standards. Required elements of the SWPPP include: (1) site description addressing the elements and characteristics specific to the site; (2) descriptions of the BMPs for erosion and sediment controls; (3) BMPs for construction waste handling and disposal; (4) implementation of approved local plans; (5) proposed post-construction controls, including description of local post-construction erosion and sediment control requirements; and (6) non-storm water management.

The San Bernardino County Flood Control District (permitee) and the cities within the County (co-permittees) are required to conduct monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of pollutants.

The MS4 permit contains provisions requiring that local agencies require the preparation of a SWPPP prior to issuance of a grading permit and to inspect construction sites for compliance with the SWPPP and the 2001 GCASP. These provisions provide further guidance with respect to implementation of construction BMPs, including the following: (1) treatment controls or structural BMPs; (2) construct-related materials, wastes, spills or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters or adjacent properties; and (3) erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs.

The 2001 GCASP also addresses authorized construction-related non-storm water discharges. Non-storm water discharges necessary for the completion of construction projects, including irrigation of vegetative erosion control measures, pipe flushing and testing, street cleaning and dewatering, are allowed, provided that they are not relied

[47]/ State Water Resources Control Board, Resolution No. 2001-046, Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity, adopted April 26, 2001.

[48]/ On September 2, 2009, SWRCB adopted a new NPDES General Construction Permit (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (2009 General Construction Permit or 2009 GCASP) for storm water discharges associated with construction and land disturbance activities which will become effective on July 1, 2010. The 2009 General Construction Permit represents a shift in storm water management practices, moving from a builder-developed storm water pollution prevention plan (SWPPP) or best management practices (BMPs) to quantitative standards to ensure compliance with the CWA.

[49]/ Adopted pursuant to the Section 402(p) of the CWA which requires regulations for the permitting of certain storm water discharges.

[50]/ As stated, the primary objectives of the SWPPP are to: (1) help identify the sources of sediment and other pollutants that affect the quality of storm water discharge; and (2) describe and ensure that implementation of BMPs to reduce or eliminate sediment and other pollutants in storm water as well as non-storm water discharge.

upon to clean up failed or inadequate construction or post-construction BMPs designed to keep materials on the site and so long as they comply with the non-storm water discharge requirements of the GCASP. These non-storm water discharge requirements mandate that non-storm water discharges shall: (1) be infeasible to eliminate; (2) comply with BMPs which must be set forth in the SWPPP; (3) not cause or contribute to a violation of water quality standards; and (4) are permitted by the local RWQCB.

On September 2, 2009, the SWRCB adopted an updated "National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002" (2009 General Construction Permit or 2009 GCASP) which becomes effective on July 1, 2010. The 2009 GCASP differs from the 2001 GCASP in a number of significant ways. Those changes include, but are not limited to, the following: (1) risk-based permitting approach (establishing three levels of risk possible for a construction site); (2) minimum requirements specified (imposing more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance); (3) effluent monitoring and reporting (requiring effluent monitoring and reporting for pH and turbidity in storm water discharges); (4) receiving water monitoring and reporting (requiring some Risk Level 3 dischargers to monitor receiving waters and conduct bioassessments); (5) post-construction storm water performance standards (specifying runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit to avoid, minimize, and/or mitigate post-construction storm water runoff impacts); (6) rain-event action plan (requires certain sites to develop and implement a rain-event action plan designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event); (7) annual reporting (requiring all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements); and (8) linear underground/overhead projects (specifying requirements for all linear underground/overhead projects)..[51]

The SARWQCB requires issuance of waste discharge requirements (WDRs) for any non-storm water discharges that will not be contained on the project site. Typically, the WDRs issued to regulate construction-related non-storm water discharges require both notification and water quality testing prior to such discharges and reporting of discharges and activities conducted pursuant to the permit.

4.4.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **San Bernardino County General Plan**. As indicated in the County General Plan, the County utilizes land-use districts to prohibit habitable structures in floodplains identified

[51]/ State Water Resources Control Board, National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002, adopted September 2, 2009, pp. 5-6.

by the federal requirements necessary to participate in the National Flood Insurance Program. The consistent adoption of overlays is needed to require special review, conditions, and the prohibition of some uses in floodplain areas.[52]

Natural hazards are identified on the County's hazard overlay map. That map contains information that may be useful in understanding existing site conditions and is presented, in part, in Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlay Map). As illustrated, a portion of the project site is located in the County's floodplain safety overlay district FP1 (100-Year Flood). As a planning tool and in order to facilitate the siting of certain types of land uses in proximity to those areas, as presented in Table 4.4-4 (Land-Use Compatibility in 100-Year Floodplains), the County General Plan includes a "Land-Use Compatibility in 100-Year Floodplain."

Table 4.4-4
LAND-USE COMPATIBILITY IN 100-YEAR FLOODPLAINS

Land Use	Compatibility In 100-Year Floodplains
Critical. Nuclear-related systems; major dams; explosives or hazardous materials/manufacturing, handing, or storage; hospitals and other emergency medical facilities; specific hazardous waste facility.	Restricted
Essential. Police, fire and communication systems; emergency operations centers; electric power inter-tie systems; power plants; small dams; utility substations; sewerage treatment plants; waterworks; local gas and electric distribution lines; aqueducts; major pipelines; major highways, bridges and tunnels; ambulance services; public assembly sites with 300 or more capacity; schools.	Restricted
High Occupancy. Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health-care clinics and convalescent homes; heavy industry; gas stations.	Generally Incompatible
Normal-Low Risk. Single-family and two-family residential; multi-family of less than 20 units; small -scale commercial; small hotels, motels; light industry; warehousing; parks.	Provisionally Incompatible
Restricted. Restricted unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated.	
Generally Incompatible. Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated.	+

Source: County of San Bernardino

In the context of the proposed project, those hydrology and water quality goals, policies, and programs presented in the County General Plan that would apply to the unincorporated County portion of the project site, if processing of some or all of the project site were to occur through the County, are presented below.

- Goal S5. The County will provide adequate flood protection to minimize hazards and structural damage.
  - ◊ Policy S5.1. Participate in the National Flood Insurance Program (NFIP), which provides flood insurance within designated floodplains.

[52]/ *Op. Cit*., San Bernardino County General Plan, p. II-A2-1.

Programs. (1) Designate Floodways and Floodplain areas, as identified by the Federal Emergency Management Agency (FEMA) on flood insurance rate maps and flood boundary maps, as Floodways (FW) on the Land Use Maps and Floodplain Overlays on the Hazards Overlay Maps. (2) Designated floodway areas will be preserved for non-structural uses through restrictions of the FW Land Use Zoning District. (3) All new development, including filling, grading, and construction, proposed within designated floodplains, will require submission of a written assessment prepared by a qualified hydrologist or engineer, in accordance with the latest "San Bernardino County Hydrology Manual" and the various detention basin policies, to determine whether the development will significantly increase flood hazard and to show that all new structures will be adequately protected. Development will be conditioned on receiving approval of this assessment by the San Bernardino County Surveyor Division of the Public Works Department. (4) All new construction in a Floodplain Overlay area will be required to be flood-proofed, located, and designed to allow unrestricted flow of floodwaters. (5) The Land Use Compatibility Chart for 100-Year Floodplains will apply to County reviews of all discretionary and ministerial actions in County-designated floodplains. (6) Lands within floodplains may be developed with non-critical and non-essential uses if mitigation measures are incorporated to ensure that the proposed development will not be hazardous, increase flood depths or velocities downstream, or degrade water quality, especially uses such as parks, trails, and open space. (7) Provide known flood hazard information with every discretionary or ministerial application. (8) When no mapped data exist, existing topographical, watershed, and drainage course data will be evaluated for a determination of potential flood hazard for every discretionary and ministerial action.

◊ Policy S5.5. Require specific hydrology and hydraulic studies for development proposals to avoid spot flooding from small streams or unmapped areas adjacent to mapped flood areas.

Programs. (1) Identify existing drainage conditions, upstream and downstream conditions, and measures that must be taken within the development project or downstream from the project to preclude impacts on the proposed development or increased impacts to downstream development. These studies will be submitted to and reviewed by the Land Use Services Department and the Department of Public Works. (2) Fully account for all planned flood control facilities within or adjacent to the project site. Where sections of flood control facilities cannot be constructed, provision should be made for their ultimate construction – that is, rights-of-way reserved and construction funds secured. Additional interim facilities must be provided that will be able to handle the additional run-off from the proposed development until the planned flood control facilities are constructed.

◊ Policy S5.8. Design flood control and drainage measures as part of an overall community improvement program that advances the goals of

recreation, resource conservation, preservation of natural riparian vegetation and habitat, and the preservation of the scenic values of the County's streams and creeks.

Programs. (1) Consider ecological significance and aesthetic quality of natural drainage ways in the design of all drainage projects. (2) Require that storm waters be used for groundwater recharge when possible and that existing ground water recharge areas be considered for retention as unbuilt open areas. (3) Preserve all existing "unlined" and "natural" drainage channels and water courses, such as creeks and river beds, as resource management areas or linear parks and recreational trails, whenever technically and economically feasible. Linear parks and/or recreation trails will be part of a master-planned system.

- Goal S6. The County will protect residents form natural and manmade hazards.

  - ◊ Policy S6.2. Utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: flood, fire, geologic, aviation, noise, cultural, prime soils, biological, scenic resources, minerals, agricultural preserves, utility corridors, water supply, and water recharge.

  - ◊ Policy S6.3. Because public health and safety can be protected through the use of open space, the County may maintain open space where flood, fire, geologic, seismic hazards, noise, or other conditions endanger public health and safety.[53]

- Goal CI13. The County will minimize impacts to stormwater quality in a manner that contributes to improvement of water quality and enhances environmental quality.

  - ◊ Policy CI13.1. Utilize site-design, source-control, and treatment control best management practices on applicable projects, to achieve compliance with the County Municipal Stormwater NPDES Permit.

  - ◊ Policy CI13.2. Promote the implementation of low impact design principles to help control the quantity and improve the quality of urban runoff. These principals include: (a) Minimize changes in hydrology and pollutant loading; ensure that post development runoff rates and velocities from a site do not adversely impact downstream erosion, and stream habitat; minimize the quantity of stormwater directed to impermeable surfaces; and maximize percolation of stormwater into the ground where appropriate. (b) Limit disturbance of natural water bodies and drainage systems; conserve natural areas; protect slopes and channels. (c) Preserve wetlands, riparian corridors, and buffer zones; establish reasonable limits on the clearing of vegetation from the project site. (d) Establish development guidelines for areas particularly susceptible to

[53]/ *Op. Cit*., County of San Bernardino 2007 General Plan, Safety Element, pp. VIII-17 through VIII-23.

erosion and sediment loss. (e) Require implementation of structural and non-structural BMPs to mitigate projected increases in pollutant loads and flows.[54]

- **San Bernardino County Development Code**. As illustrated in Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlay Zone), portions of the project site are located in a County-designated floodplain safety overlay district. The following requirements would be applicable to the proposed project only if some or all of site were to remain under the jurisdiction of the County and not be annexed into the City as currently proposed.

  Pursuant to Section 85.07.020 (Procedures) in Chapter 85.07 (Flood Hazard Development Review) of the County Development Code, a flood hazard development review shall be completed before the approval of a land-use application or issuance of a development permit in specified areas or where required if some or all of the proposed project site were to be developed in the County. Any structure in a project requiring a flood hazard development review shall be sited to modify or maintain the natural drainage way in a manner approved by the County Department of Public Works, Drainage Section.

  As specified in Section 82.14 (Flood Plain Safety Overlay) therein, the County's floodplain safety overlay district is divided into three review areas. New construction and substantial improvements in areas subject to 100-year floods (FP1), as determined by FEMA, shall be constructed so that the first floor shall be one foot or more above the base flood elevation, when the FEMA map base flood elevations are shown, and will not result in any significant increase in flood levels during the base flood discharge. When the base flood elevations are not shown, new construction and substantial improvements of any residential structure shall be constructed so that the first floor shall be two feet or more above the highest adjacent grade (Section 82.14.040[a]). In areas where no regulatory floodway has been designated, no new construction, substantial improvement, or other development (including fill) shall be permitted within any areas designated by FEMA as Zones A or AE on FIRM or flood boundary maps unless it can be demonstrated that the cumulative effect of the proposed development , when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

  New construction and substantial improvements in areas located between the limits of the 100-year flood and subject to a 500-year flood (FP2), including certain areas subject to 100-year flooding with an average depth of less than one foot or where contributing drainage areas are less than one square mile or areas protected by levees from the base flood, shall be so constructed that the first floor shall be one foot above the highest adjacent grade (Section 82.14.040[b]).

  Before a building permit is issued in areas of shallow flooding with undetermined, but possible, flood hazards, as determined by the County (FP3), a field investigation shall be made of the lot to determine if the proposed construction will have any substantial detrimental effect on the drainage way (Section 82.14.040[c]).

[54]/ *Ibid*., Circulation and Infrastructure Element, p. III-22.

Projects located within FP1 and FP2 are subject to flood hazard development review. In addition, in all areas subject to special flood hazards, Section 82.14.050 (Development Standards) of the County Development Code outlines specific standards of construction, utility standards, land-use application review requirements, manufactured homes, and floodway standards. As authorized under Section 82.14.070 (Boundary Change) of the County Development Code, an applicant may apply to FEMA for an adjustment to the designated base flood elevation and/or other designations on the FIRM or flood boundary maps. Prior to submitting such application, all FEMA required documents must be submitted to the San Bernardino County Flood Control District (SBCFCD or District) for review. As indicated, the San Bernardino County Department of Public Works will determine if a FEMA application is required.[55]

As specified under the County Development Code, each development project, building permit, grading and any other significant land disturbing activity shall include the installation of erosion control measures in compliance with the County Development Code (Section 82.13.060). For those projects located within Fire Safety Overlays, Section 82.13.080 (Soil Erosion and Sediment Control Plans/Permits) provides regulations and procedures for project planning, preparation of soil erosion and sediment control plans, land clearing, and winter operations to control existing and potential conditions of human-induced accelerated erosion. As stipulated, a soil erosion and sediment control plan shall be submitted and approved prior to the issuance of (a) building permits, (b) grading permits, and (c) other permits where, in the opinion of the Building Official, erosion can reasonably be expected to occur. General erosion control requirements (Section 82.13.080[c]), runoff control measures (Section 82.13.080[d]), land clearing measures (Section 82.13.080[e]), and winter operation measures (Section 82.13.080[f]) are outlined therein.

As stipulated in Section 87.06.050(k) in Chapter 87.06 (Subdivision Design and Improvement Requirements), storm water runoff from a subdivision shall be collected and conveyed by an approved storm drain system. A subdivision that lies in the path of existing watercourses or overflows from existing watercourses or natural drainages from upstream properties shall not be approved unless adequate dedicated rights-of-way or improvements are provided, as deemed satisfactory by the Director of the County Department of Public Works.

- **Model Water Quality Management Plan**. The purpose of the "San Bernardino Water Quality Management Plan Guidance for New Development and Redevelopment Projects"[56] (Model WQMP) is to guide the permittees that have land-use planning and development authority in the development and implementation of a program to minimize the detrimental effects of urbanization on the beneficial uses of receiving waters, including effects caused by increased pollutant loads and changes in hydrology. The Model WQMP provides the framework to be followed by project proponents for the development and implementation of a project-level WQMP to minimize the adverse effects of development and redevelopment projects on receiving waters.[57] These effects

[55]/ The Applicant has submitted a FEMA conditional letter of map revision (CLOMR) application to modify the mapped floodplain limits for the proposed southern bank improvements along Lytle Creek (0609B387R).

[56]/ California Regional Water Quality Control Board, Santa Ana Region, San Bernardino Water Quality Management Plan Guidance for New Development and Redevelopment Projects, approved April 30, 2004, updated June 9, 2005.

[57]/ Project proponents for development and redevelopment projects that either fall into one of eight permit-specified categories (Category Projects) or are not Category Projects but have a precise plan of development or

may be minimized through the implementation of site designs that reduce runoff and pollutant transport by minimizing impervious surfaces and maximizing on-site infiltration, source-control BMPs, and/or either on-site structural treatment control BMPs or participation in regional or watershed-based structural treatment control BMPs. A project WQMP shall meet all the standards of compliance and any other requirements specified in the NPDES permit. The Model WQMP is an enforceable component of the NPDES permit, applicable to all permittees, and represents the standard for NPDES permit compliance.

The project WQMP for all Category Projects must identify all pollutants that are expected or potential from the proposed project land use or category. Site-specific conditions must also be considered as potential pollutant sources, such as legacy pesticides or nutrients in site soils as a result of past agricultural practices or hazardous materials in site soils from industrial uses. Potential pollutants identified in Table 4.4-5 (Pollutants of Concern for Project Categories and Land Uses) require an offset if the potential pollutant is also identified as a pollutant causing or contributing to an impairment of water quality standards. Pollutants requiring an offset are those on the State's most recently approved CWA 303(d) list. The discharge of any listed pollutant to shall require an offset (e.g., no net loading) for any additional loading from the proposed project to ensure no further degradation of the impaired water body. The potential or expected pollutants of concern are described below.

◊ **Bacteria and viruses** (Pathogens). Bacteria and viruses are ubiquitous micro-organisms that thrive under certain environmental conditions. Their proliferation is typically cause by the transport of animal or human fecal wastes from the watershed. Water, containing excessive bacteria and viruses, can alter the aquatic habitat and create a harmful environment for humans and aquatic life. The decomposition of excess organic waste causes increased growth of undesirable organisms in the water.

◊ **Metals**. The primary source of metal pollution in storm water is typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and cooling tower systems. Metals are also raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. At low concentrations naturally occurring in soil, metals may not be toxic. At higher concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources and bioaccumulation of metals in fish and shellfish. Environmental concerns, regarding the potential for release of metals to the environment, have led to restricted metal usage in certain applications.

subdivision of land (Non-Category Projects) must develop, submit, and implement a WQMP. The Model WQMP provides a framework that local agencies can adopt. Local agencies can then require sponsors of development and redevelopment projects to use the framework to develop a WQMP to be implemented during the project planning, design, approval, permitting, construction, acceptance, and occupancy phases. Category Projects include, but are not limited to: (1) home subdivisions of 10 units or more; (2) industrial/commercial developments of 100,000 square feet or more; (3) developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into environmentally sensitive areas; and (4) parking lots of 5,000 square feet or more exposed to storm water.

Table 4.4-5
POLLUTANTS OF CONCERN FOR PROJECT CATEGORIES AND LAND USES

Project Categories Land Uses	General Pollutant Categories								
	Bacteria/ Virus	Heavy Metals	Nutrients	Pesticides	Organic Compounds	Sediments	Trash and Debris	Oxygen Demanding Substances	Oil And Grease
Residential Development (Detached)	E	N	E	E	N	E	E	E	E
Residential Development (Attached)	P	N	E	E	N	E	E	P[1]	P[2]
Industrial/Commercial Development (>100,000 ft^2)	P[3]	P	P[1]	P[1]	P[5]	P[1]	E	P[1]	E
Automotive Repair Shops	N	P	N	N	E[4,5]	N	E	N	E
Restaurants (>5,000 ft^2)	E	N	N	N	N	N	E	E	E
Hillside Development (>10,000 ft^2)	E	N	E	E	N	E	E	E	E
Parking Lots (>5,000 ft^2)	P[6]	E	P[1]	P[1]	E[4]	P[1]	E	P[1]	E
Streets/Highways/ Freeways	P[6]	E	P[1]	P[1]	E[4]	E	E	P[1]	E

Notes:
1. A potential Pollutant if landscaping or open area is present on site.
2. A potential Pollutant if the project includes uncovered parking areas.
3. A potential pollutant if land use involves animal waste.
4. Including petroleum hydrocarbons.
5. Including solvents.
6. Bacterial indicators are routinely detected in pavement runoff.

E = expected; P = potential; N = not expected

Source: California Regional Water Quality Control Board, Santa Ana Region

◊ **Nutrients**. Nutrients are inorganic substances, such as nitrogen and phosphorus. Excessive discharge of nutrients to water bodies and streams causes eutrophication, where aquatic plants and algae growth can lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms. Primary sources of nutrients in urban runoff are fertilizers and eroded soils.

◊ **Pesticides**. Pesticides (including herbicides) are chemical compounds that are commonly used to control nuisance growth or prevalence of organisms. Relatively low levels of the active component of pesticides can result in conditions of aquatic toxicity. Excessive or improper application of a pesticide may result in runoff containing toxic levels of its active ingredient.

◊ **Organic compounds**. Organic compounds are carbon-based. Commercially available or naturally occurring organic compounds are found in pesticides, solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life.

◊ **Sediments**. Sediments are solid materials that are eroded from the land surface. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.

◊ **Trash and debris**. Trash (e.g., paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (e.g., leaves, grass cuttings, and food waste) are general waste products on the landscape. The presence of trash and debris may have a significant impact on the recreational value of a water body and aquatic habitat. Trash impacts water quality by increasing biochemical oxygen demand.

◊ **Oxygen-demanding substances**. This category includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen-demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions. A reduction of dissolved oxygen is detrimental to aquatic life and can generate hazardous compounds such as hydrogen sulfides.

◊ **Oil and grease**. Oil and grease in water bodies decreases the aesthetic value of the water body, as well as the water quality. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids.

- **San Bernardino County Flood Control District**. In response to the disastrous floods of March 1938, the SBCFCD was created in 1939 by legislative action (San Bernardino County Flood Control District Act, Chapter 73, Statues of 1939), which both created the District and divided it into zones. The SBCFCD was established to: (1) provide for the control and conservation of flood and storm waters and for the protection of watercourses, watersheds, public highways, and life and property within the District from damage or destruction from such waters; (2) prevent the waste of water or the dominion of the water supply in or the exportation of water from the District; (3) import water into the District and to obtain, retain, and reclaim drainage, storm, flood, and other waters and to save and conserve all or any of such waters for beneficial use in the District; and (4) provide for the construction of works and the acquisition of property by the District to carry out the purpose of the act. Among other powers, the SBCFCD is authorized to construct, maintain and operate improvements; store water in surface and subsurface reservoirs; conserve and reclaim water for present and future use; appropriate and acquire water rights and import water for any useful purpose of the District; prevent pollution or otherwise rendering unfit the surface and subsurface water; control the flood and storm waters of the District; conserve such waters for beneficial and useful purposes; incur indebtedness and to issue bonds; and cause taxes to be levied for the purpose of obligations of the District.

  The SBCFCD is divided into six flood control zones. As illustrated in Figure 4.4-7 (San Bernardino County Flood Control District – Flood Control District Zone 2), the project site is located within the District's Flood Control Zone 2. Zone 2 is approximately 318 square miles in size and includes the central area of the San Bernardino Valley, extending easterly of Zone 1 to approximately the SAR and City Creek demarcations. This area includes the Cities of Colton, Fontana, Grand Terrace, Rialto, and San Bernardino, as well as the communities of Bloomington, Del Rosa, Devore, and Muscoy. In matters of taxation or ventures, each zone functions independently, although joint activities can be entered into by mutual agreements.[58]

  Lytle Creek is a SBCFCD-managed drainage course.[59] Lytle Creek is a SBDFCD facility that has highly debris laden flows originating in the mountains to the north. During the historic floods of January and February 1969, this drainage course experienced severe erosion and overflowed its banks.[60,61] Sycamore Creek is not maintained by the SBCFCD. The flows from Sycamore Creek traverse a portion of the project site in a well defined natural drainage course and poorly defined vagrant flow paths. Sycamore Creek also overflowed its banks in the 1969 storm.

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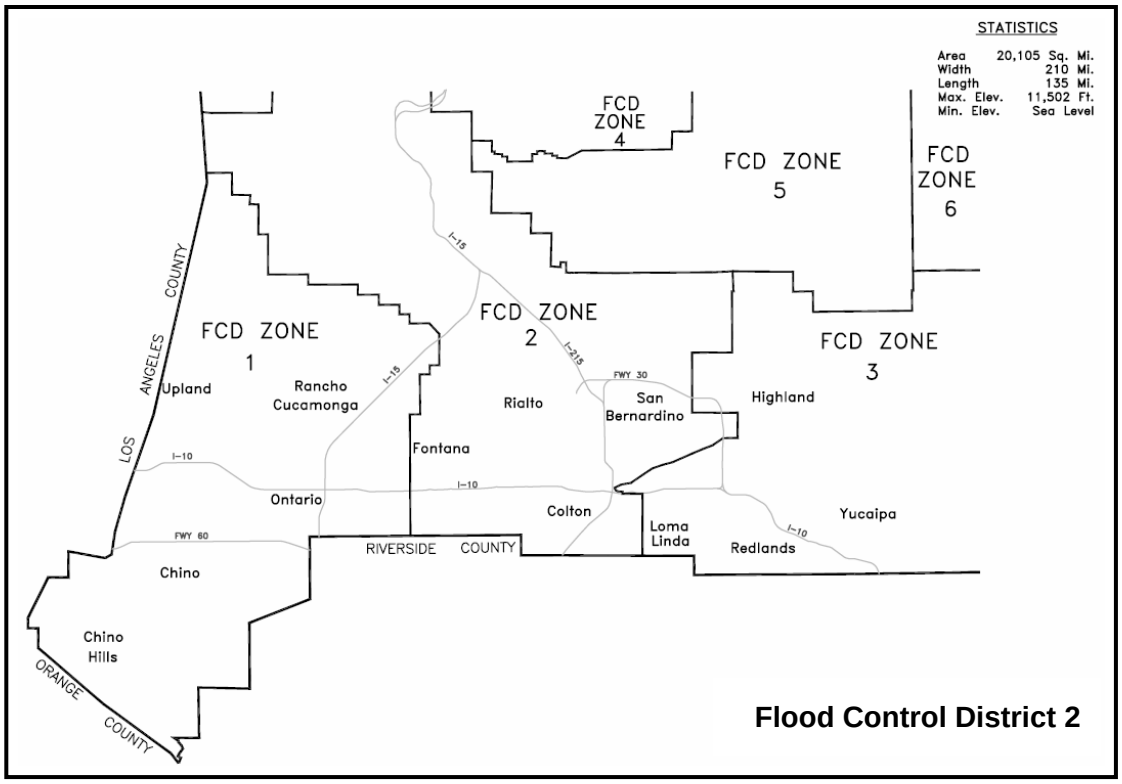
[58]/ *Op. Cit*., Safety Background Report, p. 7-73.

[59]/ Prior to any activity on SBCFCD right-of-way, a permit must first be obtained from the SBCFCD's Flood Control Operations Division, Permit Section.

[60]/ With regards to the floods that struck southern California during January 18 to January 26 and February 20 to February 26, 1969, as reported by the USACE: "As a result of virtually uncontrolled mining of sand and gravel in the streambed of Lytle and Cajon Creeks, even insignificant flows caused serious degradation of the streambed. As mentioned above, gravel pits accentuated the meandering stream. When floods occurred, the headcutting action of floodflows moving into the pits scoured the streambed in an upward direction and attacked nearby flood-control improvements. The scouring action of the floodflows eventually caused failure of the levee toes" (USACE, Assessment of Structural Flood-Control Measures on Alluvial Fans, October 1993).

[61]/ As reported by Pacific Advanced Civil Engineering, "the peak discharge associated with the January 25, 1969 flood event had an estimated return interval of 91-years, nearly the 100-year design level event" (Pacific Advance Civil Engineering, Inc., Revetment Design for Lytle Creek North Development Hydraulic Report, January 2004, p. 4-1).



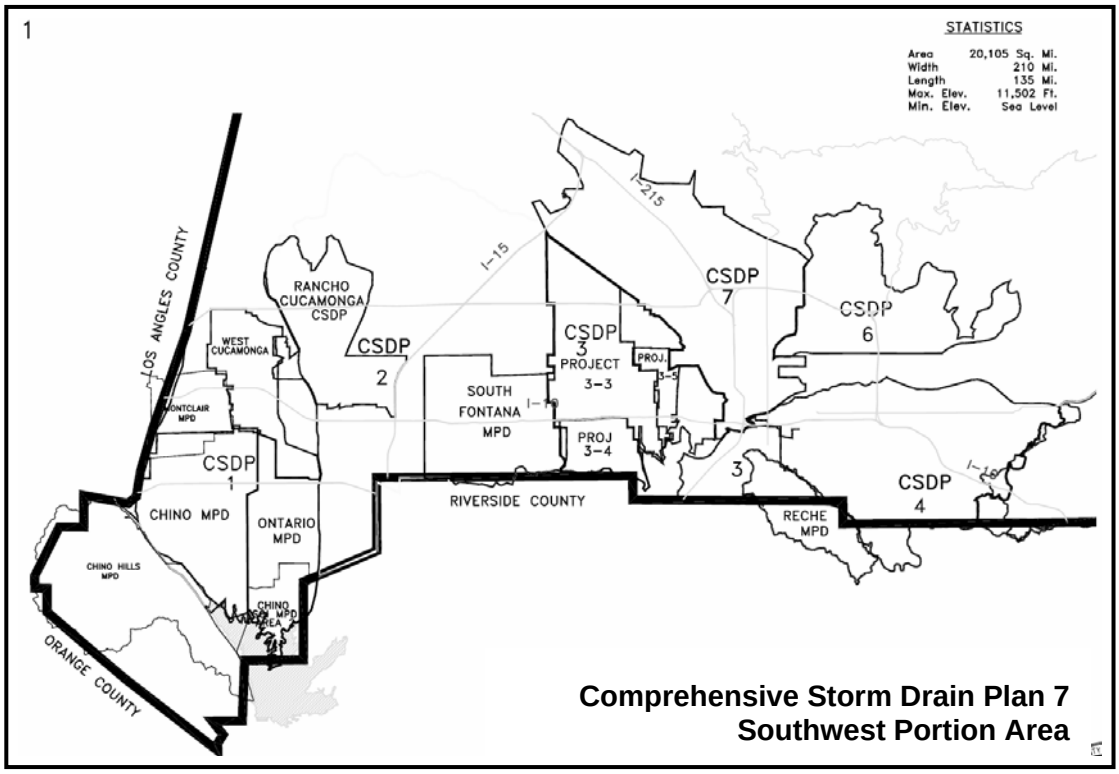


Figure 4.4-7
SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT
FLOOD CONTROL DISTRICT ZONE 2
Source: San Bernardino County Flood Control District

Localized master plans of drainage (MPD) and/or comprehensive storm drain plans (CSDP) have been created to evaluate the County's existing drainage systems, to identify deficiencies, and to recommend improvements and new facilities in a defined area. The project site is included within "Comprehensive Storm Drain Plan 7" (CSDP 7), completed in 1982. Hydrologic calculations completed with the CSDP predate the adoption of the "San Bernardino County Hydrology Manual" (August 1986). The application portion of that plan is presented in Figure 4.4-8 (Comprehensive Storm Drain Plan 7 - Portion of the Southwest Portion Map).

4.4.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. As indicated in the City General Plan, the regional plans upon which the City's surface drainage system is based are the "Comprehensive Storm Drain Plans" formulated by the SBCFCD. The comprehensive plans that encompass the general project area serve to establish an integrated hierarchical system of drainage pipes and channels discharging storm waters to the SAR. The general slope of the City provides the gravitational force necessary.[62]

  With regards to hydrology and water quality, as presented in the Conservation and Safety Elements, those City policies that would appear most closely related to the proposed project and to the project site are presented below.

  - Goal 2.1. Protect and enhance Rialto's surface waters and groundwater basins.

    - ◊ Policy 2.1.4. Prohibit encroachment on water recharge areas, keeping them free of impervious surfaces.

    - ◊ Policy 2.1.7. Monitor land uses potentially affecting Lytle Creek as a water source.

    - ◊ Policy 2.1.8. Provide flood control channels with permeable bottoms to help restore aquifers.[63]

  - Goal 1.1. Minimize hazards to public health, safety, and welfare resulting from natural and man-made hazards.[64]

  - Goal 3.1. Minimize risk and damage from flood hazards within the City and its Sphere of Influence.

[62]/ *Op. Cit*., City of Rialto General Plan,. Safety Element, p. XII-1.
[63]/ *Ibid*., Conservation Element, p. X-2.
[64]/ *Ibid*., Safety Element, p. XII-1.

- ◊ Policy 3.1.2. The City shall require the submittal of information prepared by a qualified civil or hydrological engineer which certifies compliance with development standards established for 100-year flood zones.

- Goal 3.2. Minimize the adverse effects of urbanization upon drainage and flood control facilities.

  - ◊ Policy 3.2.1. The City shall require the implementation of adequate erosion control measures for development projects to minimize sedimentation damage to drainage facilities.

  - ◊ Policy 3.2.2. The City shall maintain its open space and shall require developers to provide adequate open space pursuant to the standards established in the Parks and Recreation Element of the General Plan and the City's zoning ordinance as a measure to minimize impermeable surfaces throughout the City.

  - ◊ Policy 3.2.4. The City shall require water retention devices in new development in order to minimize peak flows to the surface drainage system.

- Goal 3.4. Correct flooding problems within the City.[65]

- Goal 7.2. Ensure the protection of new development from watercourses, flood control channels and other waterways, while retaining an aesthetic appearance.[66]

Applicable or potentially applicable hydrology and water quality policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. As specified in Section 12.60.110 (Compliance with Best Management Practices) in Chapter 12.60 (Municipal Separate Storm Sewer System) in Title 12 (Public Facilities) in the City Municipal Code: "Any person undertaking any activity or operation in the city that could potentially cause or contribute to stormwater pollution or a discharge of non-stormwater to the city's MS4 shall comply with all applicable best management practices (BMPs) as listed in the California Stormwater Best Management Practices Handbooks or the current, San Bernardino County stormwater program's 'Report of Waste Discharge,' to reduce pollutants in stormwater runoff and reduce non-stormwater discharges to the city's MS4 to the maximum extent practicable or to the extent required by law."[67]

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[65]/ *Ibid*., pp. XII-6 and XII-7.
[66]/ *Ibid*., Community Design, p. VIII-21.
[67]/ The California Stormwater Quality Association's (CASQA) "California Best Management Practices Handbook for New Development and Redevelopment" (January 2003) provides general guidance for selecting and implementing Best Management Practices (BMPs) to reduce pollutants in runoff in newly developed areas and redeveloped areas to waters of the State. The CASQA handbook also provides guidance on developing project-specific stormwater management plans, including selection and implementation of BMPs for a particular development or redevelopment project.

As required in Section 12.60.260 (Stormwater Quality Management Plan), prior to the issuance of any grading or building permit, all qualifying land development and redevelopment projects shall submit and have approved a storm water quality management plan (SWQMP) to the City Engineer. The SWQMP shall identify all BMPs that will be incorporated into the project to control storm water and non-storm water pollutants during and after construction and shall be revised as necessary during the life of the project. Qualifying development and redevelopment projects include: (1) home subdivisions of ten units or more; (2) industrial and commercial developments of 100,000 square feet or more; (3) vehicle maintenance and automotive repair shops; (4) food-service businesses where the land area of the development is 5,000 square feet or more; (5) all hillside developments on 10,000 square feet or more, which are located on areas with known erosive soil conditions or where the natural slope is 25 percent or more; (6) developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into environmentally sensitive areas; (7) parking lots of 5,000 square feet or more exposed to storm water; (8) all significant redevelopment projects adding 5,000 square feet or more of impervious surface on an already developed site.

Pursuant to Section 18.75.040 in Chapter 18.75 (Floodplain Management Ordinance) in Title 18 (Zoning) of the Municipal Code, the City seeks to restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities, require that uses vulnerable to floods (including facilities which serve such uses) be protected against flood damage at the time of initial construction, control the alteration of natural floodplains, stream channels, and natural protective barriers which help accommodate or channel flood waters, control filling, grading, dredging, and other development which may increase flood damage, and prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or increase flood hazards in other areas.

As indicated in Section 18.75.220 (Floodways), "areas of special flood hazard,"[68] as established in Section 18.75.070, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters, which carry debris, potential projectiles, and erosion potential, the following provisions apply: (A) Prohibit encroachments, including fill, new construction, substantial improvement, and other new development unless certification by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in the base flood elevation during the occurrence of the base flood discharge; and (B) If Section 18.75.220(A) is satisfied, all new construction, substantial improvement, and other proposed new development shall comply with all other applicable flood hazard reduction provisions of Sections 18.75.170 through 18.75.240.

Section 18.75.190 (Standards for Subdivisions) requires that that all subdivision proposals: (A) identify the special flood hazard area and the elevation of the base flood; (B) provide the elevation of proposed structures and pads (if the site is filled above the

[68]/ The areas of special flood hazard within the City include those identified by the FEMA in the flood insurance study and accompanying FIRMs and flood boundary and floodway maps, dated June 2, 1995, and all subsequent amendments and/or revisions thereto. As specified under Section 18.75.130 of the Municipal Code, a development permit shall be obtained before any construction or other development begins within any area of special flood hazard established under Section 18.75.070. Specific construction standards are identified in all areas of special flood hazards (Section 18.75.170) and separate standards for new and replacement water supply and sanitary sewage systems (Section 18.75.180).

base flood elevation, the lowest floor and pad elevations shall be certified by a registered professional engineer or surveyor and provided to the Floodplain Administrator); (C) consistent with the need to minimize flood damage; (D) have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage; and (E) provide adequate drainage to reduce exposure to flood hazards. Referencing Section 18.75.240(D): "Within Zone E on the Flood Insurance Rate Map, a setback is required for all new development from the ocean, lake, bay, riverfront or other body of water to create a safety buffer consisting of a natural vegetative or contour strip. This buffer shall be designated according to the flood-related erosion hazard and erosion rate, in relation to the anticipated useful life of structures, and depending upon the geologic, hydrologic, topographic, and climatic characteristics of the land. The buffer may be used for suitable open space purposes, such as for agricultural, forestry, outdoor recreation and wildlife habitat areas, and for other activities using temporary and portable structures only."

- **Multi-Jurisdictional Hazard Mitigation Plan**. As indicated in the City's "Hazard Mitigation Plan - Community of City of Rialto, CA," flooding is one of three natural hazards (i.e., earthquakes, flooding, wildfires) affecting the City. As defined therein: "A flood, as defined by the National Flood Insurance Program is 'A general or temporary condition of partial or complete inundation of two or more properties (at least one of which is your property) from: Overflow of inland or tidal waters, unusual and rapid accumulation or runoff of surface waters from any source, or a mudflow. The collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood."[69]

4.4.3 Environmental Setting

4.4.3.1 Regional Setting

The Santa Ana Basin is located in southern California between Los Angeles and San Diego. The approximately 2,650 square mile watershed is home to nearly five million people and the population is expected to increase by more than 50 percent by the 2020. During that same period, water demand is expected to increase by somewhat less than 50 percent. The Santa Ana Basin includes parts of Los Angeles, Orange, Riverside, and San Bernardino Counties. Population density for the entire basin is about 1,500 people per square mile. Excluding areas too steep to develop, the population density is about 3,000 people per square mile.

The Santa Ana River is the largest stream system in southern California, beginning in the San Bernardino Mountains and flowing more than 100 miles to the Pacific Ocean near Huntington Beach. The climate is Mediterranean with hot, dry summers and cool, wet winters.

Groundwater is the main source of supply in the watershed, providing about two-thirds of the total water used (about 1.2 million acre-feet per year [AF/Y]). Imported water from northern California and the Colorado River accounts for about one-quarter of the total consumptive demand. Local surface water provides the remaining supply. Urban water use (63 percent) exceeds agricultural water use (28 percent) within the basin.

[69]/ *Op. Cit*., Hazard Mitigation Plan - Community of City of Rialto, CA, Section 4.1.2.

As depicted in Figure 4.4-9 (Location of the Santa Ana Basin and Distribution of Alluvial Deposits)[70] and Figure 4.4-10 (Location of Inland Basin and Wells), the Santa Ana Basin can be subdivided into three primary groundwater basins: San Jacinto, Inland, and Coastal Basins. Relatively impervious hills and mountains bound water-bearing deposits in the alluvium-filled basins. Urban and agricultural land uses occur primarily in the alluvium-filled valleys and coastal plain. Land use in the watershed is about 35 percent urban, 10 percent agricultural, and 55 percent open space (primarily steep slopes).

The project site is located in the area depicted as the Inland Basin. The aquifers[71] of this basin generally are unconfined and comprise several subbasins filled with alluvial deposits eroded from the surrounding mountains. The thickness of these deposits range from less than 200 feet to more than 1,000 feet. Recharge in this basin varies seasonally and is largely from infiltration of runoff from the San Gabriel and San Bernardino Mountains. Much of the runoff is diverted into storm-detention basins which also operate as ground-water recharge facilities. Surface water imported from northern California and the Colorado River is also used to recharge the groundwater basins. Incidental recharge occurs from landscape irrigation. Several volatile organic compound (VOC) plumes in the basin define groundwater flow paths.

Precipitation

As depicted in Figure 4.4-11 (Average Annual Precipitation in the San Bernardino Area [1928-1998]),[72] mean annual precipitation ranges from less than about 15 inches over much of the valley floor to about 20 inches per year along the base of the San Bernardino Mountains. More detailed precipitation estimates are presented in the "San Bernardino County Hydrology Manual." As indicated therein, the County has prepared isohyetal maps showing 2-year 6- and 24-hour, 1-year 1-hour, and 100-year 1-, 6-, and 24-hour point precipitation values.[73,74]

Historic Hydrologic Conditions

Historic hydrologic conditions in the San Bernardino area in the late 1880's are shown in Figure 4.4-12 (Historic Hydrologic Conditions in the San Bernardino Area [Circa 1880]).[75] Important characteristics of the hydrologic system at that time include intermittently flowing streams, marshlands, and an extensive artesian area. These characteristics, except an intermittently flowing SAR, represent those pre-development conditions that probably existed for hundreds or thousands of years prior to human intervention.

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[70]/ Hamlin, Scott N., Belitz, Kenneth, and Johnson, Tyler, Occurrence and Distribution of Volativel Organic Compounds and Pesticides in Ground Water in Relation to Hydrogeologic Characteristics and Land Use in the Santa Ana Basin, Southern California, Scientific Investigation Report 2005-5032, United States Geological Survey, 2005, Figures 1 and 3, pp. 3 and 8.

[71]/ An aquifer system commonly is a saturated, heterogeneous body of interbedded permeable and poorly permeable hydrogeologic units, called aquifers and aquitards, respectively. Especially in unconsolidated or semi-consolidated deposits, the aquifers and aquitards are linked hydraulically.

[72]/ *Op. Cit*., Hydrology, Description of Computer Models, and Evaluation of Selected Water-Management Alternatives in the San Bernardino Area, California, Open-File Report 2005-1278, Figure 6, p. 11.

[73]/ *Op. Cit.*, Hydrology Manual, pp. B-10 through B-14.

[74]/ These maps are based on the "NOAA Atlas 2, Precipitation-Frequency Atlas of the Western United States, Volume XI-California," as published by the National Weather Service in 1973. These County maps may be used to estimate the precipitation data needed to prepare rationale method or unit hydrograph hydrology studies. However, the maps are to be considered only as an approximation of point precipitation values.

[75]/ *Op. Cit*., Hydrology, Description of Computer Models, and Evaluation of Selected Water-Management Alternatives in the San Bernardino Area, California, Open-File Report 2005-1278, Figure 9, p. 16.

As depicted, streams emanate from the San Bernardino Mountains but do not flow continuously across the land surface, except during large floods. Rather, they stop after a short distance, having lost all flow as recharge to the ground-water system. Further downstream, flow resumes as a result of groundwater, restricted from flowing across the less permeable San Jacinto fault, rising to the land surface and reestablishing flow in the streams. This intermittent condition was true for all streams, except Lytle Creek and for the SAR, prior to diversions in the mid 1880's. Of equal historic importance are the extensive, but somewhat discontinuous marshlands, including bogs and swamps. These areas are generally proximal to the lower stream reaches and likely also result from the rising groundwater, similar to the formation of cienagas in other semiarid basins.

The nearly continuous marshland between the SAR and Warm Creek limited human development in that area until groundwater levels declined during the drought of the 1950's and 1960's. During wetter periods, such as during the early 1900's and 1940's, the marshland between the two streams upstream of the San Jacinto fault had standing water, was a favorite area for bird-watching, and used by residents for boating. Modifications to the natural surface-water system began in the early 1800's. In about 1810, the first diversion from the SAR was made to supply water for irrigation. In 1848, widespread irrigation began and prompted an equally rapid increase in water use.[76]

Surface Water

As with many sections of this document, information presented in one portion has application to other topical issues. The following information concerning surface water is applicable to the discussion of surface hydrology and may also be applicable to an understanding of water supply, as presented in Section 4.10 (Utilities and Service Systems) herein.

Most surface-water flow in the San Bernardino area originates as runoff into streams and creeks that drain the San Gabriel and San Bernardino Mountains. Runoff into major streams is measured at several gaging stations operated by the USGS. A lesser quantity of runoff is ungaged and enters the area as flow in small creeks and as sheetflow from the surrounding mountains. Other sources of surface-water flow include local runoff from precipitation, water imported from northern California in the California Aqueduct, wastewater discharged from sewage-treatment plants, and groundwater seepage during periods of high groundwater levels.

As illustrated in Figure 4.4-13 (General Features of the Surface-Water System in the San Bernardino Area [1998]),[77] the surface-water system in the San Bernardino area includes several natural steams and many structures designed to convey or recharge surface water. These structures include canals, ditches, and pipelines, the California Aqueduct (conveying imported water from northern California), flood-control, sewage-effluent, and debris basins, artificial-recharge basins (enhancing recharge of diverted streamflow and imported water), and the Seven Oaks Dam on the SAR.

As required by the adjudication of water rights in the area, nearly all surface water that enters or leaves the Bunker Hill and Lytle Creek basins is measured. Between 1945 and 1998, inflow was measured routinely at eleven continuous-recording gaging stations along the base of the San Bernardino and San Gabriel Mountains.

[76]/ *Ibid*., p. 15.
[77]/ *Ibid*., Figure 11, p. 18.

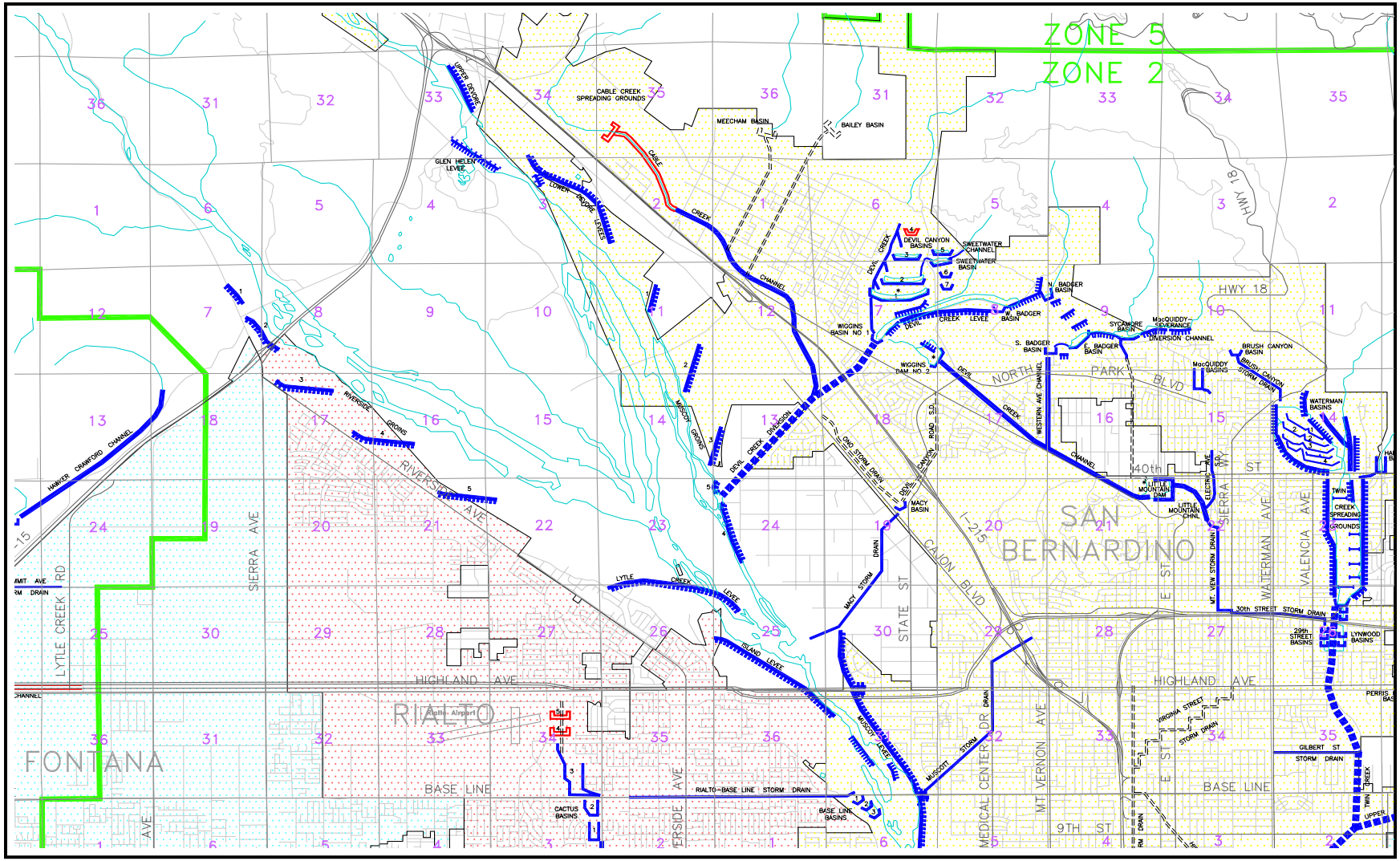

Figure 4.4-8
COMPREHENSIVE STORM DRAIN PLAN 7 - PORTION OF THE SOUTHWEST PORTION MAP
Source: San Bernardino County Flood Control District

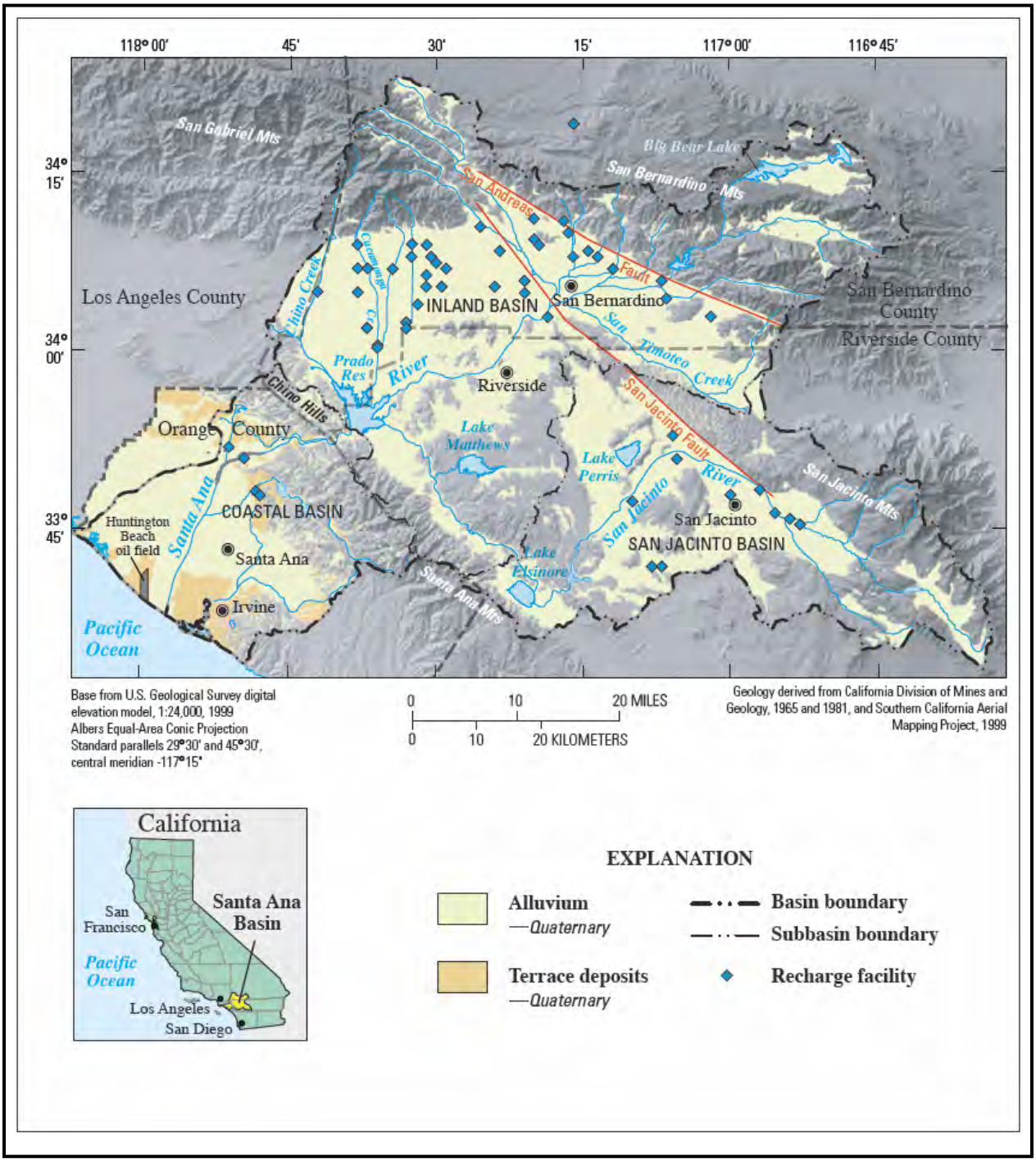

Figure 4.4-9
LOCATION OF THE SANTA ANA BASIN AND DISTRIBUTION OF ALLUVIAL DEPOSITS
Source: United States Geological Survey

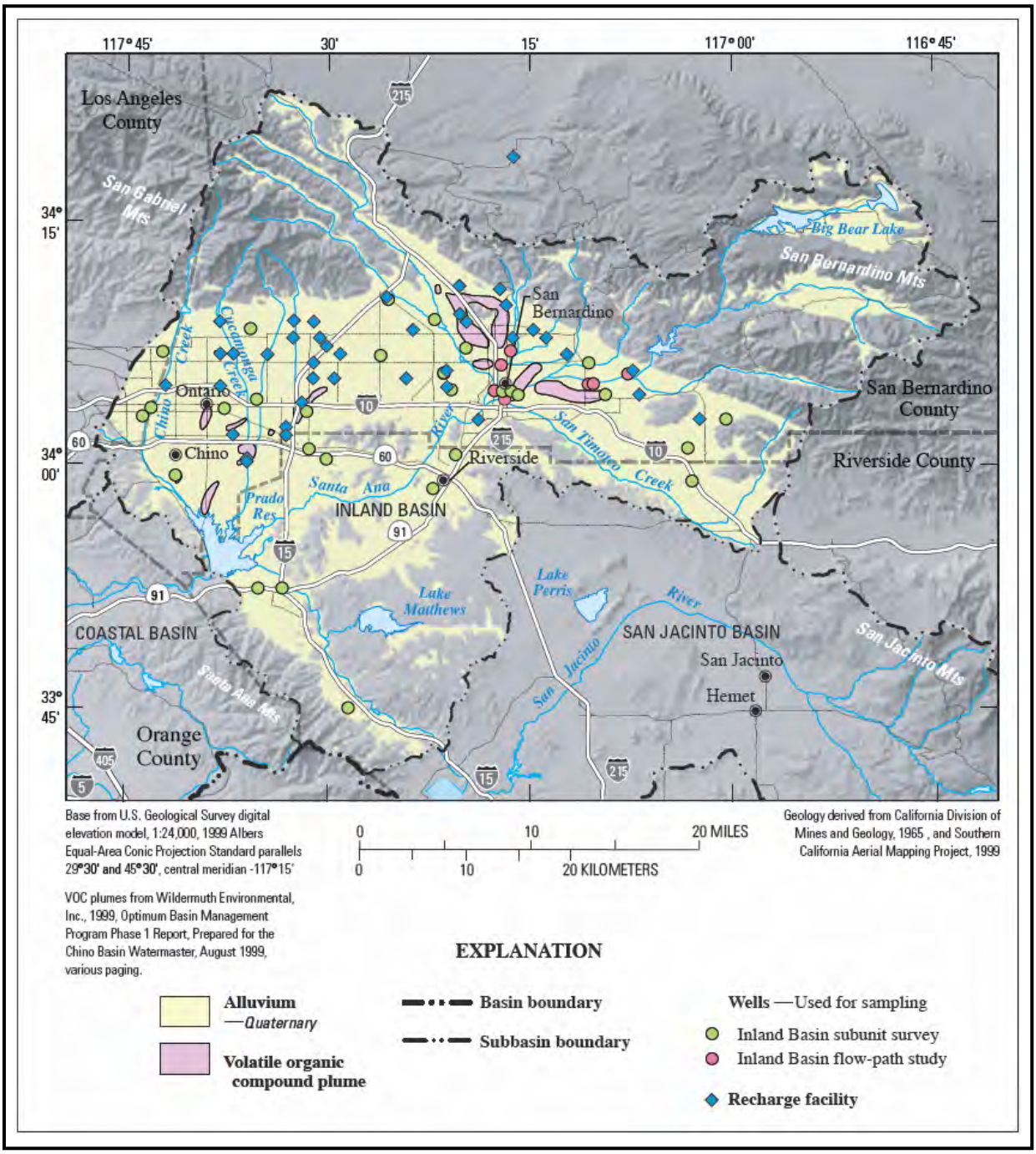

Figure 4.4-10
LOCATION OF THE INLAND BASIN AND WELLS
Source: United States Geological Survey

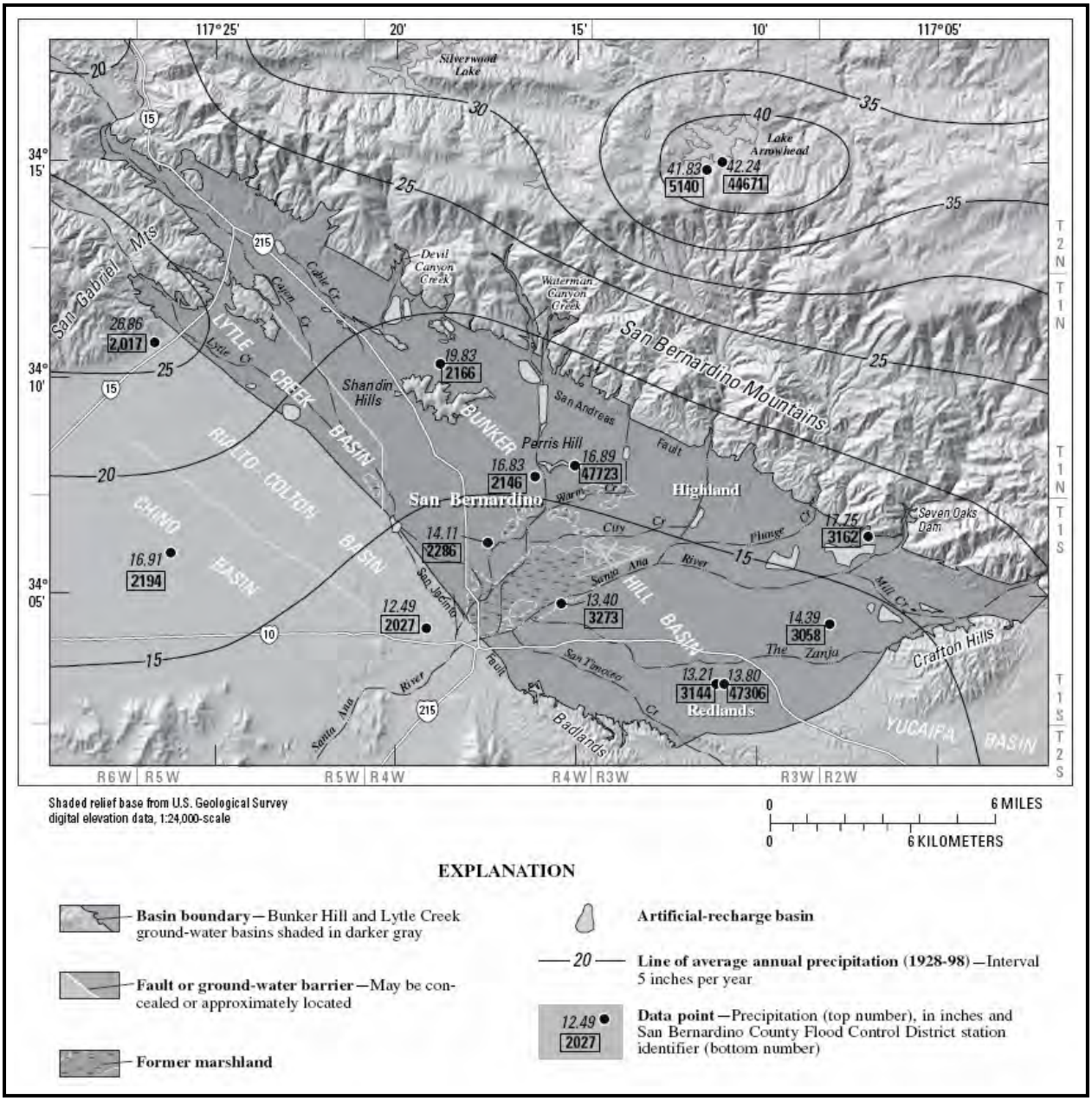

Figure 4.4-11
AVERAGE ANNUAL PRECIPITATION IN THE SAN BERNARDINO AREA (1928-1998)
Source: United States Geological Survey

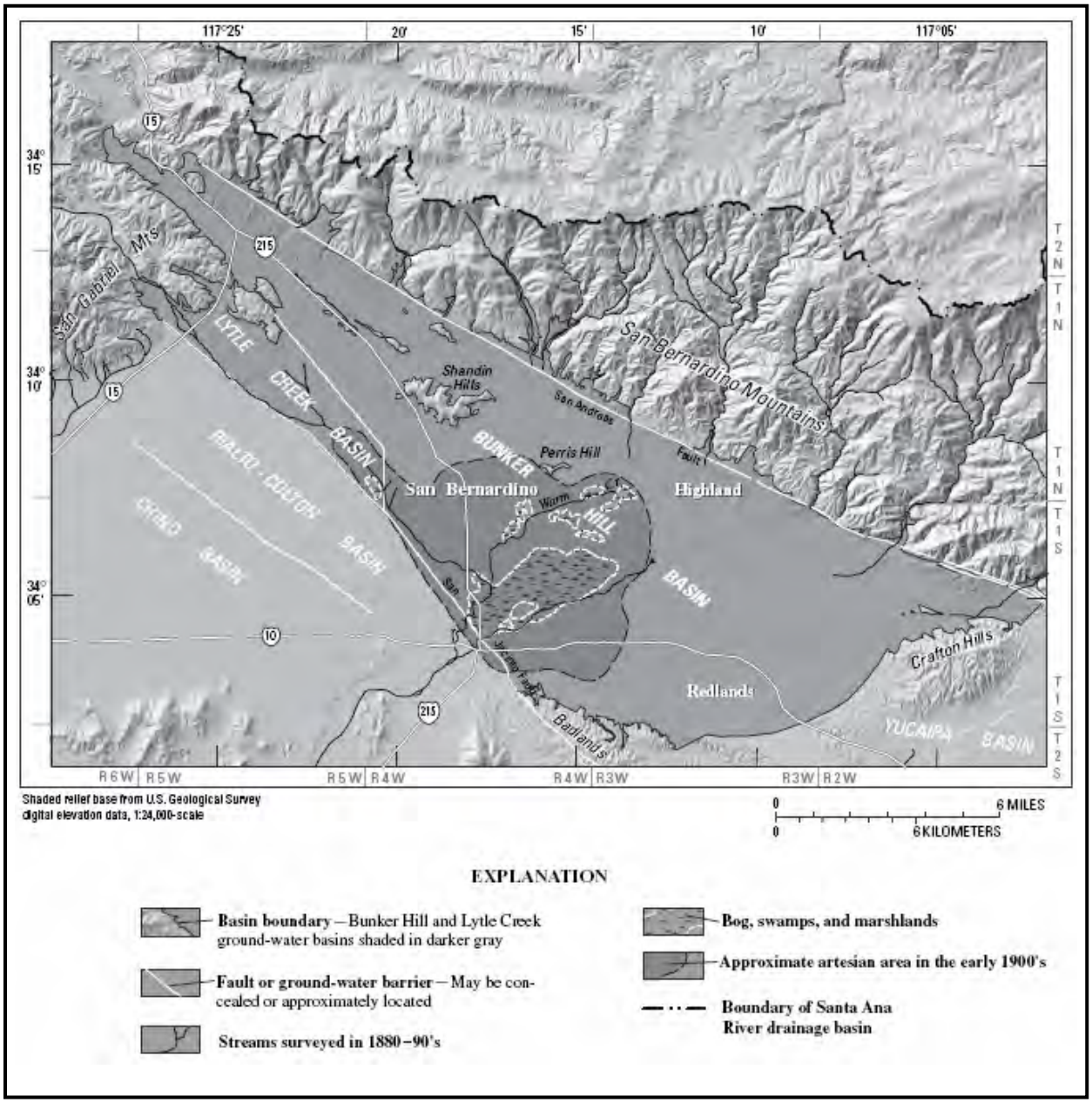

Figure 4.4-12
HISTORIC HYDROLOGIC CONDITIONS IN THE SAN BERNARDINO AREA (Circa 1880)
Source: United States Geological Survey

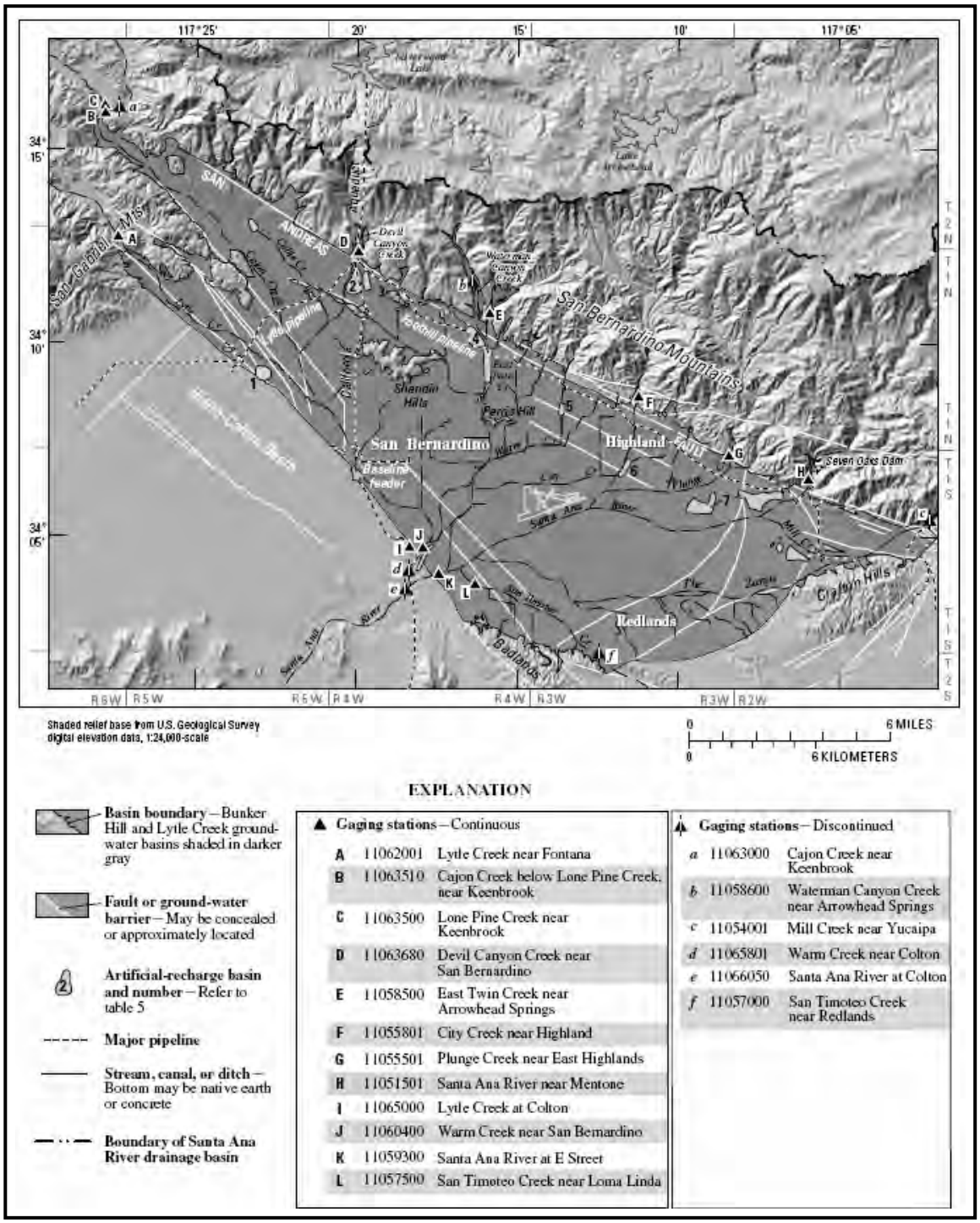

Figure 4.4-13
GENERAL FEATURES OF THE SURFACE-WATER SYSTEM IN THE SAN BERNARDINO AREA (1998)
Source: United States Geological Survey

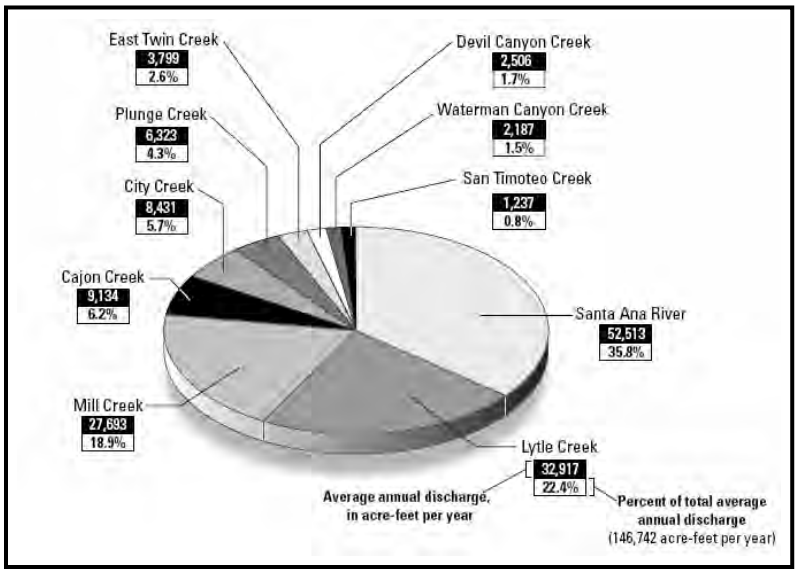

Figure 4.4-14
AVERAGE ANNUAL DISCHARGE OF GAGED STREAMS FLOWING INTO THE SAN BERNARDINO AREA (1945-1998)
Source: United States Geological Survey

Of the total gaged inflow, almost 80 percent occurs in the three largest streams: Santa Ana River, Lytle Creek, and Mill Creek. Total gaged inflow/outflow for the period 1945-1998 is shown in Figure 4.4-14 (Average Annual Discharge of Gaged Streams Flowing into the San Bernardino Area [1945-1998]).[78]

The California Department of Water Resources (DWR) subdivides the State into regions for planning purposes. The largest planning unit is the hydrologic region. California has ten hydrologic regions, corresponding to the State's major drainage basins.[79] The proposed project is located in the South Coast Hydrologic Region (SCHR), described as those basins draining into the Pacific Ocean from the southeastern boundary of Rincon Creek Basin on the north to the Mexican boundary on the south.

The SCHR is California's most urbanized hydrologic region. Although it covers only about seven percent of the State's total land area, it is home to roughly 54 percent of the State's population. The largest cities in the region are Los Angeles, San Diego, Long Beach, Santa Ana, and Anaheim. Although highly urbanized, about one-third of the SCHR's land is publicly owned. About 2.3-million acres of this region is comprised of public land, of which about 75 percent is national forest.[80]

The proposed project is located within the Santa Ana Hydrologic Unit (Hydrologic Unit Code 18070203). The SAR watershed includes much of Orange County, the northwestern corner of Riverside County, the southwestern corner of San Bernardino County, and a small portion of Los Angeles County. The approximately 2,650 square mile watershed is bounded on the south

[78]/ *Ibid*., Figure 12, p. 19.

[79]/ Under the USGS' Hydrologic Unit Codes (HUC), the nested hierarchy of watershed designations is generally similar to the State system. Differences in use of the term "Hydrologic Region" reflect changes in scope from the national to the State level. The federal HUC Hydrologic Region 18 (California) includes the drainage within the United States that ultimately discharges into the Pacific Ocean within California and those parts of the Great Basin (or other closed basins) that discharge into the State, includes parts of California, Nevada, and Oregon. At the State level, each of the ten California "Hydrologic Regions" roughly correspond to a HUC Sub-Region. The HUC designation is an 8-digit code now called the "SubBasin," roughly equivalent to the State's "Hydrologic Areas" (HA).

[80]/ California Department of Water Resources, California Water Plan, Bulletin 160-93, Division of Planning and Local Assistance, 1998, Volume 2, Chapter 7.

by the Santa Margarita watershed, on the east by the Salton Sea and Southern Mojave watersheds, and on the north/west by the Mojave and San Gabriel watersheds.[81]

The County is currently preparing a comprehensive update to the County General Plan and County Development Code. As part of the planning process, the County has prepared a number of "background reports" which serve as reference documents and technical appendices for that planning document. Those reports contain information applicable to an understanding of the project's existing environmental setting and conditions likely to exist in the foreseeable future. The County's "Safety Background Report" states that "[f]lood hazards typically occur due to precipitation producing excessive storm runoff and can be identified through floodplain maps provided by the Federal Emergency Management Agency. Flood hazards can also result from other natural causes such as earthquakes or ground subsidence. Failures of man-made structures such as dams, reservoirs, levees, and debris basins due to lack of maintenance or inadequate design can result in flood inundation of properties and loss of life. Flood control facilities ensure public safety and welfare and planning, construction, and maintenance of these facilities are the responsibility of the San Bernardino County Flood Control District." [82]

Levee System

The USACE levees (Lytle Creek Levee, Riverside Groins 1-5, and Island Levee) contain the Lytle Creek floodplain along its western side. The eastern side is contained by deeply incised and almost vertical earthen channel slopes extending from the 1-15 Freeway bridge to approximately 5,000 feet downstream of the bridge. Beyond this point, the channel is less defined. As flows leave the upper canyon and enter the alluvial fan area, the flows usually form their own paths, with patterns migrating from flood to flood, as evident by the braided patterns. Flows rarely spread out evenly across the fan; instead, they tend to concentrate in a self-forming temporary channel that is typically confined to a portion of the fan surface. The width of such self-forming channels depends upon the flood magnitude.

The Sycamore Wash floodplain extends through the northern perimeter of the project site and continues southeasterly to where it merges into Lytle and Cajon Creeks. The estimated 100-year discharge for Sycamore Wash has been estimated to range from a low of approximately 152 cubic feet per second (cfs) at the entrance to the existing 72-inch corrugated steel pipe (CSP) at the 1-15 Freeway to approximately 4,718 cfs at the confluence with Cajon Creek.

A combination of grouted riprap groins and unprotected levees have been constructed within the local reach of Lytle Creek to protect developments to the south and to direct Lytle Creek flows between the excavation pits in the Cemex USA mining site. The USACE has constructed four grouted riprap groins along the western bank, including one upstream of the I-15 Freeway crossing and three on the downstream side, to direct water flows along the present channel path. A 200-foot wide man-made channel currently exists from about 2,700 feet upstream of the 1-15 Freeway bridge to about 1,300 feet downstream. Along the northerly portion of east bank, the bank is protected by grouted riprap. An earthen levee extends southward from that point to beyond the site's southerly corner. The grouted riprap was placed by Caltrans during construction of the I-15 Freeway bridge, presumably to divert flows around the bridge supports. The downstream groins are 10-12 feet high, 12-feet wide across the top, and provide flood protection for properties south of Riverside Avenue. The groins are maintained by the San

[81]/ Santa Ana Watershed Project Authority, Santa Ana Integrated Regional Water Management Plan, 2005 Update, June 2005, p. 25.
[82]/ *Op. Cit*., Safety Background Report, June 15, 2005, p. 7-61.

Bernardino County Flood Control District. The SBCFCD considers these groins to be adequate to contain the 100-year discharge of Lytle Creek.

Cemex USA has constructed a soil cement levee to provide 100-year flood protection for the sand and gravel pit on the eastern bank of Lytle Creek. The levee is approximately 9,900 feet long and extends from the downstream end of the mining operation to about 2,300 feet upstream of the boundary between the Cemex USA property and Rosena Ranch.[83] Along the east side of Lytle Creek, the Rosena Ranch development included the construction of an improved levee along Lytle Creek from its then existing terminus at the Cemex USA quarry upstream to Glen Helen Parkway, a distance totaling 5,120 linear feet. The length of the levee totals 7,620 linear feet, of which 2,500 linear feet has previously been constructed by Cemex USA within the area of the LCNPD.

Groundwater

The valley-fill aquifer in the San Bernardino area includes both unconsolidated deposits and sedimentary rocks. The unconsolidated deposits, which constitute the primary reservoir for storing large quantities of water, are composed of gravel, sand, silt, and clay. This sediment was formed mostly by alluvial fans coalescing along the mountain front and by the SAR and Lytle Creek reworking and redepositing these materials. Near the mountain front, the unconsolidated deposits tend to be coarse grained and poorly sorted, becoming finer grained and better sorted downstream from the mountains. Zones of well-sorted sand and gravel, where saturated, yield copious quantities of water to wells. Boundary conditions for the valley-fill aquifer and the general direction of groundwater flow are shown in Figure 4.4-15 (Areal Extent of the Valley-Fill Aquifer, Boundary Conditions, and Direction of Groundwater Flow in the San Bernardino Area).[84] Additional information concerning the area's groundwater resources can be found in a number of technical studies conducted by State and local entities, including:

- **California's Groundwater, Bulletin 118**. For planning purposes, the DWR divides California into ten hydrologic regions (HRs) which correspond to the State's major drainage areas. The DWR indicates that the project site is located within the "South Coast Hydrologic Region." The South Coast Hydrologic Region (South Coast HR) covers about 6.78 million acres (10,600 square miles) of the southern California watershed that drains to the Pacific Ocean. The South Coast HR is bounded on the west by the Pacific Ocean and the watershed divide near the Ventura-Santa Barbara County line. The northern boundary corresponds to the crest of the Transverse Ranges through the San Gabriel and San Bernardino Mountains. The eastern boundary lies along the crest of the San Jacinto Mountains and low-lying hills of the Peninsular Range. The southern boundary is the international boundary with Mexico.

  The South Coast HR is divided into the Los Angeles, Santa Ana, and San Diego subregions, corresponding with the jurisdictional boundaries of the Los Angeles RWQCB (4), Santa Ana RWQCB (8), and San Diego RWQCB (9), respectively. According to the 2000 Census, about 17 million people live within the boundaries of the South Coast HR, approximately 50 percent of the population of California. Because this HR accounts for only about seven percent of the surface area of the State, it has the highest population

[83]/ United States Army Corps of Engineers, Draft Environmental Assessment – (404(b)(1) Evaluation Public Interest Review, November 7, 2003, pp. 33-34.

[84]/ *Op. Cit*., Hydrology, Description of Computer Models, and Evaluation of Selected Water-Management Alternatives in the San Bernardino Area, California, Open-File Report 2005-1278, Figure 22, p. 34.

density of any HR in California. The South Coast has 56 delineated groundwater basins, including eight within the jurisdiction of the SARWQCB. The project site is located within the Upper Santa Ana River Valley Groundwater Basin. That groundwater basin is divided into nine subbasins. Overall, groundwater basins underlie about 2.27 million acres (3,530 square miles) or about 33 percent of the South Coast HR.[85]

The DWR defines a "groundwater basin" as "an alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and a definable bottom. Lateral boundaries are features that significantly impede groundwater flow such as rock or sediments with very low permeability or a geologic structure such as a fault."[86]

As illustrated in Figure 4.4-16 (South Coast Hydrologic Region – Groundwater Basins and Subbasins), the project site is located within the "South Coast Hydrologic Region" and is located within the "Upper Santa Ana Valley Groundwater Basin, Rialto-Colton Subbasin (Groundwater Basin No. 8-2.04) and Bunker Hill Subbasin (Groundwater Basin 8-2.06). Each of those subbasins is separately discussed below.

◊ **Rialto-Colton Subbasin**. The Rialto-Colton Subbasin underlies a portion of the Upper Santa Ana Valley in southwestern San Bernardino County and northwestern Riverside County. This subbasin is bounded by the San Gabriel Mountains on the north, the San Jacinto fault on the east, the Box Spring Mountain on the south, and the Rialto-Colton fault on the west. Lytle Creek drains this part of the valley southeastward to it confluence with the SAR in the southern part of the subbasin.

Groundwater in the Rialto-Colton Subbasin can be found in alluvial deposits.[87] Specific yield ranges from about six percent northwest of Rialto to about 16 percent near Colton. Groundwater within this subbasin is primarily unconfined to semi-confined.

Water-bearing alluvium consists of gravel, sand, silt, and clay. Holocene-age alluvial deposits are found beneath the current courses of Lytle and Cajon Creeks along the eastern part of the subbasin and the SAR which crosses the southern part of the subbasin.

The Holocene deposits are typically less compacted and weathered than older deposits and have higher permeability. Alluvial deposits of Pliocene and Pleistocene-age are composed of somewhat more compacted and weathered deposits of gravel, sand, silt, and clay in discontinuous lenticular bodies. The coarsest material occurs near the mouth of Lytle Creek and the material becomes finer toward the southeast where the coarsest gravels contain few cobbles. Sorting increases southeastward and deposits of highest permeability are well sorted sands found near the SAR.

[85]/ California Department of Water Resources, California's Groundwater, Bulletin 118, Update 2003, October 2003, p. 148.

[86]/ *Ibid*., p. 88.

[87]/ Four hydrostatigraphic units have been identified in the Rialto-Colton Basin, including the river channel deposits and the upper, middle, and lower water-bearing units. The middle water-bearing unit includes the Regional Aquifer (Source: City of Rialto, Roadmap to Remedy Selection Rialto-Colton Basin, California, Version 1.1, May 4, 2007, ES-4).

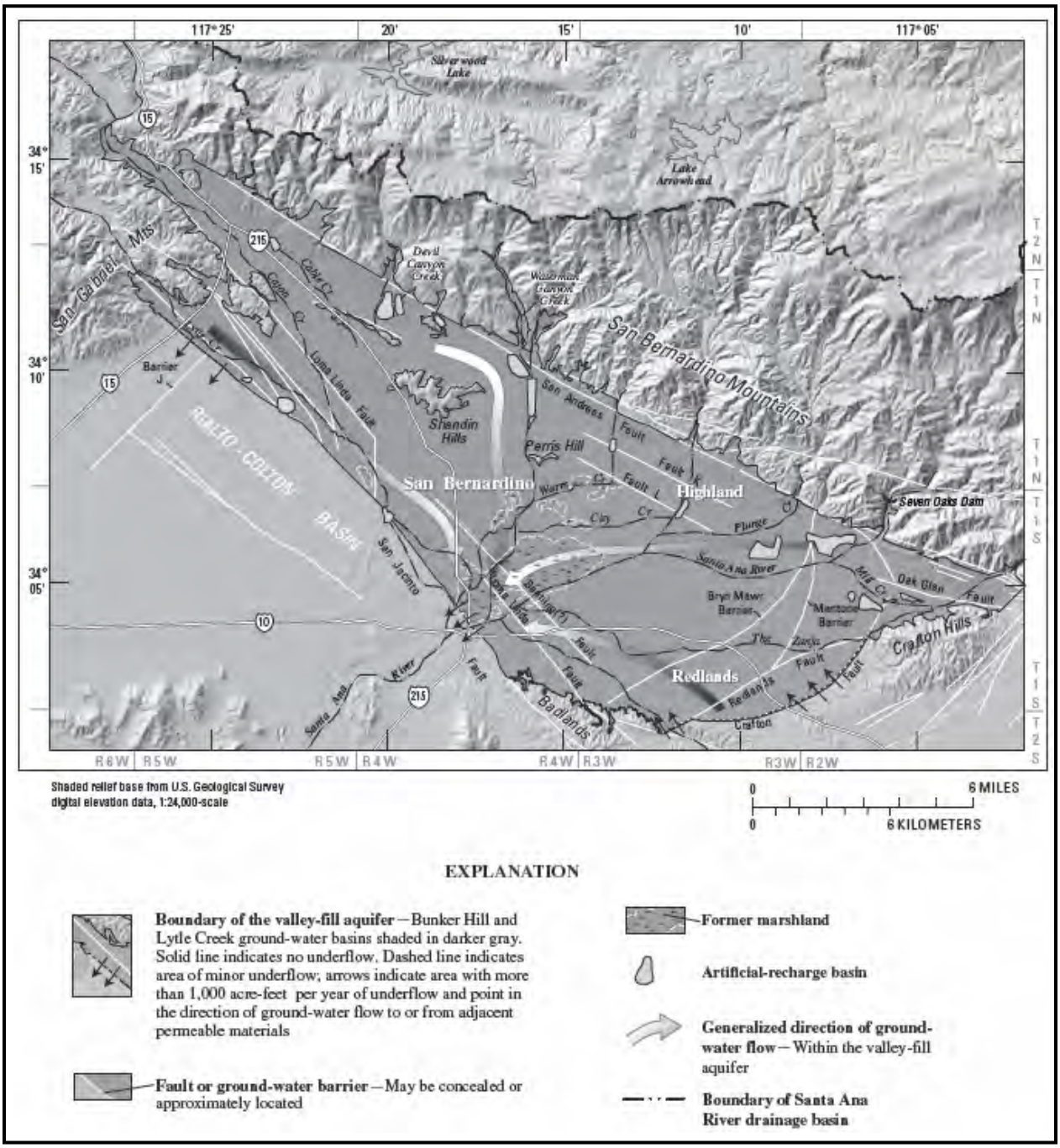

Figure 4.4-15
AREAL EXTENT OF THE VALLEY-FILL AQUIFER, BOUNDARY CONDITIONS, AND DIRECTION OF GROUNDWATER FLOW IN THE SAN BERNARDINO AREA
Source: United States Geological Survey

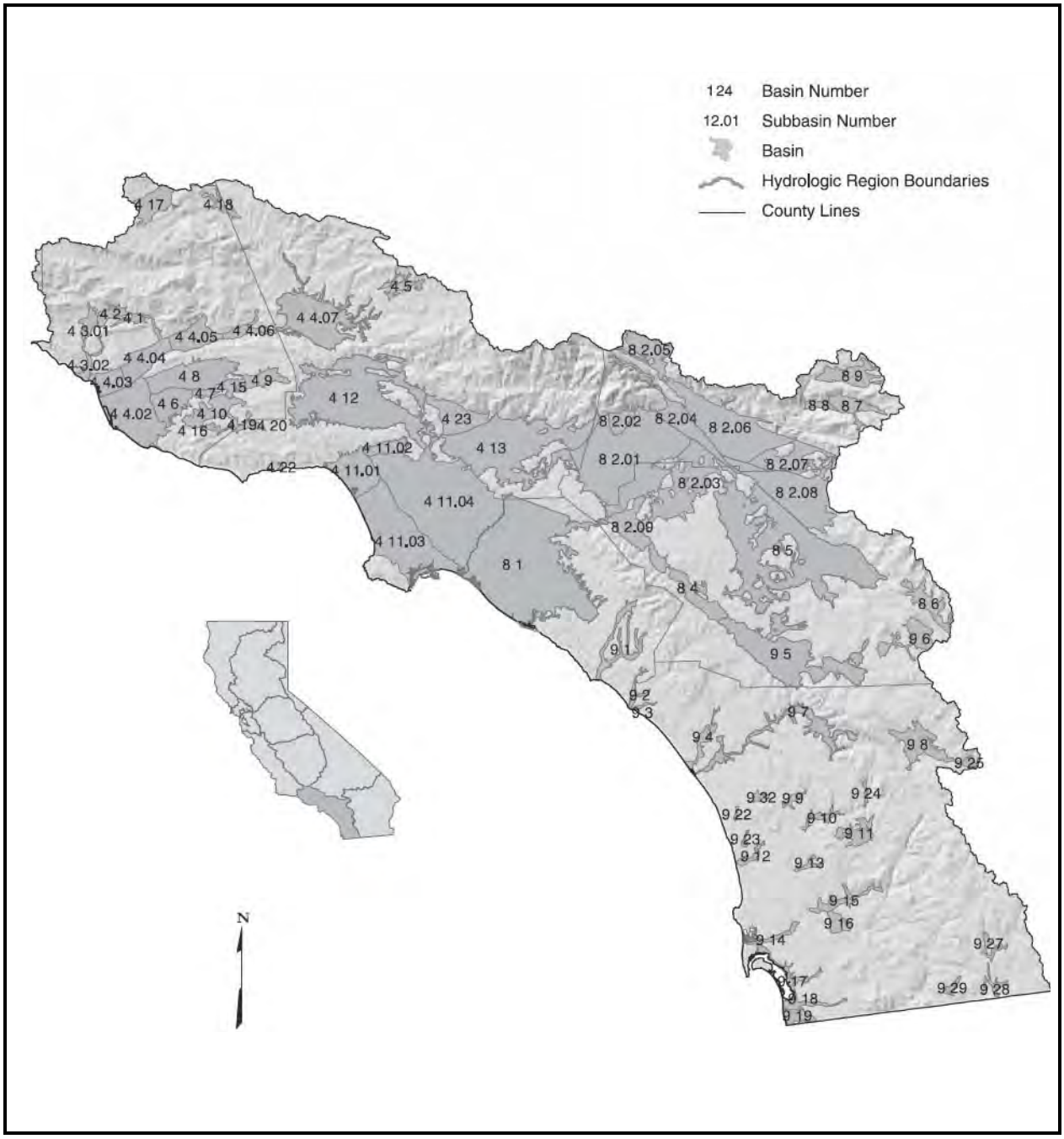

Figure 4.4-16
SOUTH COAST HYDROLOGIC REGION - GROUNDWATER BASINS AND SUBBASINS
Source: California Department of Water Resources

The San Jacinto fault, its extension Barrier E, and the Rialto-Colton fault are northwest-trending barriers to groundwater movement in this subbasin. The San Jacinto fault displaces water levels about 50 feet in older deposits but is not a barrier in the youngest materials. Barrier E lies south of the San Jacinto fault and displaces groundwater elevations by about 25-50 feet.

The Rialto-Colton fault is a barrier to groundwater flow along much of its length, especially in its northern reaches where groundwater elevations can reach near 400 feet higher within the Rialto-Colton Subbasin than in the Chino Subbasin to the west. Barrier J is a northeast-trending, southward step in groundwater elevations of about 100 feet in the northern part of the subbasin that may be a barrier to groundwater movement southward or may be a groundwater cascade.

The principal recharge areas are Lytle Creek in the northwestern, Reche Canyon in the southeastern, and the SAR in the south-central parts part of the subbasin. Lesser amounts of recharge are provided by percolation of precipitation to the valley floor, underflow, and irrigation and septic returns. Underflow occurs from fractured basement rock and through the San Jacinto fault in younger SAR deposits at the south end of the subbasin and the northern reaches of the San Jacinto Fault system.

Groundwater moves toward the SAR from Lytle Creek in the northwest and from Reche Canyon in the southeast. In the northern part of the subbasin, hydrographs show quick rises of water levels during high precipitation years and slower decline toward a baseline level over several years. Years of high precipitation may raise groundwater levels 40 feet or more. A total storage capacity of about 210,000 acre-feet (AF) is estimated for the Rialto portion of the subbasin and about 93,000 AF is estimated for the Colton portion. The total storage capacity of the subbasin is estimated at 2,517,000 AF.[88]

◊ **Bunker Hill Subbasin**. The Bunker Hill Subbasin consists of the alluvial materials that underlie the San Bernardino Valley. This subbasin is bounded by contact with consolidated rocks of the San Gabriel Mountains, San Bernardino Mountains, Crafton Hills, and several faults. The southern boundary is the Banning fault, the east boundary is the Redlands fault, the San Andreas fault is roughly the northern boundary, the Glen Helen fault abuts the northwest boundary, and the southwest boundary is the San Jacinto fault. The Santa Ana River, Mill Creek, and Lytle Creek are the main tributary streams in the subbasin.

The water-bearing material in the subbasin consists of Holocene and Pleistocene age alluvial deposits of sand, gravel, and boulders interspersed with deposits of silt and clay. The water-bearing material has been divided into upper and lower aquifers. In the central part of the subbasin, a poorly permeable clay layer separates the aquifers, creating confined conditions in the lower aquifer under about 25 square miles of the San Bernardino Valley. Maximum thickness of the upper and lower aquifers is about 350 and 650 feet, respectively. Groundwater generally converges toward the SAR in the southwestern part of the subbasin and discharges over the San Jacinto fault at Colton Narrows.

[88]/ *Ibid*., Upper Santa Ana Valley Groundwater Basin, Rialto-Colton Subbasin.

The San Andreas fault zone impedes movement of groundwater, producing springs and a groundwater level change that marks the fault trace along the northern boundary of the Bunker Hill Subbasin. The San Jacinto fault forms a strong barrier to groundwater that raises the water table nearly to the surface below the course of the SAR. The combination of alluvial material, high water table, and seismically active area creates a liquefaction hazard. The Redlands and Banning faults also serve to impede groundwater movement along the borders of the subbasin.

Recharge of the Bunker Hill Subbasin historically has resulted from infiltration of runoff from the San Gabriel and San Bernardino Mountains. The Santa Ana River, Mill Creek, and Lytle Creek contribute more than 60 percent of the total recharge to the groundwater system. The subbasin is also replenished by deep percolation of water from precipitation and resulting runoff, percolation from delivered water, and water spreading in streambeds and spreading grounds. The subbasin's total storage capacity is estimated to be about 5,976,000 AF.[89]

- **Santa Ana Watershed Project Authority**. The Santa Ana Watershed Project Authority (SAWPA) notes that groundwater in the SAR watershed is highly controlled by the area's geology, including both the configuration of bedrock and by the extensive faulting. Most groundwater basins are unconfined. The variable depth to bedrock and the presence of faults cause pressure zones where water flows toward or to the ground surface. In general, groundwater flows the same direction as surface water. As illustrated in Figure 4.4-17 (Santa Ana River Watershed – Groundwater Management Zones), there are about 40 groundwater basins in the watershed (depending on how they are defined and boundaries drawn), many of which are interrelated.[90]

  As illustrated, the SAWPA's division of groundwater basins and subbasins differs from that presented by DWR and shown in Figure 4.4-16 (South Coast Hydrologic Region – Groundwater Basins and Subbasins) and includes the Bunker Hill, Lytle Creek, Rialto Basins. The following additional information concerning those Lytle Creek and Rialto Basins has been extracted from the West Valley Water District's (WVWD) "Urban Water Management Plan" and from other cited sources.

  - ◊ **Lytle Creek Basin**. Lytle Creek originates in the San Gabriel Mountains and is the major tributary to the Lytle Creek Basin. Minor groundwater recharge to the basin is also supplied by infiltration in the Cajon Creek stream channel and underflow across the Loma Linda fault. Other sources of recharge include underflow of saturated alluvium and fractures within the surrounding bedrock hills, artificial recharge of native waters at spreading grounds along Lytle Creek, intermittent flow from Bunker Hill-A Basin across the Loma Linda fault and Barrier G, and deep percolation. Groundwater in the Lytle Creek Basin generally flows from northwest to southeast.[91]

    The basin is managed by the Lytle Creek Water Conservation Association. The WVWD operates nine existing wells in the Lytle Creek Basin and has the right to

[89]/ *Ibid*., Upper Santa Ana Valley Groundwater Basin, Bunker Hill Subbasin.
[90]/ *Op. Cit*., Santa Ana Integrated Regional Water Management Plan, 2005 Update, Part 2, pp. 28-29.
[91]/ Geoscience Support Services, Antidegradation Study for the Proposed Lytle Creek North Wastewater Reclamation Plant, Including the Lytle and Bunker Hill-A Basins, July 21, 2004, pp. 7-8.

pump and export 12,105 gallons per minute (gpm) if diverting the district's full allotment of surface flow (2,290 gpm) from Lytle Creek. If flows from Lytle Creek are low and the WVWD is receiving only a portion of their allotment, the district can pump the difference from the wells to a combined maximum of 14,395 gpm from the basin, depending on how much water is available to pump and how much is available to be diverted from Lytle Creek. The WVWD has no restrictions on how much it can pump and serve within the Lytle Creek region, including water that will be used to supply the LCNPD.

The Lytle Creek Basin has an estimated long-term safe yield of 35,000 to 45,000 AFY. The basin is highly porous and easily replenished during heavy precipitation years. The depth to groundwater in the basin varies from 50 to 400 feet, depending on whether it is a drought or wet cycle. Well production in the basin varies as the basin level changes from year to year. There is no known contamination within the basin and no contamination is expected to be detected in the future. The actual amount the WVWD can extract yearly is dependent on the availability of groundwater levels in the basin. In the past, the WVWD has pumped between 10,000 AFY in normal years and an estimated 5,000 AFY in the most severe drought periods.

The Bunker Hill Basin and the Lytle Creek Basin are collectively referred to as the San Bernardino Base Area.[92] The safe yield for the San Bernardino Basin Area has been established (Western Municipal Water District of Riverside County v. East San Bernardino County Water District) to be 232,100 AFY.[93] The San Bernardino Basin Area has a surface area of approximately 140.6 square miles and lies between the San Andreas and San Jacinto faults. The basin is bordered on the northwest by the San Gabriel Mountains and the Cucamonga fault zone, on the northeast by the San Bernardino Mountains and the San Andreas fault zone, on the east by the Banning fault and Crafton Hills, and on the south by a low, east-facing escarpment of the San Jacinto fault and the San Timoteo Badlands. Alluvial fans extend from the base of the mountains and hills that surround the valley and coalesce to form a broad, sloping alluvial plain in the central part of the valley. The Bunker Hill Basin is further divided into sub-areas, including the Cajon, City Creek, Devil Canyon, Divide, Lytle Creek, Mill Creek, Pressure Zone, Redlands, and Reservoir sub-areas.[94]

◊ **Rialto Basin**. The Rialto Basin is managed by the Rialto Basin Management Association. The basin's groundwater storage capacity is about 210,000 AF, with an estimated 120,000 AF for the Rialto and about 93,000 AF for the Colton portions of the subbasin. The total storage capacity has been estimated at 2,517,000 AF. The basin shows quick rises of water levels during high precipitation years and slower decline over several years. Under normal conditions, when the basin is not in adjudication, the WVWD has unlimited extraction rights. During drought conditions, when the adjudication is in affect,

[92]/ Santa Ana Watershed Project Authority, Santa Ana Integrated Watershed Plan, June 2002, Part 1 (Water Resources Component), p. 5-18.

[93]/ West Valley Water District (Engineering Resources of Southern California, Inc.), Urban Water Management Plan, January 2006, Appendix I, p. 2.

[94]/ San Bernardino Valley Municipal Water District website (http://www.sbvmwd.com/integrated_regional_groundwater_management_plan).

the extraction right ranges from 3,067 AFY in the most severe drought periods to a maximum of 6,134 AFY. Since the basin was adjudicated in 1961, the least amount of water supplies available to the WVWD has been 6,134 AFY.[95]

- **TIN/TDS Task Force**. In December 1995, a task force composed of approximately 20 water, wastewater, and groundwater agencies located within the SAR watershed was formed to evaluate the impact of total inorganic nitrogen (TIN) and total dissolved solids (TDS) on water resources in the watershed. The task force's work was divided into a series of phases. Phase 1A focused on the defining the watershed hydrology more precisely and reaching consensus on TDS and nitrate thresholds for beneficial use impairment. Phase 1B described analytical methodologies to investigate watershed hydrology and tasks to define the legal, scientific, and economic implications of methodologies. Phase 2A sought the development of a surface water translator for meeting groundwater objectives accounting for nitrogen losses during percolation and included the preparation of updated boundary maps for management zone, the estimation of TDS and nitrate in groundwater, and the computation of new groundwater objectives for TDS and nitrate. Phase 2B sought the development of a wasteload allocation for TIN and TDS along the SAR upstream of the Prado Dam.

  As described in the Phase 2A technical memorandum, management zones are defined as hydrologically-distinct groundwater units from a groundwater flow and water quality perspective. As such, lines delineating management zones were placed along impermeable barriers to groundwater flow, at bedrock constrictions, and between distinct flow systems. Groundwater flow between management zones is generally restricted.[96]

  The Upper SAR watershed lies within the San Bernardino Valley and Yucaipa/Beaumont Plains and within the Chino, Rialto/Colton, Riverside Basin which overlie part of a larger, broad, alluvial-filled basin located between the San Gabriel and San Bernardino Mountains to the north and the elevated Perris Block and San Jacinto Mountains to the south. The SAR is the main tributary draining this basin. Sediments eroded from igneous and metamorphic rocks within the surrounding mountains have filled this basin to provide reservoirs for groundwater. The San Jacinto fault cuts through this alluvial-filled basin from northwest to southeast to form a major barrier to groundwater flow and separates the groundwater basins of the San Bernardino Valley and Yucaipa/Beaumont Plains in the east from the groundwater basins of the Chino, Rialto-Colton, and Riverside areas in the west. The San Bernardino Valley and the Yucaipa/Beaumont Plains overlie a number of fault-separated groundwater basins located between the active San Andreas and San Jacinto fault zones. In general, the Chino, Rialto-Colton, and Riverside basins are bounded by the San Gabriel Mountains in the north, the Chino and Puente Hills to the west, the elevated bedrock hills of the Perris Block to the south, and the San Jacinto fault to the east.

  Figure 4.4-18 (Elevation Contours of the Effective Base of Freshwater Aquifers - San Bernardino Valley and Yucaipa/Beaumont Plains) presents an equal elevation contour map of the effective base of the freshwater aquifers in the San Bernardino Valley and Yucaipa/Beaumont Plains. The earthquake faults within the area vary in their effectiveness as barriers to groundwater flow. Predominant recharge to the groundwater

[95] *Ibid.*, Urban Water Management Plan, pp. 15-16.
[96] Wildermuth Environmental, Inc., TIN/TDS Study – Phase 2A of the Santa Ana Watershed, Final Technical Memorandum, July 2000, p. 3-1.

reservoirs is from infiltration of stream flow out of the San Gabriel and San Bernardino Mountains. Groundwater flow generally mimics surface drainage patters, flowing from areas of recharge at the apexes of alluvial cones toward the area of discharge where groundwater leaks across the San Jacinto fault in the vicinity of the SAR.

Figure 4.4-19 (Elevation Contours of the Effective Base of Freshwater Aquifers – Chino, Rialto/Colton, and Riverside Basins) presents an equal elevation contour map of the effective base of the freshwater aquifers in the Chino, Rialto/Colton, and Riverside basins. A number of faults and bedrock protrusion subdivide the larger area into numerous subbasins with unique rock configurations. The major internal faults within this area (Rialto/Colton, Red Hill, and San Jose) are known barriers to groundwater flow. Groundwater within the Rialto-Colton and Riverside basins primarily exists under unconfined to semi-confined conditions. Predominant recharge to the groundwater reservoirs in this area is from percolation of direct precipitation and infiltration of stream flow within tributaries exiting the surrounding mountains and hills and within the SAR. In general, groundwater flow mimics surface drainage patterns (from the areas of high elevation towards areas of discharge near the SAR and Prado Flood Control Basin).[97]

As shown in Figure 4.4-20 (Preliminary Groundwater Management Zone Boundaries - San Bernardino Valley and Yucaipa/Beaumont Plains), based on major impermeable boundaries, groundwater and watershed divides, and internal flow systems, five management zones are identified in the San Bernardino Valley and Yucaipa/Beaumont Plains. The project site is primarily located within the Lytle Management Zone (LMZ).[98] Recharge within the LMZ occurs through: (1) infiltration within the channels and floodplains of Lytle and Cajon Creeks; (2) underflow from the saturated alluvium and fractures within the surrounding bedrock hills; (3) artificial recharge of native waters at spreading grounds along Lytle Creek; (4) intermittent underflow from Bunker Hill-A across the Loma Linda fault and Barrier G; and (5) deep percolation of precipitation and returns from use. To the northeast of the LMZ, the Loma Linda fault and Barrier G serve as barriers to groundwater flow. Groundwater level time histories at wells on opposite sides of these features indicate hydraulic discontinuity. Depending on climate and drainage patterns, leaking across these features likely occurs in both directions between the Lytle and Bunker Hill-A management zones. To the southwest, the San Jacinto fault and Barrier E (and its extension north of Barrier J) separate the Lytle and Rialto management zones. South of Barrier J, the San Jacinto fault and Barrier E are competent barriers to groundwater flow, as indicated by higher groundwater elevations within the LMZ. North of Barrier J, there is little evidence of the extension of Barrier E to the San Gabriel Mountains. Groundwater likely flows across the extension of Barrier E north of Barrier J into the Rialto management zone. Some underflow also may occur across Barrier E, south of Barrier J into the Rialto management zone. To the northwest, the San Gabriel Mountains are composed of impermeable bedrock.

The northernmost boundary of the LMZ was identified as the bedrock constriction at the mouth of Lytle Creek Canyon. Within the LMZ, groundwater flow is generally from areas of recharge to the north and east along the edges of the San Bernardino Mountains and the Crafton and Yucaipa Hills toward the southwest and west and the Bunker Hill-B management zone. The Yucaipa management zone is highly faulted into a number of

[97]/ *Ibid*., pp. 3-23 and 3-24.
[98]/ *Ibid*., pp. 3-3 and 3-4.

groundwater subbasins. Groundwaters flow down-gradient from subbasin to subbasin as underflow across the faults bounding the subbasins.[99]

As shown in Figure 4.4-21 (Preliminary Groundwater Management Zone Boundaries – Chino, Rialto/Colton, and Riverside Basins), based on general flow systems, fourteen management zones are identified in the Chino, Rialto/Colton, and Riverside Basins. The southwestern portion of the project site may be located within the Rialto Management Zone (RMZ). Recharge within the RMZ occurs through: (1) infiltration of flows within the unlined stream channels overlaying the RMZ; (2) underflow from the saturated alluvium and fractures within the San Gabriel Mountains; (3) artificial recharge at spreading grounds; and (4) deep percolation of precipitation and returns from use.

The Cucamonga fault and the San Gabriel Mountains form the northern boundary of the RMZ. The Cucamonga fault is a major, active fault zone, and is, in part, responsible for uplift of the San Gabriel Mountains, which are composed of impermeable metamorphic and igneous bedrock. To the northeast, the San Jacinto fault and Barrier E separate the Rialto from the Bunker Hill-A and Lytle management zones, respectively. South of Barrier J, the San Jacinto fault and Barrier E are competent barriers to groundwater flow, as indicated by higher groundwater elevations within the LMZ. North of Barrier J, there is little evidence of the extension of Barrier E to the San Gabriel Mountains. Groundwater likely flows across the extension of Barrier E north of Barrier J into the RMZ. Some underflow also may occur across Barrier E south of Barrier J into the RMZ.

To the southwest, the Rialto-Colton fault separates the Rialto/Colton basin from the Chino and Riverside basins. The fault is a known barrier to groundwater flow along much of its length, especially in the northern reaches (south of Barrier J) were groundwater elevations can be hundreds of feet higher within the Rialto/Colton basin. The disparity in groundwater elevations across the fault decreases to the south. To the north of Slover Mountain, a gap in the Rialto-Colton fault exists. Groundwater within the RMZ passes through this gap to form a broad groundwater mount (divide) in the vicinity of Bloomington (Bloomington Divide). Little well data exists to support the extension of the Rialto-Colton fault north of Barrier J (although hydraulic gradients are steep through this area). Groundwater flowing south out of Lytle Creek Canyon, in part, is deflected by Barrier J and into the Chino-2 management zone.

To the south, in the Colton area, groundwater flowing south in the RMZ meets groundwater flowing west in the Colton management zone and flows southwest to discharge across the Rialto-Colton fault into the Riverside basin. Analysis of groundwater elevation contour maps suggests little, if any, cross-flow between these two flow systems. The management zone boundary separating the Rialto and Colton zones was drawn approximately parallel to the groundwater flow direction where these two flow systems meet from the San Jacinto fault to the Rialto-Colton fault.

Within the RMZ, groundwater generally flows southeasterly from areas of recharge in the north towards areas of discharge in the south. Barrier J, however, is an effective barrier to groundwater flow in the north, especially during times of relatively low groundwater elevations. Groundwater north of Barrier J is, in part, deflected by Barrier J and flows to the southwest (toward Chino-2 management zone). During times of relatively high

[99]/ *Ibid*., pp. 3-7 and 3-8.

groundwater elevations, the groundwater north of Barrier J, in part, overtops Barrier J and flows southeastward (toward the Colton management unit).[100]

- **Upper Santa Ana River Integrated Regional Groundwater Management Plan**. In 2005, the Upper Santa Ana Water Resources Association (Association) agreed to develop an integrated regional groundwater management plan to address major water management issues for the communities of the Upper Santa Ana River Watershed. San Bernardino Valley Municipal Water District (SBVMWD) agreed to lead the planning effort and received a grant from DWR to prepare the plan. The main benefit of the plan is the development of a process for managing the San Bernardino Basin Area. A secondary benefit is to identify and to receive funding for regional projects.

  The following two management objectives have been developed during the planning process: (1) improve water reliability during drought periods and reduce liquefaction; and (2) protect water quality and maximize conjunctive use opportunities. The approximately 824 square mile planning area encompasses about 32 percent of the SAR watershed and includes Big Bear Lake, the headwaters of the Santa Ana River (until it reaches the Riverside Narrows), and the Cities of San Bernardino, Yucaipa, Redlands, Highland, Rialto, Colton, Grand Terrace, Loma Linda, and Riverside.

Water Quality

The SAWPA was formed in 1972 to plan and build facilities to protect water quality in the SAR watershed. SAWPA is a joint powers authority composed of five water districts: Eastern Municipal Water District, Inland Empire Utilities Agency, Orange County Water District, Western Municipal Water District, and San Bernardino Valley Municipal Water District. SAWPA designs and constructs facilities to support water quality and water supply issues, coordinates activities involving member agencies, and acts to support and facilitate the activities of member agencies with regards to regulatory agencies, environmental compliance, and facilities planning.

In 2002, SAWPA prepared the "Santa Ana Integrated Watershed Plan" (2002 SAIWP) which examined key aspects of watershed growth, health, and maintenance with regards to water resources. As indicated in the 2002 SAIWP, in the development of regionwide conjunctive use storage for the SAR watershed, the basins located within the boundaries of the San Bernardino Valley Municipal Water District (SBVMWD) "show great potential for major water storage areas. These basins, collectively comprising the largest basins in southern California, include the Bunker Hill Basin, San Timoteo Basin, Lytle Creek Basin, and the Rialto Basin. The most productive of the water bearing basins in the valley are the Bunker Hill Basin and Lytle Creek Basin, also known as the San Bernardino Basin Area. The San Bernardino Basin Area has a combined storage capacity of approximately 5,500,000 AF [acre-feet]."[101]

Within the SAR watershed, water quality is generally better in the headwaters and upper watershed, lessening as the distance to the Pacific Ocean decreases. In the Upper Santa Ana River watershed, including Lytle Creek, the primary water quality concern is the presence of excessive levels of bacterial indicators from unknown point sources. Downstream, water quality

[100]/ *Ibid*., pp. 3-32 and 3-33.
[101]/ Santa Ana Watershed Project Authority, Santa Ana Integrated Watershed Plan, Volume I - Water Resources Component, June 2002, p. 5-18.

is further degraded by runoff from urban development and agricultural operations, including dairies (which contribute elevated nutrient levels, suspended solids and high salinity.[102]

Groundwater in the San Bernardino area generally is a sodium-calcium-bicarbonate type, containing equal amounts (on an equivalents basis) of sodium and calcium in shallow groundwater and an increasing predominance of sodium in water from deeper parts of the valley-fill aquifer. Concentrations of both sodium and chloride are higher in the lower confining member (LCM) and lower water-bearing unit (LWB). Mean dissolved-solids concentration was about 400 milligrams per liter (mg/L) in the upper part of the valley-fill aquifer and about 200 mg/L in the deeper parts of the valley-fill aquifer where confined conditions are present.

The inorganic composition of groundwater varies areally in the valley-fill aquifer depending on the part of the watershed contributing runoff and recharge. Runoff from igneous and metamorphic rocks tends to have a lower dissolved-solids concentration than runoff from sedimentary rocks or unconsolidated deposits.

The largest sources of runoff and recharge (Santa Ana River, Lytle Creek, Mill Creek) have calcium-bicarbonate water while the smaller creeks in the middle of the San Bernardino area have higher equivalent concentrations of sodium. The inorganic composition of groundwater may also be affected by small quantities of geothermal water emanating from faults and fractures in the bedrock surface underlying the valley-fill aquifer. The inorganic quality of most native groundwater in the San Bernardino area is suitable for both agricultural and municipal uses. Agricultural and urban development, however, have caused additional water-quality problems, primarily contaminants of the native groundwater by nitrogen species, pesticides, and volatile (purgeable) organic compounds. As illustrated in Figure 4.4-22 (Areas with Poor Groundwater Quality in the San Bernardino Area),[103] since about 1980, detection of these groundwater contaminants has become widespread and more than forty public-supply wells have been closed. As more wells are contaminated and as the legally acceptable concentration of contaminants are lowered, local water-supply agencies have become increasingly concerned about the source and movement of groundwater contaminants.

Contamination of groundwater in the San Bernardino area by volatile (purgeable) organic priority pollutants was first discovered in 1980. The most commonly found organic contaminants in the area are trichloroethylene (TCE) and tetrachloroethylene (PCE).[104] The SARWQCB has identified several contaminant plumes that are considered a threat to groundwater supply quality. A number of these plumes, which have impacted some of the highest producing well fields in the watershed, exist within the Bunker Hill Groundwater Basin.[105] Two areas of groundwater contamination have been identified and designed by the USEPA as operable units of a federal superfund site: Newmark and Muscoy. The source or sources of contamination for those operable units are not known and the extent of contamination for the Muscoy operable unit has been identified only schematically. A third area of groundwater contamination by volatile organic compounds (VOCs) is referred to as the Redlands plume. A fourth area of significant contamination by VOCs is on and adjacent to the Norton Air Force Base. In addition to VOCs, contamination in this area involves radionucleides and metals.[106]

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[102]/ *Op. Cit.*, Santa Ana Integrated Regional Water Management Plan, 2005 Update, p. 43.
[103]/ *Op. Cit.*, Hydrology, Description of Computer Models, and Evaluation of Selected Water-Management Alternatives in the San Bernardino Area, California, Open-File Report 2005-1278, Figure 36, p. 60.
[104]/ *Ibid,* pp. 59-61.
[105]/ *Ibid.*, p. 49.
[106]/ *Ibid.*, p. 61.

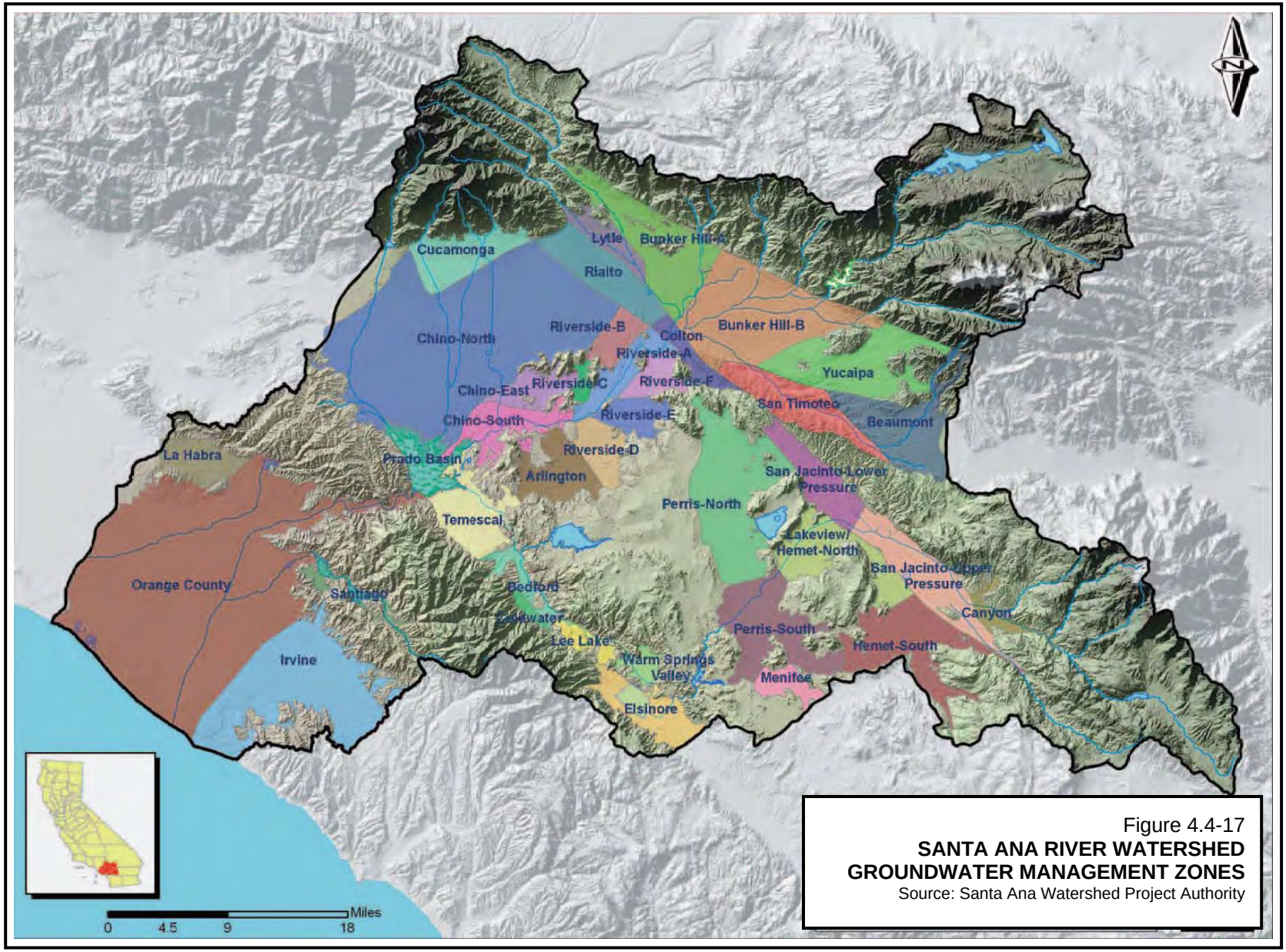

Figure 4.4-17
SANTA ANA RIVER WATERSHED GROUNDWATER MANAGEMENT ZONES
Source: Santa Ana Watershed Project Authority

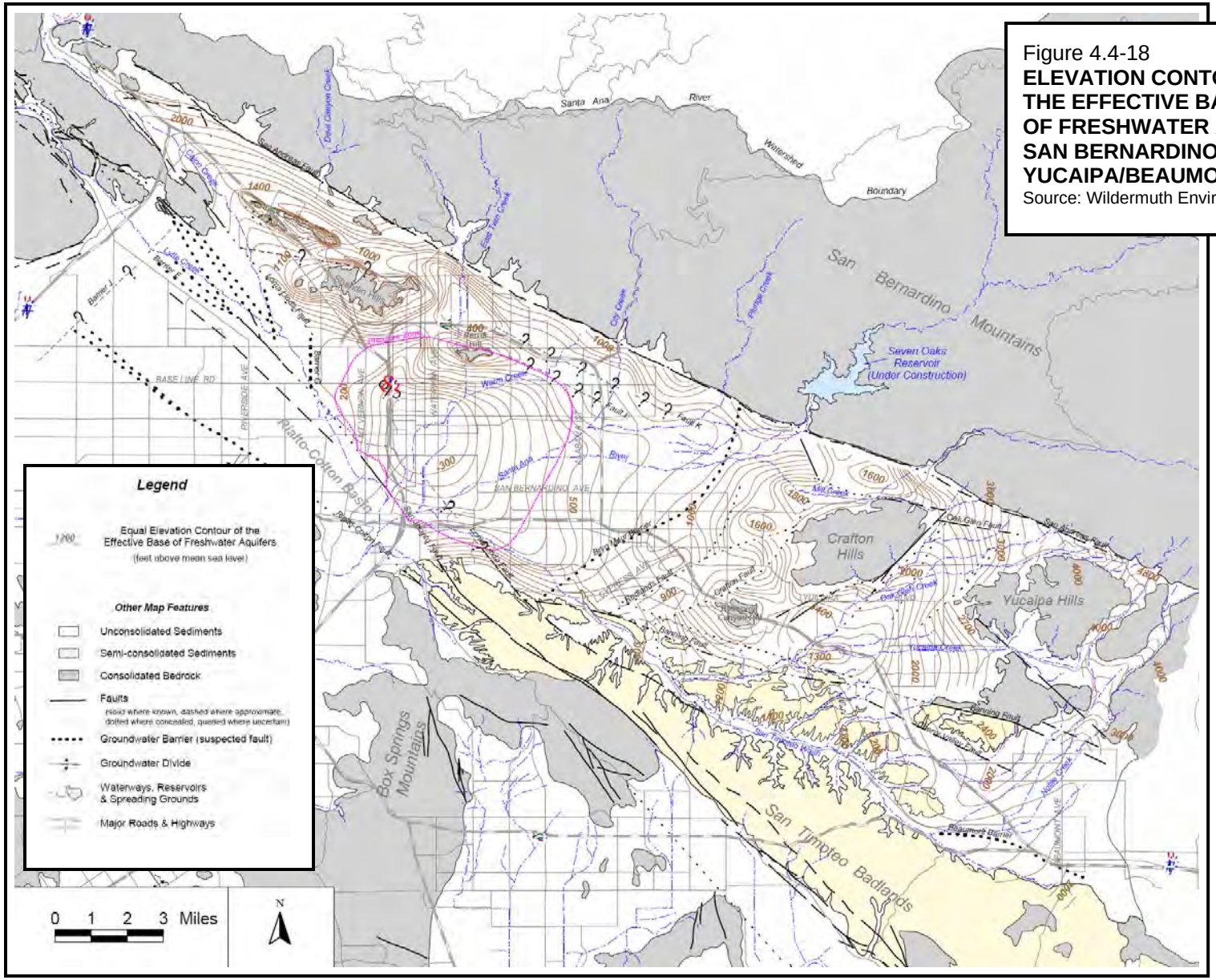

Figure 4.4-18
ELEVATION CONTOURS OF THE EFFECTIVE BASE OF FRESHWATER AQUIFERS SAN BERNARDINO VALLEY AND YUCAIPA/BEAUMONT PLAINS
Source: Wildermuth Environmental, Inc.

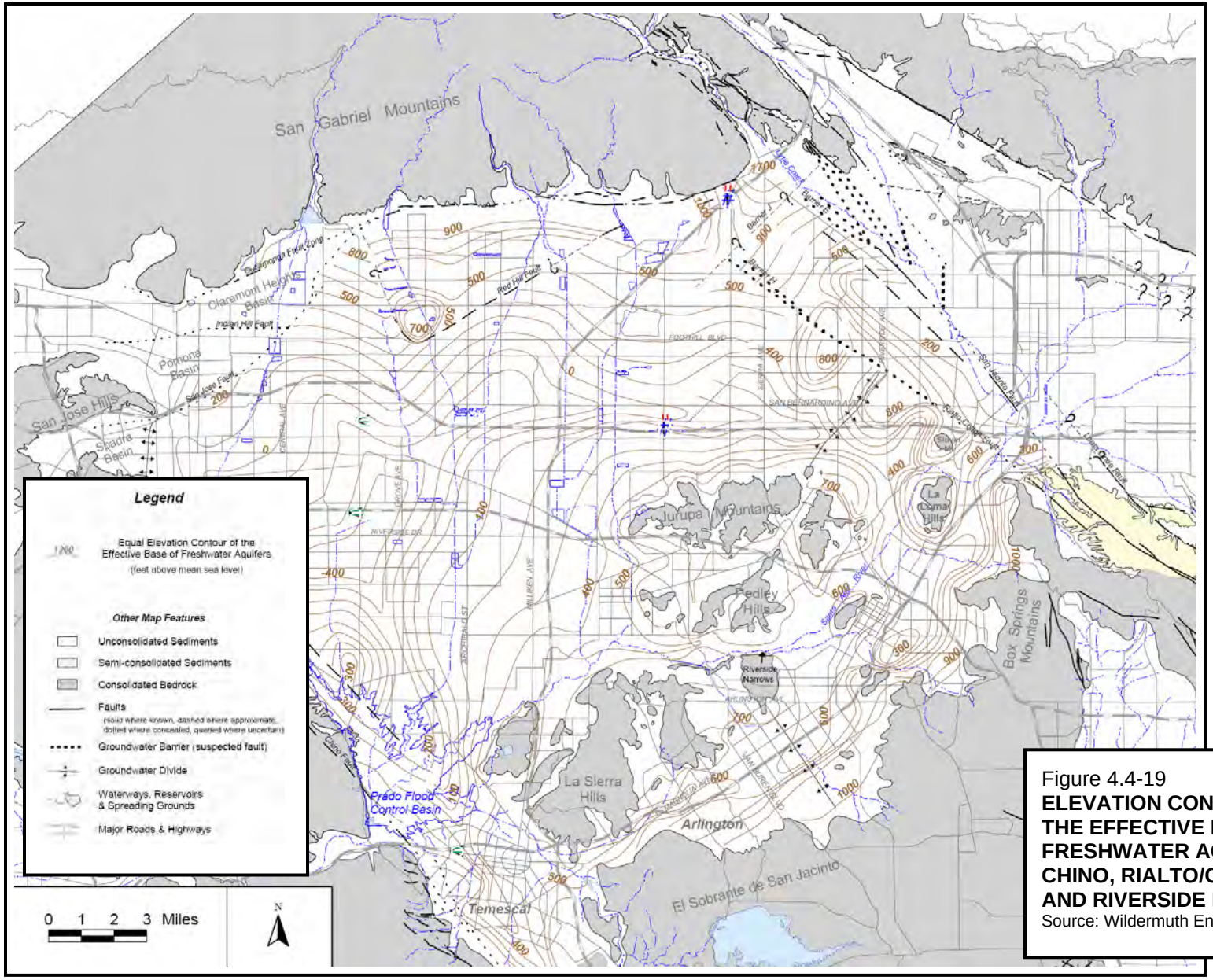

Figure 4.4-19
ELEVATION CONTOURS OF THE EFFECTIVE BASE OF FRESHWATER AQUIFERS CHINO, RIALTO/COLTON, AND RIVERSIDE BASINS
Source: Wildermuth Environmental, Inc.

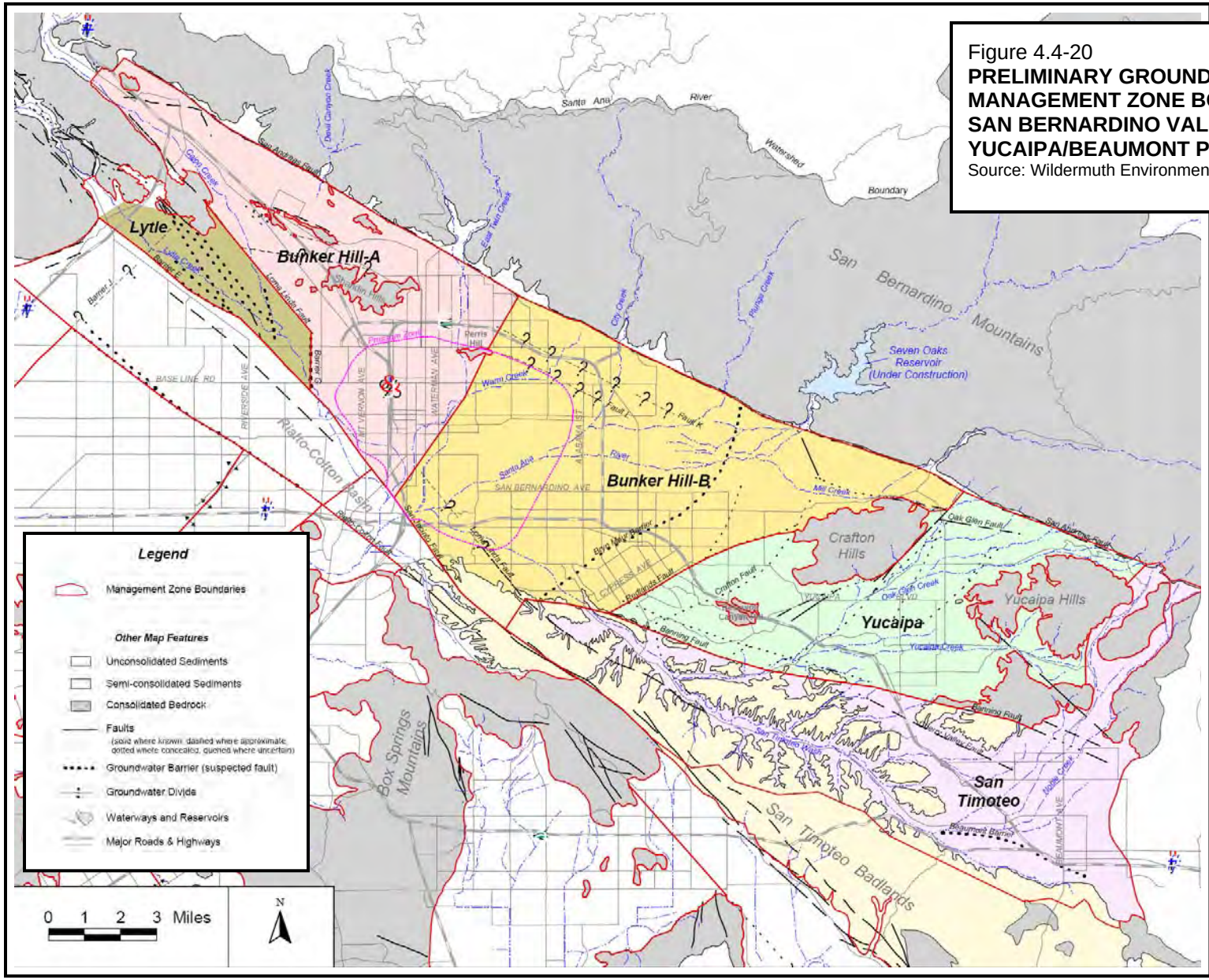

Figure 4.4-20
PRELIMINARY GROUNDWATER MANAGEMENT ZONE BOUNDARIES SAN BERNARDINO VALLEY AND YUCAIPA/BEAUMONT PLAINS
Source: Wildermuth Environmental, Inc.

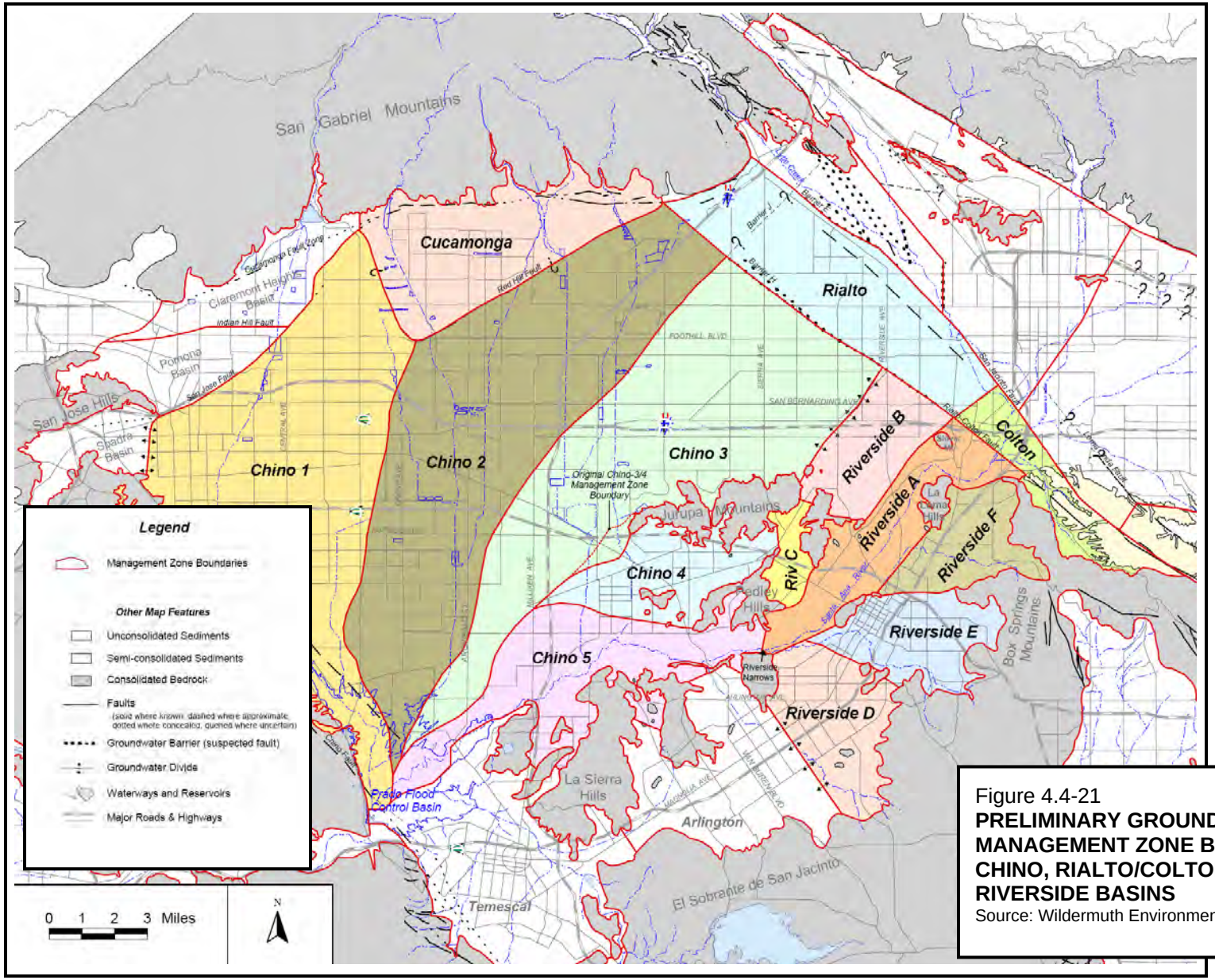

Figure 4.4-21
PRELIMINARY GROUNDWATER MANAGEMENT ZONE BOUNDARIES CHINO, RIALTO/COLTON, AND RIVERSIDE BASINS
Source: Wildermuth Environmental, Inc.

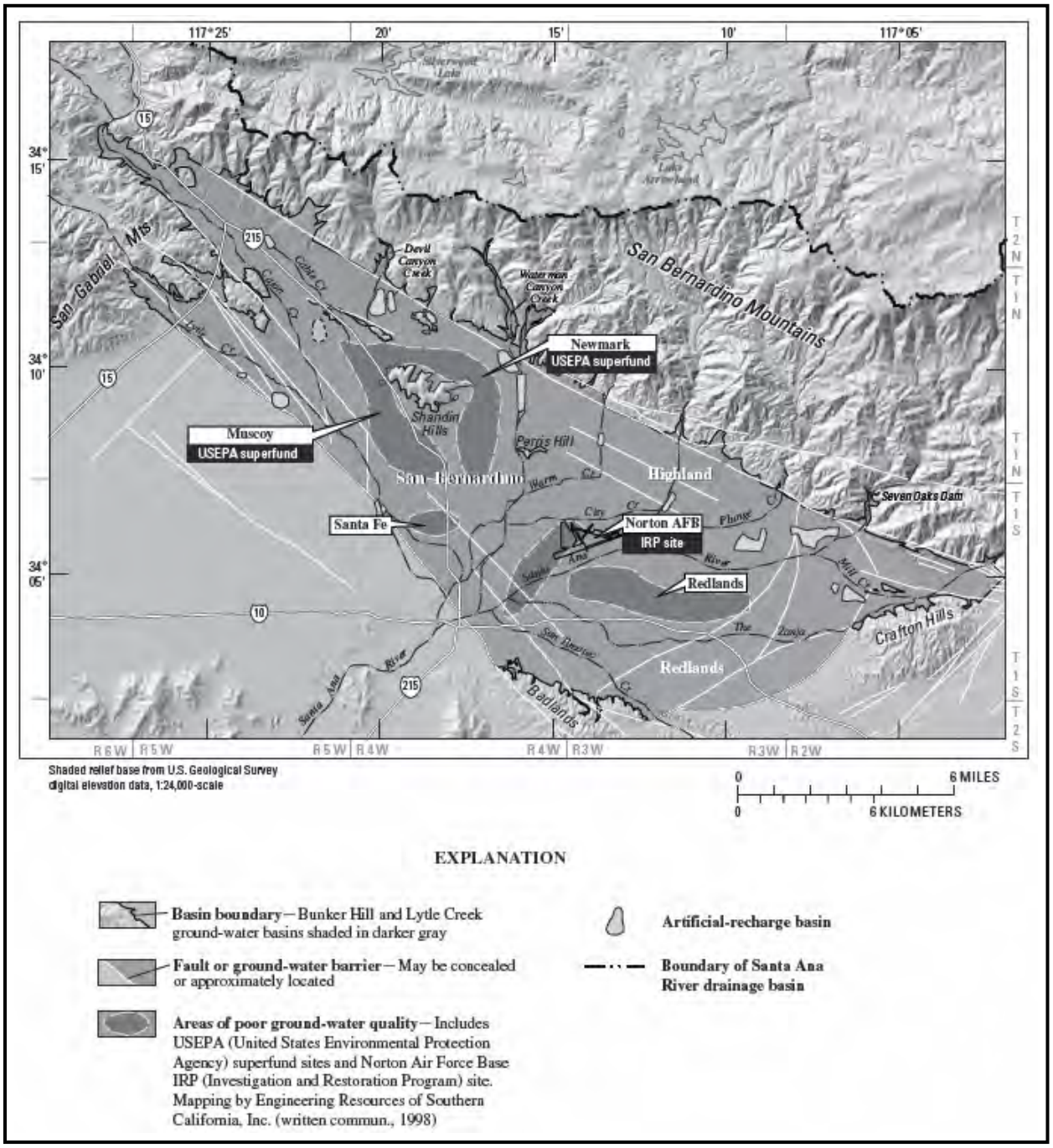

Figure 4.4-22
AREAS WITH POOR GROUNDWATER QUALITY IN THE SAN BERNARDINO AREA
Source: United States Geological Survey

As discussed in Section 4.10 (Utilities and Service Systems), south of the project site, the existence of a perchlorate and TCE groundwater plume, as illustrated in Figure 4.1-29 (Approximate Extent of Perchlorate and/or TCE Contamination in the Rialto-Colton Groundwater Basin),[107] has resulted in the closure of a number of the City's wells in the Rialto-Colton Groundwater Basin (Rialto Groundwater Management Zone).[108,109] The area of groundwater contamination is at least several miles long and has reached depths of 800 feet below ground. The above figures show the approximate area where the concentration of contaminants in the groundwater exceeds federal and State MCLs. On September 23, 2009, the USEPA added the site to its Superfund National Priorities List, designating the area the B.F. Goodrich Superfund Site (CAN000905945). The area of known or suspected perchorate and TCE groundwater contamination does not include the project site.

The County's "Conservation Background Report" recognizes that "[w]ater quality is a critical issue facing local, regional and State agencies. . .The most important element for the economic survival of San Bernardino County is the availability, beneficial use, and conservation of water."[110] The background report makes specific reference to perchlorate contamination of groundwater wells in selection locations. As indicated therein: "Recent developments regarding the provisional action level (PAL) for perchlorate are likely to have tremendous impacts. In January 2002, the USEPA and DHS [California Department of Health Services] lowered the PAL for perchlorate from 18 ppb [parts per billion] to 1 ppb. To understand the scope of the PAL reduction, approximately 45 municipal wells within the Santa Ana watershed contain traces of perchlorate, of which 11 previously exceeded the prior PAL of 18 ppb. All of these wells exceed the current PAL of 4 ppb. . .The City of Rialto now has one well offline and two others out of service. Rialto Well #2 has a capacity of 2,000 gallons per minute (GPM) and has an average perchlorate concentration of 57 ppb. Rialto Well #6 and Chino Well #1 also pump approximately 2,000 GPM and perchlorate concentrations range from 6 to 14 ppb."[111]

Numerous hydrogeologic studies have been performed in the Rialto Groundwater Management Zone by the USGS and others. Groundwater flow is generally toward the southeast and is controlled by several barriers and faults, some of which delineate the basin boundaries. The basin extends from Barrier J on the northwest to the SAR on the southeast. The basin is bounded on the northeast by the San Jacinto fault and on the southwest by the Rialto-Colton fault. The presence of perchlorate in municipal drinking water supply wells has resulted in the affected water purveyors bearing significant costs associated with wellhead treatment, loss of usage of municipal wells, and providing replacement water supply.

The USGS has identified the following four hydrostatigraphic units in the Rialto Groundwater Management Zone: (1) River-channel deposits – these sediments are present only in the southeastern portion of the basin; (2) Upper water-bearing unit – this unit is comprised of an sequence of unsaturated soils extending to surrounding areas; (3) Middle water-bearing unit –

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[107]/ *Op. Cit.*, B.F. Goodrich Superfund Site, EPA Seeks Public Comment on Groundwater Cleanup Plan, January 2010, Figure 2, p. 2.

[108]/ *Op. Cit.*, Roadmap to Remedy Selection Rialto-Colton Basin, California, Version 1.1, Figure 6.

[109]/ As indicated in the City's "Roadmap to Remedy," of Rialto's 13 supply wells, seven have been removed from service for some period due to detections of perchlorate at concentrations of over 4 to 110 micrograms per liter (μg/L). These shutdowns have reduced the City's production capacity by nearly 48 percent. The Rialto-Colton Basin is also impacted by volatile organic compounds (VOCs), including trichloroethylene (TCE) at concentrations up to 730 μg/L. The highest perchlorate concentrations have been detected in the northeast portion of the Rialto-Colton Basin (Source: City of Rialto, Roadmap to Remedy Selection Rialto-Colton Basin, California, May 4, 2007, ES-1).

[110]/ *Op. Cit.*, Conservation Background Report, p. 6-126.

[111]/ *Ibid.*, p. 6-132.

the top of the groundwater table occurs in the middle of this unit and most of the basin's water production takes place in this zone; soils are coarse to medium sand and interbedded silt and clay; and (4) Lower water-bearing unit – this unit consists mainly of interbedded sand and silt. In addition, a thick sequence of consolidated sediments underlie these four hydrostatigraphic units. Some of the local municipal wells have well screens that extend into these deeper, consolidated sediments. The groundwater velocity in the Rialto Groundwater Management Zone is variable, ranging from an estimated 1-4 feet per day, on average.[112]

4.4.3.2 Local Setting

Surface Water

Lytle Creek Canyon, located on the eastern end of the San Gabriel Mountains, comprises approximately 47 square miles of drainage area before emptying out onto an alluvial cone. From its headwaters, Lytle Creek flows southeasterly joining Cajon Creek and finally reaching its terminus at the SAR, near Colton.[113] The relict (non-active) fan is being dissected by a modern fanhead trench that follows a regional fault. Differential vertical movement of this fault is suggested by different bank heights near the SAR a few miles downstream. Because of this 2.5 to 5.0-meter (8 to 15-foot) deep by about 610-meter (2,000-foot) wide trench dissects the relict fan from the mountains to Cajon Creek, no fan areas are subject to active sedimentation. The capacity of the trench is many times that needed to convey the 100-year discharge.[114]

The majority of the Lytle Creek regional watershed is located entirely within the boundaries of the SBNF. Lytle Creek eventually combines with Cajon Creek before entering the SAR. The Lytle Creek alluvial fan is not subject to alluvial fan flooding processes. The incised channel conveys flows at shallow depths and high velocity during flooding. Flood control structures have prevented large-scale channel migration. Although substantial erosion and deposition occurs in the main channel, flow path uncertainty is minimal.

The floodplain is topographically bounded on both sides. The confinement is mostly because of channel incision and, to a lesser degree, because of the spur dikes and levees above and below the I-15 Freeway. Without the presence of the constructed spur dikes and levees, flood measures, such as setbacks and elevation, might not reliably mitigate the hazard.[115]

The Lytle Creek alluvial fan has been studied by numerous investigators and was used as a case study in the National Research Council's "Alluvial Fan Flooding." As indicated therein: "At the topographic apex, it drains approximately 50 square miles of the San Gabriel Mountains, which are composed of highly fractured rock at steep slopes. Erosion from the watershed produces a high yield of very course sediment. The fan slope is almost 3 percent. The main channel is incised as it leaves the mountains. Since the 1940's a series of spur dikes and levees have been built to confine the flows to a narrow corridor along the fan. . .The fan is one

[112]/ Advocacy Team, Advocacy Team's Memorandum of Points and Authorities in Support of Proposed Amendment Cleanup and Abatement Order No. R8-2005-0053, Including Details and Testimony, March 27, 2007, pp. 5-8.

[113]/ *Op. Cit*., Final Multiple Project Environmental Assessment for Hydropower Licenses, Santa Ana River Projects, Lytle Creek Hydroelectric Project, FERC Project No. 1932-004, Santa Ana River 1 and 3 Hydroelectric Project, FERC Project No. 1933-010, Mill Creek 2/3 Hydroelectric Project, FERC Project No. 1934-010, California, p. 38.

[114]/ Committee of Alluvial Fan Flooding, Water Science and Technology Board, Commission on Geoscience, Environment, and Resources, National Research Council, Alluvial Fan Flooding, 1996, p. 98.

[115]/ *Op. Cit.*, Alluvial Fan Flooding, pp. 99-100.

of a series that consist of unconsolidated alluvial deposits to the south of the Sierra Madre fault zone. The piedmont is a complex bajada with several trenched and untrenched alluvial fans. For example, the Cucamonga fan, to the west, is deeply trenched, but the nearby Day and Deer Creek fans, also to the west of this site, are not entrenched and have areas of active sedimentation and flooding."[116] As further indicated in that case study: (1) the larger regional alluvial fan is no longer active and the "relic" or ancient alluvial fan (no longer active) is being dissected by a modern fanhead that follows a regional fault and is no longer subject to flooding from the alluvial fan; (2) the incised channel in the active floodplain conveys flow at shallow depths and high velocity during floods; (3) flood control structures installed over the past 40+ years have prevented large-scale channel migration and, although substantial erosion and deposition occur in the main channel, flow path uncertainty is minimal; and (4) the hydraulic capacity of the entrenched channel is many times that needed to convey the 100-year discharge. The study does, however, note that the potential does exist for a large sedimentation event, such as a debris flow. A large event might be triggered by a large wildfire followed by heavy precipitation.[117]

The largest two floods that have occurred since 1920 were confined to defined channels between the mountain front and confluence with Cajon Creek. Based on a comparison of aerial photographs taken shortly before and after floods on March 2, 1938 and January 25, 1969, description of channel below the apex suggests the channel is the same as the present (1996) channel. Based on comparison of aerial photographs of 1967 and 1989, flow paths are unchanged. The developed Soboba soils adjacent to the channel suggest the flow paths are stable. Channel capacity below the apex is about three times the magnitude of the largest flood of record since 1920 (USGS Gage No. 11062000).[118]

The existing northern bank of Lytle Creek is fully improved, extending from Glen Helen Parkway to the confluence with Sycamore Creek. An 8-foot thick grouted riprap revetment extends down 30-feet below the existing flowline and spans from Glen Helen Parkway to the Cemex USA quarry site located at the easterly boundary of the LCNPD (Tract 15900), approximately 6,300 feet downstream of the northbound I-15 Freeway bridge over Lytle Creek. This reach of Lytle Creek also has an existing 20-foot wide asphalt concrete access/ maintenance road at the top of the bank. The Cemex USA quarry is protected by an existing levee that is constructed of soil cement capped with grouted riprap. The combined span of these two bank improvements extends from 1.2 miles upstream of the I-15 Freeway bridge to 5.7 miles downstream of the I-15 Freeway crossing near the confluence with Cajon Creek.

The Glen Helen Parkway roadway crossing at Lytle Creek is improved to the ultimate condition. The roadway crossing is a dip crossing that would be inundated in a large storm event. The roadway profile was raised to provide a higher level of safety for the crossing of Lytle Creek and to allow for the construction of several culverts located at the main flow paths of Lytle Creek.

Paralleling Lytle Creek, Sycamore Creek (also referred to as Sycamore Wash herein) runs through the northern portion of proposed Neighborhood I. Sycamore Creek, a small tributary to Lytle Creek, is an incised natural channel that is visible on the west side of I-15 Freeway. Flows are carried beneath the I-15 Freeway by two culverts. The Sycamore Creek watershed is approximately 953 acres spanning several small canyons between foothills of the south eastern portion of the San Gabriel Mountains. The canyon areas are undeveloped, hydraulically steep,

[116]/ *Op. Cit.*, Alluvial Fan Flooding, p. 96.
[117]/ *Ibid.*, pp. 98-99.
[118]/ *Ibid.*, Appendix A.

and sandy with stands of sycamore trees, scrub brush, and grasses. The confluence of Sycamore Creek with Lytle Creek is located approximately 19,400-feet east (downstream) of the I-15 Freeway bridge over Lytle Creek. Neighborhood I is situated in the upstream reaches of Sycamore Creek adjacent to the north fork of Sycamore Creek.

The reach of Sycamore Creek within the span of the proposed project was fully improved as a part of the LCNPD (Tract 15900), as approved by the County.[119] The small tributaries of Sycamore Creek, north fork, north fork tributary, and south fork each have origins at the foothills and canyon on the west side of the I-15 Freeway. In conjunction with the LCNPD, RBF Consulting[120] prepared improvement plans to construct storm drain improvements within Glen Helen Parkway and culverts crossing Glen Helen Parkway for tributaries to Sycamore Creek.

The existing culverts beneath the I-15 Freeway, conveying captured runoff from the west side of the freeway to the east, were constructed along with the I-15 Freeway. These culverts discharge to unimproved creeks just east of the freeway embankment. Two arch culverts; one for Sycamore North Fork and one for Sycamore South Fork, were constructed along with the improvements to Clearwater Parkway. As designed by RBF Consulting, the channel section of Sycamore Creek just downstream of Clearwater Parkway and the junction of the north and south forks was regraded and stabilized. As designed by Associated Engineers,[121] the south bank of Sycamore Creek was constructed along with the grading of Tract 15900. The revetment extends from the I-15 Freeway to 4,900 feet downstream of the I-15 Freeway. The bank protection includes a 2.5-foot thick layer of un-grouted rock rip-rap buried in the existing bank of the creek and provides emergency flood protection if the existing bank were to erode.

Surface water from Lytle Creek was adjudicated under the 1924 Judgment No. 17,030 from the Superior Court of San Bernardino County and is managed by the Lytle Creek Water Conservation Association (LCWCA).[122] The LCWCA, formed as a result of that 1924 judgment, is comprised of seven member agencies, including the City of San Bernardino Municipal Water Department, the Cities of Colton and Rialto, the Fontana Union Water Company, the WVWD, the Riverside Highland Water Company, and the Terrace Water Company.

Post-Fire Flood Hazards

In late October 2003, wildfires burned approximately 700,000 acres in southern California. The effects of wildfires on vegetation and soils can cause substantial increases in runoff, significantly increasing the flood hazards in fire-affected watersheds until the burned areas recover. To assist local, regional, and federal agencies in accounting for the increased flood hazards, FEMA, in cooperation with the California Office of Emergency Services, initiated an effort to analyze the post-fire flood hazards for streams in the five counties affected by those wildfires (i.e., San Diego, San Bernardino, Riverside, Los Angeles, and Ventura). A series of post-fire advisory maps were produced showing the increased flood hazard areas created by the wildfire damage. Presented in Figure 4.1-23 (Post-Fire Advisory Flood Hazard Map – Devore 7.5-Minute Quadrangle [December 1, 2003]) is a portion of the FEMA map depicting the project site.

[119]/ There are no additional planned improvements to Sycamore Creek as part of the proposed LCRSP.
[120]/ RBF Consulting, Construction Plans for Improvements of Offsite Channel Alignment – Glen Helen Parkway, July 2004.
[121]/ Associated Engineers, Emergency Access Plans, Tract 15900, 2005.
[122]/ West Valley Water District (Engineering Resources of Southern California, Inc.), West Valley Water District - Urban Water Management Plan, January 2006, p. 18.

LEGEND:

- Post-Burn Area of Flood Risk
- Pre-Burn Area of Flood Risk
- Approximate Burn Perimeter

Figure 4.4-23
POST-FIRE ADVISORY FLOOD HAZARD MAP
DEVORE 7.5-MINUTE QUADRANGLE
(DECEMBER 1, 2003)
Source: Federal Emergency Management Agency

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Peak discharges were calculated using the U.S. Geological Survey (USGS) regional regression equations, adjusted for post-fire hydrologic conditions. The hydrologic summary table for the Grand Prix East fire is presented in Table 4.4-6 (Hydrologic Summary Table for Lytle Creek – Grand Prix East Fire). Approximate floodplain elevations were calculated using the HEC-RAS model, developed by the United States Army Corps of Engineers (USACE).[123]

Table 4.4-6
HYDROLOGIC SUMMARY TABLE FOR LYTLE CREEK - GRAND PRIX EAST FIRE

Location	Drainage Area (sq. mi.)	5-Year Flood		100-Year Flood	
		Pre-Fire (cfs)	Post-Fire (cfs)	Pre-Fire (cfs)	Post-Fire (cfs)
Middle Fork Lytle Creek	1.65	154	284	1,404	2,413
Sycamore Canyon Tributary @ Lytle Creek	3.15	355	961	3,475	8,692
Unnamed Glen Helen Park Tributary to Lytle Creek	5.17	449	1,085	4,464	9,948
Lytle Creek @ 0.94 Miles Downstream of I-15 Crossing	49.18	3,252	5,718	37,957	61,185
Lytle Creek @ 0.98 Miles Downstream of I-15 Crossing	49.18	3,252	5,718	37,957	61,185
Lytle Creek @ Confluence w/ Cajon Creek	52.94	3,392	5,946	39,706	63,812
Lytle Creek @ Rancho Verde Country Club	60.76	3,625	6,577	42,608	70,866
Lytle Creek @ Golf Course Downstream of Country Club	61,95	3,625	6,421	42,586	69,151
Lytle Creek @ Flood Control Basin	137.26	4,791	7,362	56,982	80,264

Source: Federal Emergency Management Agency

Groundwater

The Lytle Creek Groundwater Basin was adjudicated under the 1924 Judgment No. 17,030 from the Superior Court of San Bernardino County and is managed by the LCWCA. The basin has an estimated long-term safe yield of 35,000-45,000 AF/Y. The basin is highly porous and easily replenished during heavy precipitation years. The depth to groundwater in the basin varies from 50-400 feet depending on whether it is a drought cycle or wet cycle. There is no known contamination within the Lytle Creek Basin and no contamination is expected to be detected in the future[124]; however, contaminant plumes have been identified in both the Bunker Hill and Rialto-Colton Basins.

The groundwater basin is part of the North Santa Ana River Basin (or the Inland Basin) and is located at the foot of the San Bernardino Mountains where the watershed extends northerly into the Wrightwood subbasins and where the majority of the Lytle Creek water supplies originate. The water flowing into the basin is of extremely high quality, has met State drinking water quality requirements and has been used for public water supplies by local water agencies for nearly 100 years with no need for water treatment plants. The Lytle Creek area consists of highly permeable materials and the percolation rate is estimated to average three feet/day and stores about 194,000 acre-feet of water. The Lytle Creek Basin, which is recharged from water from

[123]/ Federal Emergency Management Agency, The Hydrologic and Hydraulic Methodology Used to Estimate Post-Burn Floodplain Hazards, FEMA-1198, DR-CA (http://www.capostfireflood.net/docs/hh_methodology.pdf).
[124]/ *Ibid*., p. 15.

the Lytle Creek watershed, is subject to extreme fluctuations based on precipitation in the watershed and has experienced up to a 400-foot drop in groundwater levels with a subsequent loss of up to 50 percent of the basin's potential as a water supply source.[125]

Since recharge and retention in the basin is based on time and flow volumes, it is necessary to divert and recharge as much of the wet-weather surface water flows as possible. It has been a practice to do this within the wash in the form of low-level earth berms. In the past, such diversions have resulted approximately 14,000 acre-feet of water annually being captured and recharged naturally into the basin. It is not known how much water is currently being recharged naturally because there are currently no active engineered artificial recharge basins within the Lytle Creek Basin.[126]

Over half of the WVWD's water is pumped from the Lytle Creek Basin.[127]

Water Quality

With regards to surface water, pollutants of concern consist of any pollutants that exhibit one or more of the following characteristics: current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water, elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein, or the detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.

In the pre-development condition, as indicated in Table 4.4-7 (Existing Site Storm Water Runoff Pollutants),[128] the pollutants of concern for Lytle Creek are pathogens. Presented in Table 4.4-8 (Historical TDS Concentration of Lytle Creek Stream Flow) is historical total dissolved solids (TDS) data reported for SCE's Lytle Creek Intake and USGS gages on Lytle Creek.[129] With regards to groundwater, Wildermuth Environmental Inc.[130] calculated current ambient concentrations of TDS and nitrate for each groundwater basin within the Santa Ana River watershed. In the Lytle Creek Basin, the current average ambient concentration of TDS is 240 mg/L and the current ambient concentration of nitrate is 2.8 mg/L.[131]

At the request of the Cities of Colton and Rialto, in June 2008, the United States District Court signed an order dismissing, without prejudice, legal actions pertaining to perchlorate contamination in the Rialto-Colton Groundwater Basin. The action allows the cities to refile the

[125]/ *Ibid*., p. 22.

[126]/ Temporary, non-engineered basins, covering approximately 40 acres, were destroyed by high-flow storm events over the past twenty years. In previous years, the Lytle Creek Water Conservation Association (LCWCA) member agencies that developed these diversion areas previously captured significant stormwater flows and successfully recharged the area from I-15 Freeway to the present Lytle Creek narrows (within the CEMEX USA property). The average annual recharge to groundwater was approximately 13,000 to 14,000 AF/Y, and the maximum daily percolation rate in the system of basins and interconnecting channels was 1,380 acre-feet/day (AF/D). Historically, the maximum daily percolation rate in the main channel was estimated to be about 980 AF/D.

[127]/ *Op. Cit*., West Valley Water District - Urban Water Management Plan, p. 6.

[128]/ PACE Advance Civil Engineering, Water Quality Management Plan (WQMP), for Lytle Creek Ranch Neighborhood I-4, February 2008.

[129]/ Roberson Water Consulting, Ground Water Technical Report – Lytle Creek Ranch Specific Plan, San Bernardino County, March 2008.

[130]/ Wildermuth Environmental Inc., TIN/TDS Study – Phase 2A of the Santa Ana Watershed, Final Technical Memorandum, July 2000.

[131]/ Geoscience Support Services, Inc., Evaluation of Ground Water Impacts from the Proposed Lytle Creek Ranch Development, September 30, 2008, p. 7.

lawsuit within a specified time period if the cities are unable to negotiate a settlement with the alleged polluters to recover costs associated with operating and maintaining perchlorate-removal equipment on the City's water wells. As reported, the perchorate-tainted plume spreads in the groundwater basin at a rate of about six feet per day, contaminating about 360 million galls of the City's drinking water each month.[132]

Table 4.4-7
EXISTING SITE STORM WATER RUNOFF POLLUTANTS[1]

Receiving Waters	303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Sycamore Creek	-	-	Adjacent to Neighborhood 1 and tributary to Lytle Creek
Lytle Creek	Pathogens	MUN, AGR, IND, PROC, GWR, POW, REC1, REC2, COLD, WILD, RARE	Project is adjacent to Lytle Creek which has RARE Beneficial Use
Santa Ana Reach 4	Pathogens	GWR, REC1, REC2, WARM, WILD	-
Santa Ana Reach 3	Pathogens	AGR, GWR, REC1, REC2, WARM, WILD, RARE	-
Santa Ana Reach 2	-	AGR, GWR, REC1, REC2, WARM, WILD, RARE	-
Santa Ana Reach 1	-	REC1, REC2	-

Notes:
1. Storm water runoff from the site includes storm flows, irrigation water overflows, and urban runoff from residential lots, retail development, open space, school and streets. No other potential pollutants of concern are expected from the project site.

Source: PACE Advanced Water Engineering

Table 4.4-8
HISTORICAL TDS CONCENTRATION OF LYTLE CREEK STREAM FLOW

Water Quality Sample Location	Date of Measurement	TDS Concentration (mg/L)	TDS Ambient Lytle Creek Basin
SCE Lytle Creek Intake	May 1992	158	240
SCE Lytle Creek Intake	February 1993	183	240
USGS Lytle Creek at Devore Avenue	February 1993	162	240
SCE Lytle Creek Intake	May 1993	158	240
USGS Gage No. 11062000	November 1993	186	240

Source: Roberson Water Consulting

Previous Site-Specific Hydrologic Investigations

A number of previous hydrologic investigations have been conducted addressing the project site or portions thereof. Those studies, which did not examine the currently proposed project but examined earlier site-specific development applications, provide relevant background information concerning the existing hydrologic and water quality setting. The information contained in those studies is extensive and includes a broad array of water-related issues.

[132]/ Bender, Mary, Judge Dismisses Perchlorate Actions at the Request of Colton, Rialto, San Bernardino County Governments, The Press-Enterprise, June 18, 2008.

As indicated in an analysis conducted by Pacific Advanced Civil Engineering (PACE), a comparison of flow paths from major floods indicated that upper Lytle Creek has been relatively unchanged since 1935 and it is believed that the channel has been incised since at least 1862, indicating only minor movement of the stream banks within the last 150 years. The historic geomorphology of the alluvial fan and the hydraulic analysis indicates that the relic portion of the alluvial fan does not typically experience flooding from the main creek. A comparison of streambed slopes generally indicates that the active incised alluvial channel appears to have reached a long-term equilibrium or a relatively stabilized condition. Significant changes in the long-term stream profile are not anticipated, except for localized erosion processes. The stream characteristics generally reflect a balance in the ability to transport the sediment delivered from the upper watershed (i.e., the streambed has achieved an equilibrium condition which does not result in either significant erosion or deposition of sediment).[133]

As indicated in an analysis conducted by Robert Bein, William Frost & Associates (RBF), during the 1940's, in an effort to maintain a stable flow path, the USACE constructed a series of groins along Lytle Creek. The I-15 Freeway crossing of Lytle Creek was completed in the 1970's and acts to further confine the stream flow. Downstream of the I-15 Freeway crossing, a number of flow diversion structures and water conservation ponds have been constructed.[134] At the I-15 Freeway crossing, the drainage area of the Lyle Creek watershed basin is approximately 51.4 square miles.[135]

Lytle Creek runoff spreads across the alluvial fan with somewhat confined paths influenced by groins, diversion structures, the I-15 Freeway crossing, natural bluffs, protected banks, and levees. Based on a gradation analysis performed by Simons, Li & Associates, the stream bed materials of Lytle Creek are extremely course with mostly cobbles. The median grain size is 51 millimeters (mm). Larger than 500 mm-sized particles are common throughout the streambed. According to a 1996 slope profile, the stream bed from upstream of the alluvial fan apex to the Cajon Creek confluence showed a constant slope of 0.292. In 1998, the average slope of Lytle Creek between the fan apex and the Cemex USA Lytle Creek Plant property line was computed to be 0.293. Comparison of those stream bed slopes indicates that the channel has apparently reached a long-term equilibrium condition.[136]

Numerous hydrologic studies have been prepared to estimate the design flow rates of Lytle Creek. Results of those studies are presented in Table 4.4-9 (Lytle Creek Design-Flow Rates at the I-15 Freeway Bridge). As indicated therein, the calculated existing condition 100-year, 24-hour clearwater peak flow rate in Lytle Creek at the I-15 Freeway bridge is approximately 42,580 cfs.[137] Estimated peak-flow rates for lower frequency floods are presented in Table 4.4-10 (Lytle Creek Peak-Flow Rates with Associated Frequencies).

As indicated in an analysis conducted by Simons, Li & Associates,[138] flood conditions along Lytle Creek were estimated utilizing FEMA procedures for estimation of the characteristics of flood flows along alluvial fans. The estimated hydraulics of the self-forming channel along the

[133]/ Phillips, Bruce, Memorandum: Assessment of Potential Lytle Creek Development Floodplain Hydraulic and Geomorphic Impacts, Pacific Advance Civil Engineering, September 4, 2001, p. 2.
[134]/ *Op. Cit.*, Lytle Creek Flood Protection Preliminary Design Study, p. 7.
[135]/ *Ibid.*, p. 22.
[136]/ *Ibid.*, p. 14.
[137]/ Pacific Advance Civil Engineering, Inc., Revetment Design for Lytle Creek North Development Hydraulic Report, January 2004, pp. 3-3, 3-4, and 3-8.
[138]/ Simons, Li & Associates, North Bank Levee for Protection of Sunwest Materials' Gravel Mining Operation Within the Lytle Creek Wash, May 1994.

Lytle Creek alluvial fan is presented in Table 4.4-11 (Estimated Hydraulics of the Self-Forming Channel along the Lytle Creek Alluvial Fan).

Table 4.4-9
LYTLE CREEK DESIGN-FLOW RATES AT THE I-15 FREEWAY BRIDGE

Studies	Prepared by	Peak Discharge (cfs)
Standard Project Flood (1964)	United States Army Corps of Engineers	38,000
100-Year Flood Using Frequency Analysis of Gaged Records (1989)	Simons, Li & Associates	42,580
100-Year Flood Using San Bernardino County Hydrology Procedures (1992)	Simons, Li & Associates	32,270
Standard Project Flood (1993)	Robert Bein, William Frost & Associates	34,100

Source: Robert Bein, William Frost & Associates and Pacific Advanced Civil Engineering

Table 4.4-10
LYTLE CREEK PEAK-FLOW RATES WITH ASSOCIATED FREQUENCIES

Return Period	100-Year	50-Year	25-Year	10-Year	5-Year	2-Year
Peak Discharge (cfs)	42,580	24,040	13,110	5,420	2,530	690

Source: Robert Bein, William Frost & Associates

Table 4.4-11
ESTIMATED HYDRAULICS OF THE SELF-FORMING CHANNEL ALONG THE LYTLE CREEK ALLUVIAL FAN

Discharge (cfs)	Width (feet)	Unit Discharge (cfs/foot)	Flow Depth (feet)	Velocity (fps)
690	130	5.3	0.96	5.52
2,530	218	11.6	1.61	7.22
5,420	296	18.3	2.18	8.39
10,550	386	27.3	2.85	9.58
13,110	421	31.1	3.11	10.01
24,040	537	44.8	3.96	11.32
42,580	675	63.1	4.97	12.68

Source: Simons, Li & Associates

As a component of the proposed revetment improvements associated with the LCNPD, the USACE conducted separate "detailed hydraulic modeling of the floodplain conditions." As indicated, in part, therein, the "updated floodplain was utilized to quantify the changes to the floodplain from the proposed flood protection revetment. The results of this analysis indicated that the potential changes from the revetment to key hydraulic characteristics such as depth, velocity, average shear stress, and cross sectional flow area are relatively minor."[139]

Program-Level Hydrologic Investigations

In order to foster informed decision making, a number of relevant studies are included in Appendix III-C (Hydrology and Water Quality Analysis) and serve to augment the information

[139]/ *Op. Cit.*, United States Army Corps of Engineers, Draft Environmental Assessment – (404(b)(1) Evaluation Public Interest Review, p. 34.

which is presented herein. In the preparation of the LCRSP and master plan of drainage, an engineering analysis was conducted and serves as the technical basis for specific design elements of the proposed project. As indicated therein: "This Master Drainage Study provides concept level analysis and data to support the proposed stormwater management facilities that would be constructed as a part of this project."[140]

The County Rationale Method was used to perform the hydrology analysis.[141] The methodologies employed were consistent with the "San Bernardino County Hydrology Manual" (August 1986). The 100-year discharge peak flow rate was calculated at identified concentration points in the project watershed using the 2007 version of hydrology software developed by Advanced Engineering Software, Inc. (AES). The determined flow rate was used to preliminarily size the proposed LCRSP drainage facilities and improvements. Pipe and channel sizes were estimated using normal depth calculations based upon Manning's Equation.

4.4.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant hydrology and/or water quality impact if the project or if project-related activities were to:

- Violate any water quality standards or waste discharge requirements.
- Substantially[142] deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on the site or off the site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on the site or off the site.
- Create or contribute to runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
- Substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

[140]/ Pacific Advanced Civil Engineering, Preliminary Master Plan of Drainage and Stormwater Management – Lytle Creek Ranch Project, November 2007, revised October 2008, p. 1.

[141]/ The Rational Method assumes that there is uniform rainfall intensity across the entire watershed and is, therefore, intended for watersheds with a total drainage area less than 640 acres. For larger watersheds, the Rational Method tends to overestimate peak flow rates.

[142]/ Certain terms, such as "substantially" and "significant adverse effect," are neither defined in CEQA nor in the State CEQA Guidelines and require a local determination whether a proposed action would meet or exceed the stated standard.

- Place within a 100-year flood hazard area structures which would impede or redirect flood flow.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Result in inundation by seiche, tsunami, or mudflow.[143]

Pursuant to Section 13241 of Porter-Cologne, "[e]ach regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of the beneficial uses and the prevention of nuisance." In accordance therewith, the proposed project would normally be deemed to create a significant or potentially significant hydrologic and water quality impact on the environment if the project or if project-related activities were to:

- Violate any water quality standards or waste discharge requirements as stipulated under Porter-Cologne (Section 13243) or Section 404 of the CWA.
- Violate any water quality objectives promulgated by the SARWQCB and contained in that water quality control plan applicable to the project site.

Additional thresholds of significance standards for the evaluation of water quality impacts have been formulated based on a review of the NPDES Permit and the SARWCB's "San Bernardino Water Quality Management Plan Guidance for New Development and Redevelopment Projects." In accordance therewith, as a qualifying project, the proposed project would normally be deemed to produce a significant or potentially significant impact upon water quality if the project or if project-related activities were to:

- Discharge other than de minimus quantities of non-storm water into the MS4 which are not authorized by either a separate NPDES permit of the NPDES No. CAS618036 or any successive NPDES permit issued by the SARWQCB.
- Cause or substantially contribute to exceedances of receiving water quality standards (designed beneficial uses and water quality objectives) contained in the Basin Plan and amendments thereto or surface or groundwater.[144]
- Fail to comply with applicable receiving water limitations for discharges to the MS4 system that cause or substantially contribute to violations of applicable water quality standards in receiving waters.[145]
- Produce a change to the hydrologic regime that would be considered a Hydrologic Condition of Concern (HCOC) which would have a significant adverse impact on downstream natural channels and habitat integrity, alone or in conjunction with impacts of other projects.[146]

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other standards that can appropriately be extracted from other related policy or other environmental documents and used as the basis for

[143]/ *Op. Cit.*, State CEQA Guidelines, Appendix G, Section VIII (Hydrology and Water Quality).

[144]/ Regional Water Quality Control Board, Santa Ana Region, National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements, NPDES No. CAS618036, Order No. Rs-2002-0012, April 26, 2002, pp. 17 and 19.

[145]/ *Ibid.*, Fact Sheet, p. 15.

[146]/ California Regional Water Quality Control Board, Santa Ana Region, San Bernardino Water Quality Management Plan Guidance for New Development and Redevelopment Projects, approved April 30, 2004, updated June 9, 2005, p. 2-4.

assessing the significance or potential significance of project-related and cumulative hydrologic and water quality impacts.

4.4.5 Impact Analysis

4.4.5.1 Construction Impacts

Environmental Impact 4-1*. The project site contains areas designated as being located within the 100-year floodplain. Site development could, therefore, result in the introduction of residential and non-residential land uses within those areas and/or expose site users to potential flood hazards.*

Preliminary Determination 4-1*. Less-than-significant impact.*

As shown in Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlay Map) and Figure 4.4-2 (Portions of Flood Insurance Rate Maps for a Portion of San Bernardino County), portions of Neighborhoods I, II, III and IV are located in the 100-year flood zone and designated as a SFHA (subject to specific FEMA regulations).[147] As presented in Table 4.4-4 (Land-Use Compatibility in 100-Year Floodplains), the County has established a "land-use compatibility chart" depicting the capability of development within designated flood zones. In accordance therewith, single-family and multi-family residential development of less than 20 units, small-scale commercial, light industry, warehousing, and parks are categorized as "provisionally incompatible" within a 100-year floodplain. Additionally, uses such as multi-family residential of 20 or more units, major commercial including large shopping centers, office buildings, health-care facilities, convalescent homes, heavy industry, and gasoline service stations would be classified as "generally incompatible."

The SBCFCD provides a process for developing within those areas. Before issuance of a grading permit for proposed on-site improvements, a FEMA-issued conditional letter of map revision[148,149] (CLOMR) or conditional letter of map amendment[150] (CLOMA) must be obtained.

[147]/ As illustrated in Figure 4.4-3 (Portions of Flood Insurance Rate Maps for a Portion of San Bernardino County), portions of the proposed development areas within Neighborhoods I, II, III, and IV are located within a mapped 100-year floodplain (i.e., Panel Nos. 06071C7905H, 06071C7910H, 06071C7920H, and 06071C7940H). As indicated therein, portions of the project site are designated as "Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood" and "Zone A" (Areas of 100-Year Flood – No Base Flood Elevation Determined).

[148]/ A conditional letter of map revision (CLOMR) is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and, thus, result in the modification of the existing regulatory floodway, the effective base flood elevations (BFEs), or the special flood hazard area (SFHA). The letter does not revise an effective National Flood Insurance Program (NFIP) map, it indicates whether the project, if built as proposed, would be recognized by FEMA. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review. Building permits cannot be issued based on a CLOMR, because a CLOMR does not change the NFIP map. Once a project has been completed, the community must request a revision to the flood insurance rate map (FIRM) to reflect the project. "As-built" certification and other data must be submitted to support the revision request.

[149]/ A CLOMR application (0609B387R) has been submitted by the Applicant to modify the mapped floodplain limits for the proposed south bank improvements and development that will be designed and constructed as a part of the LCRSP.

[150]/ A conditional letter of map amendment (CLOMA) is FEMA's comment on whether a proposed project would be excluded from the SFHA shown on the effective NFIP map. There is no appeal period. The letter becomes effective on the date sent. This letter does not revise an effective NFIP map, it indicates whether the project, if built as proposed, will be recognized by FEMA.

The SBCFCD also requires that a letter of map revision[151] (LOMR) or letter of map amendment[152] (LOMA) be obtained before a certificate of occupancy will be issued for constructed structures. Compliance with these required regulations ensure that the proposed development areas within Neighborhoods II, III, and IV will be adequately removed from the 100-year floodplain by proposed grading and/or flood control improvements before the project is permitted to grade and construct the proposed improvements.

The proposed levee improvements are not a USACE or SBCFCD-initiated action because the existing Riverside Avenue groins, levees, and other bank improvements are sufficient to confine the existing Lytle Creek floodplain. The proposed bank improvements are needed to protect the proposed development which encroaches into that floodplain. The proposed development of Neighborhoods II, III, and IV will be located within the existing floodplain and, therefore, require flood control bank improvements to protect them from the floodwaters of Lytle Creek. No USACE permit is assumed to be required for the levee's construction because the proposed flood control improvements will be located entirely within SBCFCD jurisdictional area. None of the proposed improvements are located on federally-owned lands.

Additionally, in response to existing flood hazards, an armored revetment structure is proposed along the northerly edge of Neighborhoods II, III, and IV to provide 100-year flood protection for the adjacent planning areas. The levee structure would encroach into the present 100-year flood hazard limits of Lytle Creek and redirect its existing flood flows. As a result, with the proposed east bank revetment in place, with the exception of open space, no residential or non-residential uses would be placed within a 100-year flood hazard area.

With regards to revetment improvements constructed in associated with the LCNPD, the USACE concluded that the "potential direct impacts on the creek processes and geomorphology would include (1) changes in general erosion patterns within the active floodplain, (2) influences to the natural trends for braided or meander patterns, (3) developing or influencing erosion features in other locations of the floodplain where these were not actively occurring in the existing conditions, (4) effects on the stability of other streambanks or increased erosion, and (5) adjustments to the streambed stability or modifying the existing equilibrium conditions. The most recent influences on the creek geomorphology and planforms has been associated with the in-stream grading by the local water districts to develop recharge basin within the creek. These efforts have tended to create flow barriers that have blocked and diverted flows on the smaller and more frequent storm events, resulting in shaping the channel patterns. In addition, the small scale or size of the development watershed relative to the vast regional Lytle Creek watershed demonstrates the relative insignificance of the hydrologic impacts from the project development. The Lytle Creek geomorphology is dominated by the influences of the larger upstream watershed and in particular the hydrologic response from the 51.4 square mile watershed associated with rainfall events tends to generate rather 'flashy' storm hydrographs. In addition, the enormous amount of sediment produced and delivered from the upstream watershed is the controlling factor related to the stream stability and stream mechanics processes. The influence of the development watershed on the hydraulic and geomorphic responses is limited because it's relative small percentage of the regional watershed. Also the

[151]/ A FEMA-issued letter of map revision (LOMR) is an official revision, by letter, to an effective NFIP map. A LOMR may change flood insurance risk zones, floodplain and/or floodway boundary delineations, planimetric features, and/or BFE.

[152]/ A FEMA-issued letter of map amendment (LOMA) is an official amendment, by letter, to an effective NFIP map. A LOMA establishes a property's location in relation to the SFHA. There is no appeal period. The letter becomes effective on the date sent.

dynamic nature of this type of river system and fluvial processes tends to more than dominate other external influences."[153]

The south bank levee was designed to withstand the hydraulic forces generated by the 100-year bulked flow flowrate in Lytle Creek of 64,450 cfs (representing the bulked value of the base flood of 42,580 cfs). The calculated ultimate condition flow velocities in Lytle Creek range between 10-20 feet per second (fps). The project reach has average flowline grades of 0.03 feet per foot. The flow regimes vary between subcritical and supercritical, with supercritical dominating most segments of the channel.[154] The proposed levee will provide a minimum three foot of freeboard over the base flood elevation and ultimate discharge of 64,540 cfs.[155]

In order to obtain FEMA approval, the proposed revetment improvements must be designed and constructed in accordance with FEMA's standard criteria (44 CFR 65.10).[156] As the project proposes the construction of an armored revetment structure prior to development of habitable structures, all such structures would be constructed outside of the floodplain. Compliance with the requirement to obtain either a CLOMR or CLOMA ensures that all floodplain maps reflect the level of flood protection that is provided for those areas.

The potential hydrologic impacts of construction within an existing 100-year floodplain is less than significant under CEQA because the project includes the construction of revetment improvements to remove those areas currently within an existing 100-year floodplain from exposure to future flood conditions. The Applicant's obligation to obtain a CLOMR or CLOMA from FEMA further ensures that current floodplain maps for those areas proposed for development with habitable structures which are located within an existing 100-year flood zone be revised to show that those areas have been adequately protected.

Should any area designated as a 100-year floodplain not be removed from FEMA's 100-year floodplain designation through construction of revetment improvements and the Applicant's obtaining a CLOMR or CLOMA, FEMA's floodplain standards specify that development could still proceed by increasing the elevation of those portions of the site subject to flooding to a specified elevation about flood levels and/or by other similar means.

Under existing procedures, prior to the issuance of grading permits in any portion of Neighborhoods I, II, III, and IV which is located in a FEMA-designated 100-year floodplain, the Applicant must first deliver to the City documentation, acceptable to the City Engineer, of FEMA's issuance of a CLOMR and/or CLOMA. Prior to the issuance of a letter of occupancy in

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[153]/ *Op. Cit*., Draft Environmental Assessment – (404(b)(1) Evaluation Public Interest Review, p. 35.

[154]/ Pacific Advance Civil Engineering, Inc., Preliminary Master Plan of Drainage and Stormwater Management, Lytle Creek Ranch Project, November 2007, revised October 2008, p. 20.

[155]/ *Ibid*., p. 29.

[156]/ As specified, in pertinent part, in FEMA regulations (44 CFR 65.10): "(a) General. For purposes of the NFIP, FEMA will only recognize in its flood hazard and risk mapping effort those levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with the level of protection sought through the comprehensive flood plain management criteria established by Sec. 60.3 of this subchapter. Accordingly, this section describes the types of information FEMA needs to recognize, on NFIP maps, that a levee system provides protection from the base flood. This information must be supplied to FEMA by the community or other party seeking recognition of such a levee system at the time a flood risk study or restudy is conducted, when a map revision under the provisions of part 65 of this subchapter is sought based on a levee system, and upon request by the Administrator during the review of previously recognized structures. The FEMA review will be for the sole purpose of establishing appropriate risk zone determinations for NFIP maps and shall not constitute a determination by FEMA as to how a structure or system will perform in a flood event. (b) Design criteria. For levees to be recognized by FEMA, evidence that adequate design and operation and maintenance systems are in place to provide reasonable assurance that protection from the base flood exists must be provided."

any portion of Neighborhoods I, II, III, and IV that was located in a designated 100-year floodplain prior to the issuance of a CLOMR or CLOMA or remains in a designated 100-year floodplain at the time the occupancy permit is requested, the Applicant shall first deliver to the City documentation, acceptable to the City Engineer, of FEMA's issuance of a LOMR or LOMA.

In the event of a bank failure, localized lateral erosion could occur in Neighborhoods II, III, and/or IV. Structures and improvements in the area of the failure could be damaged or threatened by encroaching floodwaters and/or erosion. Catastrophic loss of life and/or property would not, however, be anticipated.

The proposed channel improvements offer multiple factors of safety against failure. The proposed bank system will be designed for the 100-year bulked peak flow rate in Lyle Creek. This flow rate is substantially greater than the calculated runoff from the 100-year storm event. Typically, the affect of using a conservative flow rate for design provides for a greater toe-down depth, an increased minimum bank height, a larger revetment size, and/or increased revetment thickness. Those factors increase the factor of safety from failure of the proposed bank system.

Conservation efforts will be conducted on lands that have elevations that are higher than the 100-year floodplain and will be monitored by an appropriate conservation entity. Those efforts have been taken into consideration in the hydrologic studies.

Potential risks of levee failure are minimized through FEMA-imposed obligations for the preparation of a levee maintenance plan. As specified, in pertinent part, in FEMA regulations (44 CFR 65.10[d]), for levee systems to be recognized as providing protection from the base flood, the maintenance criteria must be as described. Levee systems must be maintained in accordance with an officially adopted maintenance plan and a copy of this plan must be provided to FEMA by the owner of the levee system when recognition is being sought or when the plan for a previously recognized system is revised in any manner. All maintenance activities must be under the jurisdiction of a federal or State agency, an agency created by federal or State law, or an agency of a community participating in the NFIP that must assume ultimate responsibility for maintenance. The maintenance plan must document the formal procedure that ensures that the stability, height, and overall integrity of the levee and its associated structures and systems are maintained. At a minimum, maintenance plans shall specify the maintenance activities to be performed, the frequency of their performance, and the person by name or title responsible for their performance."

> ***Environmental Impact 4-2****. Proposed drainage improvements have the potential to adversely impact the operation of those existing facilities now located within the Lytle Creek channel, including the I-15 Freeway bridge and those existing high-pressure pipelines that now traverse the wash.*
>
> ***Preliminary Determination 4-2****. Less-than-significant impact.*

With regards to the I-15 Freeway bridge, the south abutment and two piers of the existing bridge will be enclosed by the proposed flood control revetment. The encroachment into the existing floodplain will alter the current hydraulic behavior in the bridge vicinity and may affect the bridge flood conveyance and scour characteristics under the existing condition. The proposed revetment will act as the new south abutment for the bridge. Design of the toe-down has taken into account the maximum scour potential that may occur at the bridge location and will provide

an adequate protection for both the proposed project and the bridge structure.[157] In addition, there are two existing buried high-pressure gas lines that cross Lytle Creek, perpendicular to the centerline, about 1,500-feet downstream of the northbound I-15 Freeway bridge. The existing and proposed high-velocity flows in Lytle Creek have the potential to damage these gas lines. As proposed, a soil cement overpour structure will be constructed over the lines to protect them from undermining and erosion-related damage.[158] Construction and maintenance of that structure will ensure that impacts to operating gas lines remain at a less-than-significant level.

Existing SCE high-voltage transmission lines, constructed on steel-lattice towers, cross above Lytle Creek. Since those towers span the existing channel, proposed drainage improvements will not impact those facilities.

> ***Environmental Impact 4-3****. Construction activities may increase sediment discharge and/or result in the introduction of hazardous materials, petroleum products, or other waste discharges that could impact the quality of the area's surface and groundwater resources if discharged to those waters.*
>
> ***Preliminary Determination 4-3****. Less-than-significant impact.*

The proposed project's conceptual grading plan is presented in Figure 2-22 (Lytle Creek Ranch Specific Plan – Conceptual Grading Plans). As proposed, development of the proposed project would involve approximately 4.0 million cubic yards of earth movement to create the project's major building pads, the vehicular circulation system, and a network of utilities and infrastructure systems. All grading is anticipated to be balanced on the project site. The conceptual grading plan was developed to respond to the results of the preliminary geologic investigation and seeks to maintain the natural contour characteristics of the project site, to the extent feasible. Grading components include contour grading practices, preservation of significant on-site topographic features, and sensitive grading and landscaping in those areas where development transitions to park boundaries and other natural on-site and off-site features.

During and following grading, existing vegetation, debris, and unsuitable fill materials will be cleared and removed. Bare ground surface area will be exposed to potential erosional forces such as wind and rain. The existing on-site soils are moderately-to-highly erosive.[159] If proper controls are not implemented during the grading phases, siltation from exposed loose soils could be blown or washed off the site and into the adjacent segments of Lytle Creek and/or Sycamore Creek. If substantial amounts of such materials reach these watercourses, significant impacts on water quality could occur, particularly if water is flowing at the time and the materials are transported with those flows.

Eroded soil typically contains nitrogen, phosphorous, and other nutrients. When these nutrients are contained in surface runoff and transported into water bodies, algae growth can be triggered, resulting in reduced water clarity, odors, oxygen depletion, and potentially fish kills if fish inhabit the receiving waters. Deposition of sediments in streams can also add materials to stream bottoms, thereby blanketing bottom fauna and destroying or reducing aquatic animal habitats and potential spawning areas. Turbidity (cloudiness) from sediment also reduces in-

[157]/ *Ibid*., pp. 36-37.
[158]/ *Ibid*., p. 37.
[159]/ GeoSoils, Inc., Compilation of Prior GeoSoils, Inc. Fault/Seismic Investigation Data Supplemental Geotechnical Investigation and Slope Stability Analysis, Tract No. 15900, The Villages at Lytle Creek, Volume II, August 2, 1999.

stream photosynthesis, leading to reduced food supply and diminished aquatic habitats, thereby potentially disrupting or otherwise affecting the natural ecosystems within those environments.

In order to avoid or minimize these potential impacts, the Applicant is required under the provision of the 2009 General Construction Permit requirements, as adopted by the SWRCB, to prepare a management plan for the control of construction runoff, establishing adequate drainage controls to ensure that site runoff does not result in localized flooding or sediment loading both on and off the project site. That plan is included as part of the stormwater pollution prevention plan (SWPPP) that is required to be prepared and submitted in compliance with NPDES requirements for any activity that requires grading more than one acre. The SWPPP shall be submitted to and accepted by the City prior to commencement of any grading activities on areas which are one acre or greater in size and demonstrate how the Applicant will control runoff to avoid adversely affecting the performance of existing drainage facilities, such as the culverts beneath the I-15 Freeway bridge, and avoid impacting existing water quality through control of construction runoff into storm drains and other water bodies.

Water quality protection is further ensured through preparation and implementation of the BMPs that will be identified in the SWPPP to ensure that grading and construction operations involving the transport, storage, use, and disposal of a variety of construction materials, including regulated materials (e.g., diesel and gasoline fuels to power heavy equipment, paints, glues, solvents, lubricants, and other liquid and solid materials used in construction and maintenance processes), comply with certain requirements regarding the proper storage, handling and transport of these materials. BMPs also set out the means by which any accidental releases of hazardous materials would be contained, cleaned up, and reported to regulatory authorities.

Mass grading of the project site may exposed the graded land areas to aeolian and fluvial erosion. In order to reduce the amount of soil transported from the graded areas a master SWPPP will be developed to guide the implementation of BMPs commensurate with the phased development plan for the overall project.[160] The master SWPPP will define the BMPs to be implemented along with the maintenance and replacement cycles of each BMP.[161]

Compliance with 2009 General Construction Permit and SWPPP requirements will ensure that all construction activities occurring on the project site will be undertaken in a manner to assure compliance with applicable water quality standards. Implementation of BMPs will serve to effectively minimize impacts to water quality from project-related construction activities.

4.4.5.2 Operational Impacts

Environmental Impact 4-4*. The introduction of standing water on the project site, including those waters associated with the project's drainage facilities and BMPs, have the potential to introduce vector breeding habitat and harborage.*

[160]/ As specified in the proposed LCRSP: "A Stormwater Pollution Prevention Plan (SWPPP) will be prepared in accordance with the California State Water Resources Control Board Order No. 92-08-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002. This SWPPP complies with Best Available Technology (BAT) achievable and Best Conventional Pollutant Control Standards (BCT) to reduce or eliminate stormwater pollution from areas of construction activity. The SWPPP document will be certified in accordance with the signatory requirements of Standard Provisions C.9 in the State General Construction Permit."

[161]/ Typical BMPs for control of erosion on mass graded areas include the application of a soil binder to those graded areas that will be exposed for a period of time exceeding 30-days before production begins on that impacted area.

Preliminary Determination 4-4*. Potentially significant unless mitigation incorporated.*[162]

As indicated in the Applicant's SWQMP, structural and treatment control BMPs include dry extended detention basins, wet ponds/basins, wetland filters, a recirculating stream with pond biofiltration system, and vegetated swales. These elements have the potential to introduce standing water on the project site. As indicated in the CASQA Handbook: "The potential of a BMP to create vector breeding habitat and/or harborage should be considered when selecting BMPs. Mosquito and other vector production is a nuisance and public health threat. Mosquitoes can breed in standing water almost immediately following a BMP installation and may persist at unnaturally high levels and for longer seasonal periods in created habitats. BMP siting, design, construction, and maintenance must be considered in order to select a BMP that is least conducive to providing habitat for vectors."[163]

Arthropod-borne viruses (arboviruses) are viruses that are maintained in nature through biological transmission between susceptible vertebrate hosts by blood-feeding arthropods, including mosquitoes, sand flies, ceratopogonids and ticks. In the United States, West Nile virus (WNV) is transmitted by infected mosquitos, primarily members of the *Culex* species. The most serious manifestation of WNV infection is fatal encephalitis in humans and horses, as well as mortality in certain domestic and wild birds. WNV has also been a significant cause of human illness in the United States. Arboviral encephalitis can be prevented through the use of personal protective measures to reduce contact with mosquitoes and through public health measures to reduce the population of infected mosquitoes in the environment.[164]

WNV is a member of the family *Flaviviridae* (genus *Flavivirus*). Thirty-six species of mosquito species have been shown to be infected with WNV.[165] This wide variety of WNV-infected mosquito species has widened this virus' host-range in the United States, such that 27 mammalian species have been shown to be susceptible to WNV infection and disease has been reported in twenty of these (including horses and humans).[166] The San Bernardino County Vector Control Program (SBCVCP), along with DHS and the Centers for Disease Control and Prevention (CDC), has developed a comprehensive monitoring and surveillance plan to detect WNV in the County and limit residents' risk of exposure. The SBCVCP routinely tests for WNV in sentinel chicken flocks maintained at various sites in the county and mosquito populations collected throughout the County.[167] In 2006, squirrels testing positive for WNV where identified in Crestline and Big Bear City and birds testing positive for WNV were identified in the Cities of Loma Linda and San Bernardino.[168]

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[162]/ Prior to mitigation, the applicable or potentially applicable threshold standard relative to this preliminary determination includes, but may not be limited to, the initial conclusion that the proposed project could have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

[163]/ California Stormwater Quality Management Association, California Stormwater Best Management Practices Handbook for New Development and Redevelopment, January 2003, updated September 30, 2004, p. 5-23.

[164]/ United States Department of Health and Human Services, Center for Disease Control and Prevention, Division of Vector-Borne Infectious Diseases, West Nile (http://www.cdc.gov/ncidod/dvbid/westnile/index.htm).

[165]/ Modern mosquito control practices integrate a diversity of management practices, including the use of environmentally sound larvicides, biological control agents, and habitat management.

[166]/ United States Department of Health and Human Services, Center for Disease Control and Prevention, Epidemic/Epizootic West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control, Division of Vector-Borne Infectious Diseases, 2003, p. 5.

[167]/ San Bernardino County Environmental Health Services (http://www.co.san-bernardino.ca.us/dehs/vectorcontrol/westnilevirusinfo.htm).

[168]/ County of San Bernardino, Department of Public Health, Press Release: West Nile Found in New Areas in San Bernardino County, August 31, 2006.

Urban storm water runoff regulations now mandate the construction and maintenance of structural BMPs for both volume reduction and pollution management. Those BMPs can create additional sources of standing water and sources for mosquito propagation. Design and maintenance of BMP structures has been shown to contribute to the production of vectors. In addition, without proper maintenance, storm water BMP structures can degrade and experience a degradation of their pollutant-removal efficiency. Stagnant water with a high concentration of organic material can attract mosquitoes. In general, any design that includes standing water or requires more than 72 hours to drain serves as a source of mosquitoes and other vectors. Aquatic habitats that last only three to five days generally do not generally allow for the complete development of mosquito larvae. In California, the general recommendation has been for structures to drain completely in 72 hours or less.

Structural damage can reduce BMP performance and create conditions allowing for standing water. The accumulation of vegetation, silt, and debris within structures predicates the need for routine maintenance to prevent the occurrence of standing water.[169]

In 1998, the California Department of Health Services' Vector-Borne Disease Section (VBDS) entered into an agreement with Caltrans to provide technical expertise regarding vector issues within its storm water BMP retrofit pilot study. As part of that study, VBDS conducted a two-year study of vector production associated with the 37 operational storm water BMP structures in southern California. The study concluded that a variety of vector species, particularly mosquitoes, utilize the habitats created by storm water BMP structures.

To prevent mosquito and other vector production, the dry extended detention basins were designed using a 24-hour drawdown time. That drawdown time represents the minimum acceptable time for water quality detention. As proposed, the wet ponds will always have water in them as well as any recirculating streams associated with the wet pond(s). The water in the wet ponds will be recirculated and will be stocked with mosquito fish for vector control. Circulating or flowing water disrupts the maturity cycle of mosquito larvae. A mitigation measure (Mitigation Measure 4-1) has been formulated requiring the preparation, by the Applicant, or a routine inspection plan for possible vector harborage. As mitigated, the potential for vector breeding would be reduced to a less-than-significant level.

***Environmental Impact 4-5**. Storm water and non-storm water runoff have the potential to impair downstream receiving waters, particularly in Lytle and/or Sycamore Creeks.*

***Preliminary Determination 4-5**. Potentially significant unless mitigation incorporated.*[170]

Storm water runoff from the site includes storm water runoff, irrigation water overflows, and urban runoff from residential lots, retail development, open space, school and streets. As indicated in Table 4.4-7 (Existing Site Storm Water Runoff Pollutants), the pollutants of concern for Lytle Creek, as it currently exists today in the pre-developed condition, are pathogens. As

[169]/ Metzer, Marco E., *et al*., The Dark Side of Stormwater Runoff Management: Disease Vectors Associated with Structural BMPs, Stormwater – The Journal for Surface Water Quality Professionals, Volume 3, No. 2, March/April 2002.

[170]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project would: (1) substantially degrade water quality; (2) violate any water quality objectives promulgated by the SARWQCB and contained in that water quality control plan applicable to the project site; and (3) cause or substantially contribute to exceedances of receiving water quality standards (designed beneficial uses and water quality objectives) contained in the Basin Plan and amendments thereto or surface or ground water.

indicated in Table 4.4-5 (Pollutants of Concern for Project Categories and Land Uses),[171] based on the proposed development, additional anticipated storm water pollutants likely include bacteria/virus, nutrients, pesticides, sediment, trash and debris, organic compounds, oxygen demanding substances, metals and oil and grease. Bacteria will require an offset for any additional loading from the proposed project to ensure no further degradation of the impaired water body. However, the proposed treatment train of BMPs will capture and treat dry-weather runoff and the target water quality volume or water quality flow for 2-year or less storm events before the storm water reaches Lytle Creek.

The treatment control BMPs will consist of: (a) dry extended detention basins; (b) wet ponds/basins; (c) wetland filters; and (d) vegetated swales. The target capture volume of runoff for each watershed area was calculated using the guidelines presented in the Model WQMP (Attachment D). The basins were designed using a volume-based BMP design criteria. The function of these water quality BMPs is to properly manage storm water runoff that contain on-site pollutants which will potentially cause a decline in water quality, in addition to reducing erosion and sedimentation. Since the storm water runoff from this proposed development will drain downstream of the project into Lytle and Sycamore Creeks, efforts are made to ensure proper on-site water quality management.

The proposed project will not impact stream habitat at the downstream receiving waters. Erosion and sedimentation will be prevented at the downstream receiving waters by the placement of outfall structures from the BMP basins as well as energy dissipaters at the outlets of the overflow storm drain pipes that discharge into Lytle Creek for storm events larger than the 2-year storm event. The BMP basins will also capture the target water quality volume of storm water runoff from the developed area and contain the runoff before release into Lytle and Sycamore Creeks.

As proposed, each of the planned neighborhoods will include on-site storm water management system improvements. These improvements will consist of a closed conduit storm drain system (capable of conveying debris from the off-site watershed, on-site closed conduit storm drain, and/or open channel conveyance systems) and a water quality management system to treat non-storm and small storm runoff before discharge to Lytle and Sycamore Creeks.

As described in Section 2.6.4 (Storm Water Quality Management Plan), the project's proposed SWQMP is composed of structural and treatment control BMPs that will treat storm and non-storm runoff (dry-weather runoff) to reduce pollutants of concern from the on-site watershed prior to discharging to Lytle and/or Sycamore Creeks. The BMPs will be sized in accordance with guidelines established in California Stormwater Quality Association's (CASQA) "Stomwater Best Management Practice Handbook"[172] (CASQA Handbook).

The BMPs to be constructed as a part of the proposed project are dry extended detention basins, wet ponds/basins, wetland filters, and vegetated swales. Treatment capacity and pollutant removal efficiency, along with expected pollutant loading from a particular typical land use, were considered in selecting and placing BMPs. The wet pond and dry extended detention BMPs were preliminarily sized according to the requirements of the NPDES Permit.

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[171]/ Pacific Advanced Water Engineering, Water Quality Management Plan (WQMP), for Lytle Creek Ranch Neighborhood I-4, February 2008.

[172]/ California Stormwater Quality Association, Stormwater Best Management Practice Handbook, January 2003.

The wetland filters with biofiltration have much higher treatment capacity and removal efficiency than the standard General Construction Permit BMPs provided in the CASQA Handbook. Biofiltration is a technology that comes from water treatment plant treatment processes. Biofiltration provide a high surface area media to allow for the colonization of benefical bacteria. A low velocity flow of untreated water is introduced to the media and beneficial bacteria. The beneficial bacteria eat the bacteria and other pollutants (such as hydrocarbons). The beneficial bacteria are sustained by the pollutants within untreated water. As such, as opposed to passive treatment where settling and degradation of pollutant constituents occur over time, biofiltration is an active form of treatment.

These BMPs have been preliminarily sized based on long-term studies of the performance of these BMPs as constructed on past projects throughout California. Because it will receive polluted runoff discharged from the on-site storm drain system, the water quality management system will treat the target water quality storm volume and/or dry-weather non-storm runoff from the on-site watershed only. Because the basins are not on a passive bypass storm drain system but rather on a direct connection to the main storm drain system, each basin will be surcharged in a larger storm event with a runoff volume potentially exceeding the basin capacity. Each basin will, therefore, include an overflow spillway to discharge excess captured runoff safely downstream to a receiving channel to be conveyed to Lytle or Sycamore Creeks. Each water quality basin spillway will be constructed from a suitable armoring material (e.g., site rock, grout, concrete, turf reinforcement matting, or combination thereof). The water quality basin spillways, as illustrated in Figure 2-17 (Lytle Creek Ranch Specific Plan Master Drainage Plan), have been preliminarily sized using the broad crested weir equation ($Q= CLH^{1.5}$).

All off-site flows tributary to all the neighborhoods will be captured in a separate off-site storm drain system. The off-site storm drain system will convey debris-laden flow from the tributary watershed to Lytle and Sycamore Creeks. The off-site storm drain system is not tributary or connected to any detention basins or BMP basins.

In addition to the basins, filters, and swales, several of the source control BMPs[173] listed in the CASQA Handbook will be implemented Source controls, such as public education, planning management, material use controls, material exposure and disposal controls, spill prevention and clean-up, illegal dumping controls, and street/storm drain maintenance controls must, however, be put in place. As a result, in addition to those structural and treatment control BMPs presented in the SWQMP, a number of source control measures have been identified and a mitigation measure formulated (Mitigation Measure 4-2) requiring the inclusion of those measures during the project's operational life.

Those long-term BMPs proposed by the Applicant which will be incorporated into project plans and future subdivision maps will provide a range of effective measures to reduce the concentrations of water contaminants that enter into and outlet from the project's storm drain system. The success of these measures, however, can only be determined through actual monitoring of water quality at the project outlet locations over time once discharge to those facilities have commenced. Regular monitoring will enable identification of excessive pollutant levels so that appropriate corrective measures can be taken, if deemed to be required. Monitoring has been included as a recommended mitigation measure (Mitigation Measure 4-3) and will constitute an on-going obligation upon the proposed project.

[173]/ Source control BMPs are operational practices that prevent pollution by reducing potential pollutants at the source. They typically do not require maintenance or construction.

***Environmental Impact 4-6**. Project plans include the construction of new levee systems adjacent to Lytle Creek. In addition, project implementation will result in the introduction of impervious surfaces and, as a result of the impedance of opportunities for absorption and infiltration of those waters, has the potential to increase the quantity, velocity, and duration of storm waters discharged from the project site.*

***Preliminary Determination 4.6**. Potentially significant unless mitigation incorporated.*[174]

Because the project is located in the southwestern portion of the County, the slope of intensity duration curve used in the analysis was 0.6. The 100- and 25-year rainfall intensities were 1.48 inches/hour and 1.0 inch/hour, respectively. The on-site watershed subareas for the existing and proposed conditions were delineated based on the existing topography, proposed grading, and entry points into the existing and proposed drainage system. Table 4.4-12 (Summary of Existing and Proposed Conditions – Lytle Creek Peak Discharge) summarizes the pre-project and post-project 100-year discharges by neighborhood.[175] Watershed changes are illustrated in Figure 4.4-24 (Lytle Creek Ranch Specific Plan - Master Drainage Plan – Watershed Changes).

Table 4.4-12
SUMMARY OF EXISTING AND PROPOSED CONDITIONS
LYTLE CREEK PEAK DISCHARGE[1]

Neighborhood	Existing			Proposed			Delta		
	Area (acres)	100-Year Discharge (cfs)		Area (acres)	100-Year Discharge (cfs)		Area (acres)	100-Year Discharge (cfs)	
		Q	Q Bulk		Q	Q Bulk		Q	Q Bulk
I	1,423.93	1,961	2,942	1,423.93	2,011	2,489	0	50	(453)
II	1,024.80	888	1,776	616.07	1,262	1,262	(408.73)	374	(514)
III	658.10	516	1,032	559.43	1,213	1,215	(98.67)	697	183
IV	1,197.41	1,554	2,331	1,197.31	1,782	2,422	(0.10)	228	91

Notes:
1. In order to compare the impact of existing Vs proposed, watershed models are confluence at single nodes even though they are discharged into Lytle Creek at different locations.

Source: Pacific Advanced Civil Engineering, Inc.

Differences in pre-project and post-project conditions are mostly due to the construction of the proposed levee improvements along Neighborhoods II and III. Under existing conditions, certain lands within Lytle Creek are currently part of the watersheds for Neighborhoods II and III. The proposed levee improvements would provide a barrier preventing runoff in the creek from encroaching into Neighborhoods II and III. As a result, certain lands that are tributary under existing conditions would no longer be tributary under the proposed conditions. Runoff from those lands would remain within the creek rather than encroaching into Neighborhoods II and III.

[174]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project would: (1) substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on the site or off the site; and (2) substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on the site or off the site.

[175]/ *Op. Cit*., Preliminary Master Plan of Drainage and Stormwater Management, Lytle Creek Ranch Project, p. 5.

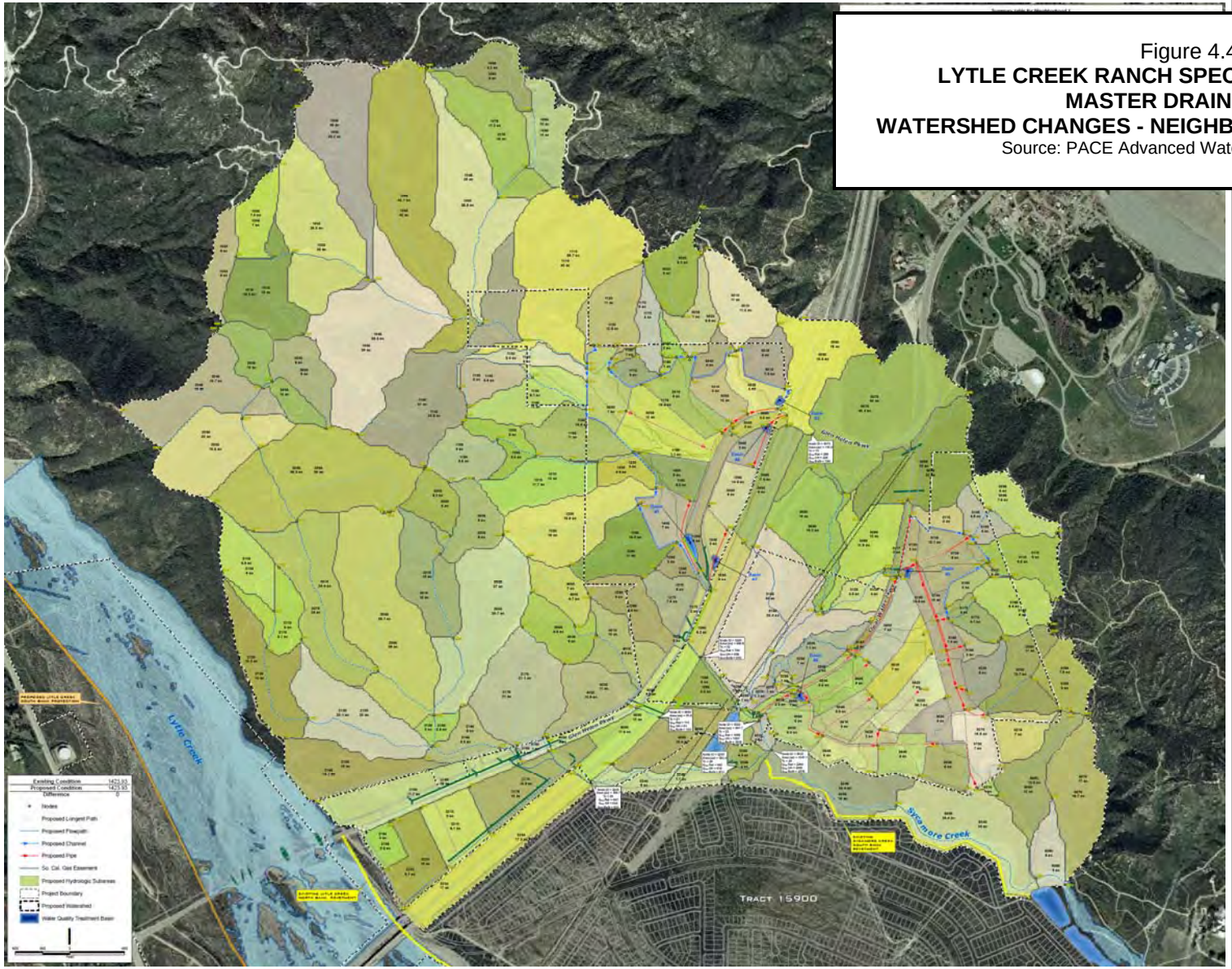

Figure 4.4-24 (1 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
MASTER DRAINAGE PLAN
WATERSHED CHANGES - NEIGHBORHOOD I
Source: PACE Advanced Water Engineering

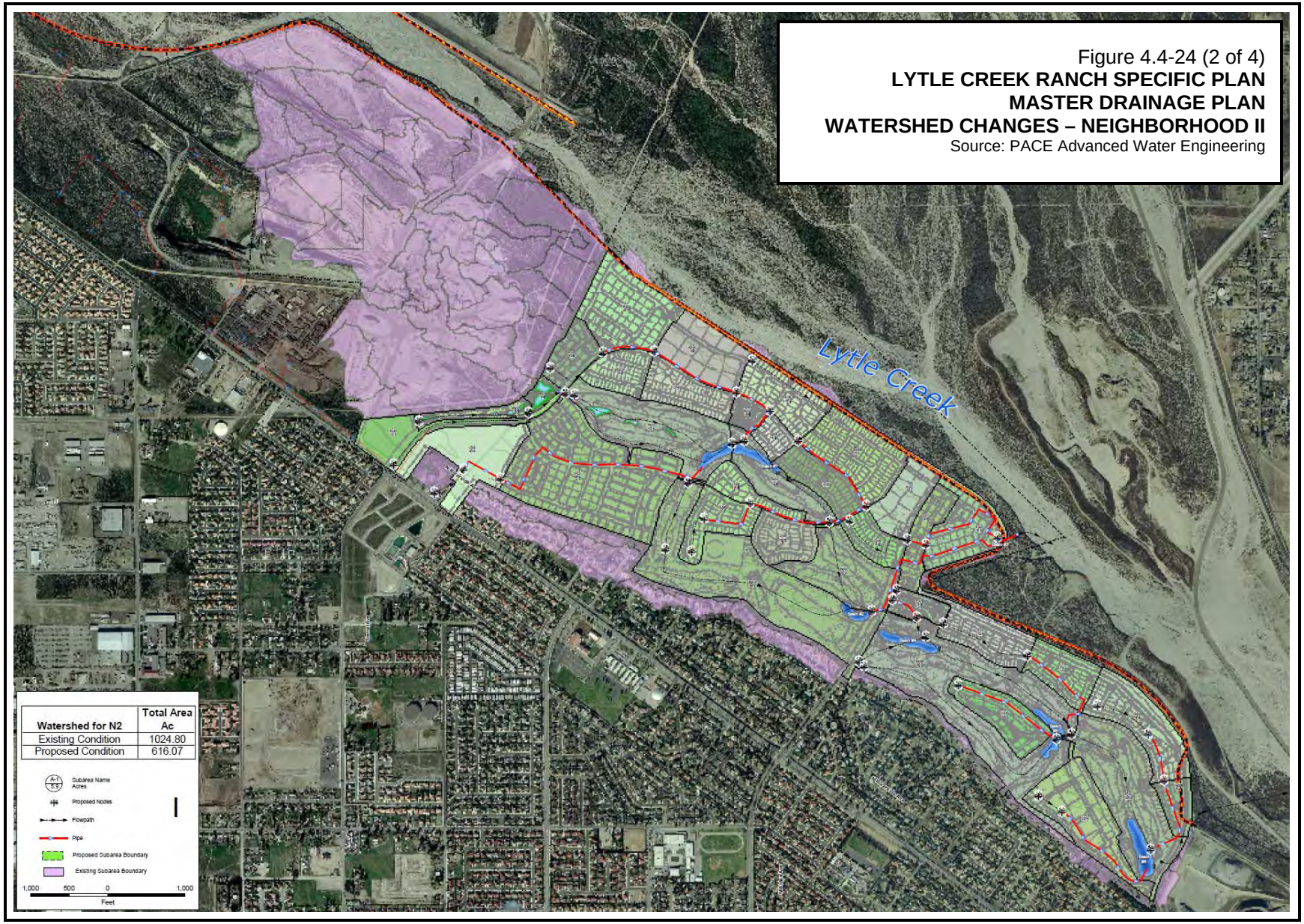

Figure 4.4-24 (2 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
MASTER DRAINAGE PLAN
WATERSHED CHANGES – NEIGHBORHOOD II
Source: PACE Advanced Water Engineering

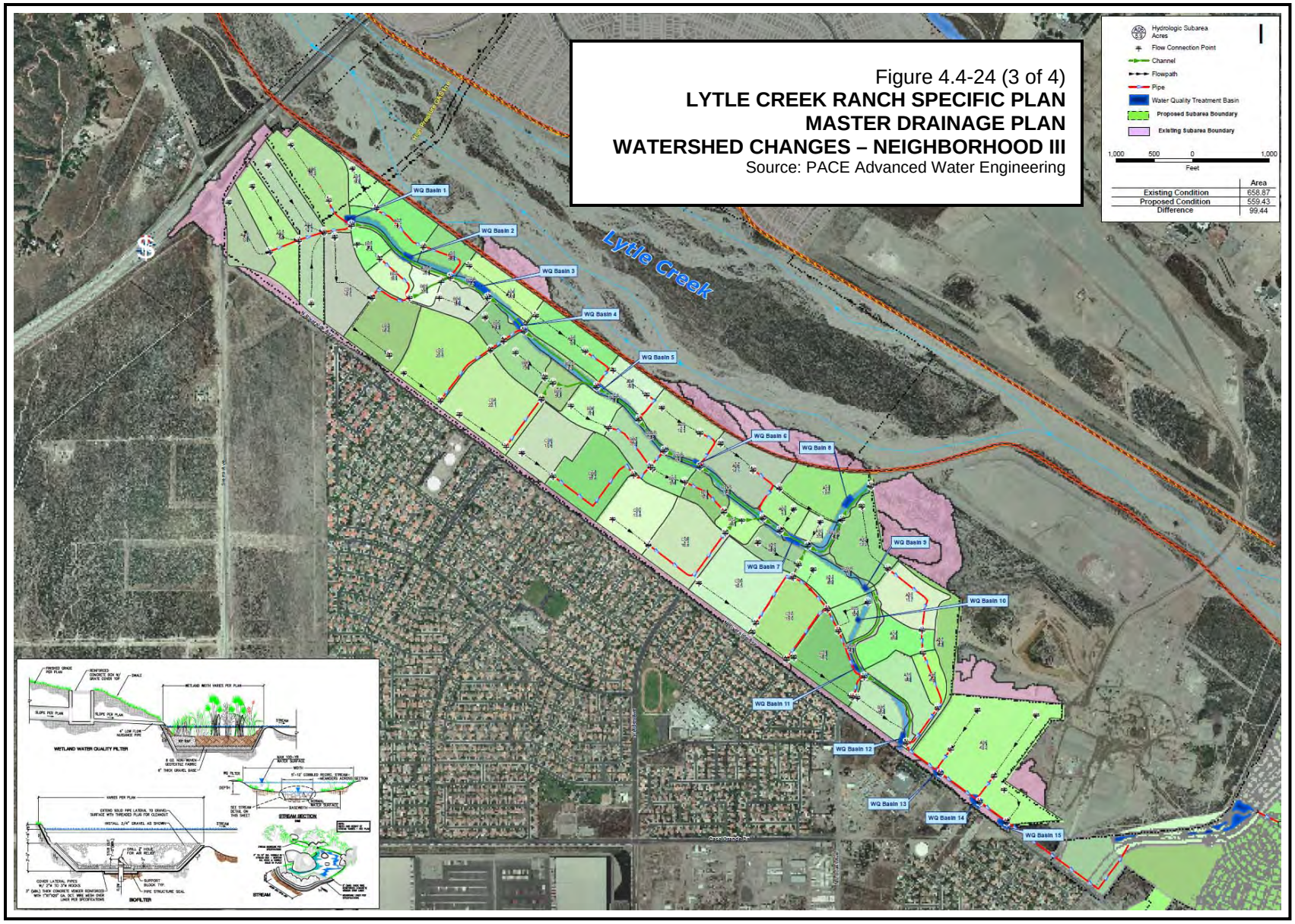
Figure 4.4-24 (3 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
MASTER DRAINAGE PLAN
WATERSHED CHANGES – NEIGHBORHOOD III
Source: PACE Advanced Water Engineering
Hydrologic Subarea
Acres
Flow Connection Point
Channel
Flowpath
Pipe
Water Quality Treatment Basin
Proposed Subarea Boundary
Existing Subarea Boundary
1,000 500 0 1,000
Feet
Area
Existing Condition 658.87
Proposed Condition 559.43
Difference 99.44
Lytle Creek
WQ Basin 1
WQ Basin 2
WQ Basin 3
WQ Basin 4
WQ Basin 5
WQ Basin 6
WQ Basin 7
WQ Basin 8
WQ Basin 9
WQ Basin 10
WQ Basin 11
WQ Basin 12
WQ Basin 13
WQ Basin 14
WQ Basin 15
WETLAND WATER QUALITY FILTER
STREAM SECTION
BIOFILTER

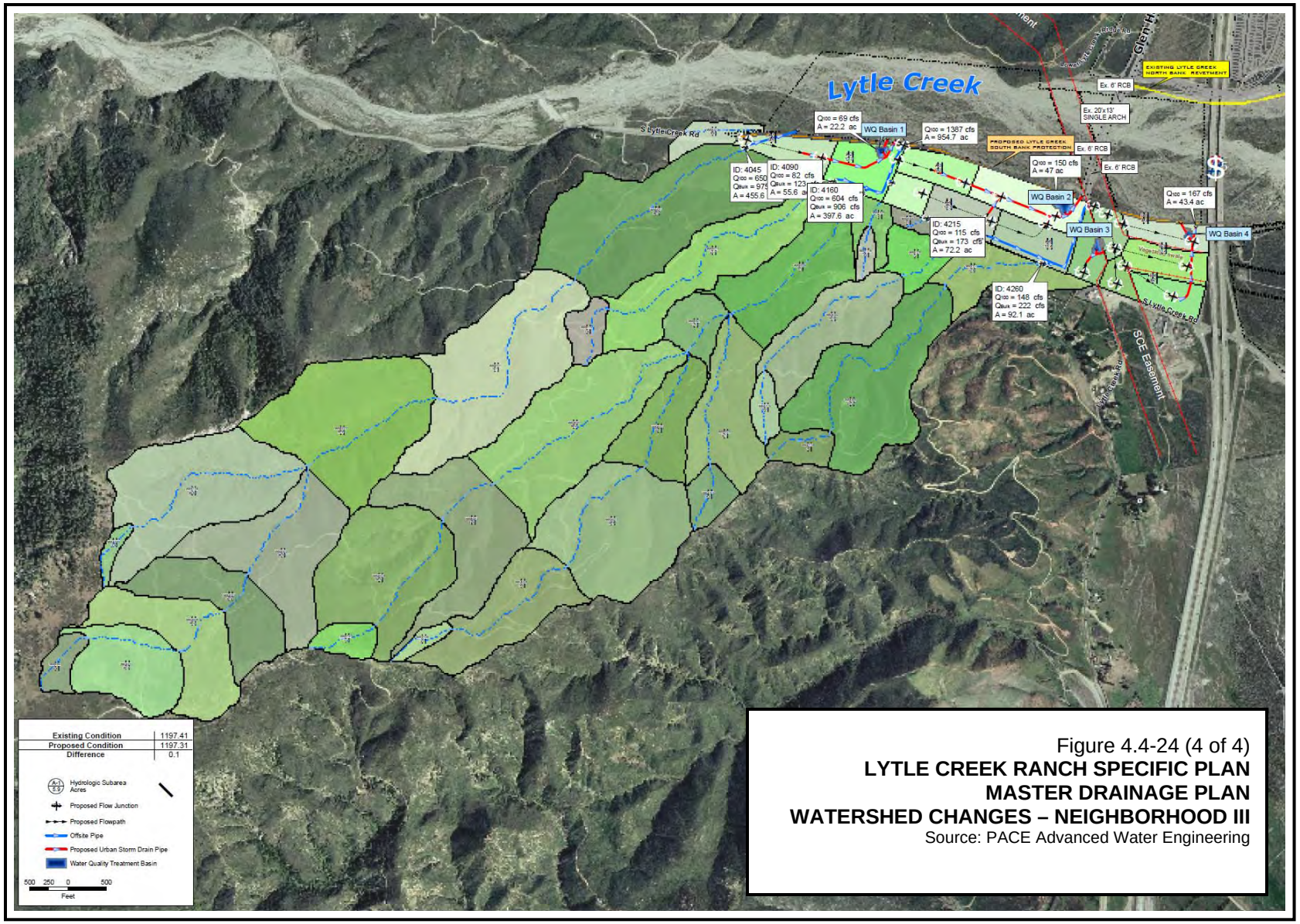

Figure 4.4-24 (4 of 4)
LYTLE CREEK RANCH SPECIFIC PLAN
MASTER DRAINAGE PLAN
WATERSHED CHANGES – NEIGHBORHOOD III
Source: PACE Advanced Water Engineering

The Cemex USA quarry is tributary to Neighborhood II in the existing condition; however, the conceptual grading plan shows a proposed fill slope that would be constructed between the quarry and Neighborhood II. This slope would prevent runoff from the quarry area from flowing into Neighborhood II (as it currently does). It is assumed that runoff from the quarry area would be directed northerly to Lytle Creek, resulting in a reduction in watershed area under the proposed condition. In addition, there is a small parcel of land within the Caltrans' ROW that is currently tributary to the Neighborhood III watershed. It is assumed that, when the site is developed, runoff from the Caltrans' ROW would be captured and conveyed directly to the creek, resulting in a reduced watershed area for Neighborhood III under the proposed condition.

In the proposed condition, as measured at the point of discharge to Lytle Creek, the peak flow rates from the project watersheds are increased and the time of concentration is reduced compared to the existing condition. This net increases in peak flow rates and reduction in time of concentration, however, are less-than-significant to the regional peak flow rates in Lytle Creek that would be expected in the same storm event due to the offset of peaks of the regional watershed hydrograph and the local watershed hydrograph, as measured at the point where the local watersheds discharge to Lytle Creek. The average time of concentration (Tc) for the local watersheds discharging to Lytle Creek is approximately thirty minutes.[176]

Those development activities authorized under the LCRSP will result in the introduction of impervious surfaces. With the resulting decrease in infiltration,[177] there will be an increase in storm water runoff to surface waters, including Lytle and Sycamore Creeks. Under pre-project conditions, the 100-year storm discharge to Lytle and Sycamore Creeks is estimated at 5,799 and 2,028 cfs, respectively. The post-project 100-year storm discharge to Lytle and Sycamore Creeks is 7,789 and 2,028 cfs, respectively. This represents a 34 percent increase for Lytle Creek and a 26.8 percent increase for Sycamore Creek. Based on the size of the regional watershed, the increased calculated flow rate through the on-site area will have no substantive effect on the receiving creek hydrograph and is, therefore, less than significant.

Project implementation, including the introduction of impervious surfaces, will result in a concentration of flows, increase flow velocities, and shorten the time of concentration. Energy dissipaters will be constructed at the outfall locations of each storm drain. To provide a local armoring of the creek and to protect creek inverts from local erosion at the storm drain outfalls, the proposed energy dissipaters could be constructed from existing on-site rocks.

The project's storm water control system is designed to hold the 2-day, 1-hour storm, as well as dry-weather flows. Surface flow through the water quality control system will result in some infiltration as the water flows through the series of planned dry detention basins and biofilters. Water not infiltrated will result in increased run-off to Lytle and Sycamore Creeks. Dry weather flows, including nuisance water not present before the proposed development, will be infiltrated and evaporated. Since Lytle Creek consists of highly permeable materials, with a percolation rate of approximately 3 feet/day, the additional water discharged to Lytle and Sycamore Creeks will be recovered by infiltration and become groundwater recharge.[178]

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[176]/ *Ibid*.

[177]/ The total estimated change in infiltration from existing to proposed project conditions amounts to a decrease of just less than 300 acre-feet per year.

[178]/ Geoscience Support Services, Inc., Evaluation of Ground Water Impacts from the Proposed Lytle Creek Ranch Development, September 30, 2008, pp. 15-17.

In order to ensure that people and structures are not subjected to significant flood hazards, the project proposes the construction of an armored revetment structure along the northerly edge of Neighborhoods II, III, and IV to provide 100-year flood protection for the adjacent areas from potential flooding impacts of Lytle Creek. The proposed project has also been designed to capture and treat urban runoff from new development areas to ensure that discharge of storm water runoff downstream of the project site into Lytle and Sycamore Creeks does not increase the velocity of peak flows in those creeks during storm events. The project includes measures to ensure that, where feasible, storm water runoff is captured on the project site and infiltration promoted so as to minimize the volume of storm water runoff discharged into the creeks. Features such as vegetated swales have been designed to capture runoff and provide for infiltration, and treatment and dissipation prior to discharge into receiving waters.

In order to ensure that people and structures are not subjected to significant flood hazards, a mitigation measure (Mitigation Measure 4-4) has been formulated to provide specific standards by which the engineering plans for the armored revetment must comply in order to assure that impacts from creek flows are reduced to a less-than-significant level.

> ***Environmental Impact 4-7****. Four groundwater infiltration ponds, used by the Fontana Water District, are presently located in Neighborhood II (PAs 82, 91 and 92). The areas where those ponds are located are proposed for "Single-Family Residential 3 (SFR-2) (8-14 du/ac)," High Density Residential (HDR) (25-35 du/ac)," and "Village Center Commercial (VC)" development. The existing infiltration ponds will be relocated and incorporated into the design of Neighborhood II.*
>
> ***Preliminary Determination 4-7****. Less-than-significant impact.*

As indicated in the "Mining Reclamation Revision for Lytle Creek Quarry Reclamation Plan (93M-04), CA Mine ID#91-36-0040" (September 3, 2008), the Lytle Creek Water Conservation Association (LCWCA) was formed through a court order and consists of water agencies that have interests in the Lytle Creek watershed. LCWCA has historically operated and maintained groundwater and surface water facilities for the benefit of the member water supply agencies. In 2004/2005, storm flows from Lytle Creek damaged LCWCA's diversion facilities and those facilities' ability to recharge.[179]

In correspondence from the LCWCA to Cemex USA, dated July 21, 2008, the LCWCA noted: "It is our understanding that Cemex is in the process of amending its existing mining permit with the County of San Bernardino, to allow for additional mining extraction and use of the mining pits for groundwater recharge and water conservation. . .the LCWCA endorses the concept of constructing groundwater recharge facilities within the mining area. Cemex has agreed to locate diversion facilities on its property and provide additional recharge areas on a long term basis. This plan will allow for the recharge of historical and potential additional storm flows to benefit the Lytle Groundwater Basin and avoid use of imported water for recharge."

[179]/ The LCWCA is made up of the following seven member agencies, the City of San Bernardino Municipal Water Department, the Cities of Rialto and Colton, the Fontana Union Water Company, the West Valley Water District, the Riverside Highland Water Company, and the Terrace Water Company. The LCWCA technical advisory group (TAG) is a management-level group of LCWCA member agency water purveyors that perform and oversee water resource studies, operations and maintenance, agreements, and develop consensus policy for the Lytle Creek Basin. LCWCA has been the association that has implemented groundwater recharge in the Lytle Creek Basin. Prior to the combined seasonal storms of the mid 1990's and 2004/2005, which destroyed the recharge basins, the LCWCA maintained approximately 43 acres of basins for recharge. These basins provided approximately 13,000 acre-feet/year of recharge within the Lytle Creek Basin.

Under the provision of a "Memorandum of Understanding" (MOU) to be entered into between Cemex USA (mining operator), the San Bernardino County Special Districts Department's (SBCSDD) (wastewater treatment plant operator), the Lytle Creek Water Conservation Association (overlying water purveyors), and the Lytle Development Company (LDC), in order to augment and offset the lack of available reclaimed water within the project area, as proposed, the project's implementation would serve to assist in providing additional groundwater recharge within the Lytle Creek Basin.

The existing mining operation is situated between Neighborhoods II and III and just upstream from the SBCSDD's Lytle Creek North Wastewater Recycling Plant (Lytle Creek North WRP) discharge into Lytle Creek.

The SBCSDD manages and oversees the Lytle Creek North WRP just downstream of the Cemex USA quarry on the northerly side of Lytle Creek which lies within County Service Area (CSA) 70-GH. As part of the discharge permitting requirements for that facility, the California Regional Water Quality Control Board, Santa Ana Region (SARWQCB) ordered the County to develop a total dissolved solids[180] (TDS) plan as part of its waste discharge requirements (WDRs) under Order No. R8-2007-0004[181] (stipulating that a TDS offset program be developed and implemented that will enable the SBCSDD offset discharges of TDS from the LCNWRP that exceed the Lytle Creek Basin water quality objective of 260 mg/L and current ambient concentration of 240 mg/L).[182]

The proposed TDS offset for the Lytle Creek North WRP consists of enhanced recharge of the Lytle Creek surface water stream flows diverted during wet weather. The Lytle Basin has been used by the LCWCA member agencies and has proven to be a prime area for enhanced stream-flow recharge, due to the low TDS concentration of the Lytle Creek surface water (approximately 160 mg/L to 180 mg/L and averaging 169 mg/L), and currently there are no engineered diversions of surface waters into artificial recharge basins. The volume of higher quality water recharged will be blended within the Lytle Basin such that the TDS of the total volume of water recharged from the stream-flow spreading basins and plant discharges will not exceed the effluent limitations of the WDRs.

The Cemex USA mining operations vary within the mining property and does not work all of the property concurrently but on a rotating basis leaving areas unused for years at a time. As part of a revised mining permit application, Cemex USA has agreed to participate in the recharge program by providing two separate spreading basins. One of the basins will be located in the North Pit and one in the South Pit on a rotating schedule, depending on material availability and production needs. Each of these areas is more than double the capacity of the historic spreading basins within Lytle Creek. Those spreading basins (totaling approximately 43 acres), which are operated by the LCWCA, were recently destroyed by storm events. Each of two pits

[180]/ High salt and nitrate concentrations are two long-standing groundwater quality issues in the SAR watershed. Sources of elevated levels include mineral content in the sediments, recharge and drainage patterns, source water quality, irrigation, wastewater discharges, and historic land uses. Managing levels of TDS in groundwater basins is a significant challenge as the recycling of wastewater increases in the watershed. Each cycle of residential water use typically adds approximately 200 mg/L of salt to the water (Source: Santa Ana Watershed Project Authority, 2009 Integrated Watershed Plan: An Integrated Regional Water Management Plan – Moving Toward Sustainability, January 29, 2009, pp. 177 and 179).

[181]/ California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2007-0004, Waste Discharge and Producer/User Water Recycling Requirements for he San Bernardino County Special Districts Department – Lytle Creek North Wastewater Recycling Plant, April 20, 2007.

[182]/ In lieu of assigning assimilative capacity under the WDRs to the LCNWRP, the SARWQCB has mandated the TDS offset program as part of the adopted WDRs Order No. R8-2007-0004.

will provide approximately 80 acres of spreading basins and are expected to yield approximately 24,000 AF/Y of basin recharge on a rotating basis.[183] The historic 43-acre spreading basins provided approximately 13,000 AF/Y.[184]

- **South Pit**. In collaboration with Cemex USA, under the proposed LCRSP, the construction and repair of the South Pit levee (permitted by Cemex USA) will be undertaken. The South Pit levee will include three flow control inlet pipe and valve assemblies to allow high surface water flows into the South Pit. The inlet of the three flow control valves will have a flow diversion area with a barrier directing flows to the valves. The South Pit will be divided into four ponds by using native pit bottom material to build three soft division berms for flow control distribution.

  Potential impacts to Lytle Creek for the construction of the South Pit levee were identified within the County's levee permit and mitigation outlined within that permit. Basin construction within the South Pit is permitted under Cemex USA's existing mining operation permit. Upon implementation of the proposed project, the South Pit levee will be extended northerly.

- **North Pit**. The necessary flow control inlets and valves for the North Pit were permitted and constructed under the previous North Pit levee and basin construction within the "North Pit" is allowed under the Cemex USA's existing mining permit.

With regards to wastewater discharge from Neighborhood I, potential impacts to downstream water quality were analyzed in "Antidegradation Study for the Proposed Lytle Creek North Wastewater Reclamation Plant, Including the Lytle and Bunker Hill-A Basins."[185] Additional information relating to this subject can be found in "Evaluation of Ground Water Impacts from the Proposed Lytle Creek Ranch Development"[186] and "Ground Water Technical Report,"[187] including the technical referenced cited therein.

4.4.5.3 Cumulative Impacts

***Environmental Impact 4-7**. Development of the project, in conjunction with other foreseeable related projects, will collectively contribute to surface flows within the Lytle and Sycamore Creek areas and will result in the introduction of additional urban pollutants that could affect the beneficial uses of existing surface and groundwater resources.*

[183]/ LCWCA, Cemex USA, and County CSA 70 GH will be charged with monitoring, operations, and maintenance of the basins.

[184]/ The proposed project includes extending the Lytle Creek levee joining the Cemex USA South Pit. The levee permit will cover work in Lytle Creek and the Cemex USA operating permit will cover South and North Pits flow contour and directional grading. The North Pit utilization for percolation in the future will start when Cemex USA starts mining the South Pit and will be handled under the Cemex USA operating permit. Cemex USA agrees to utilize North and South Pits for percolation of Lytle Creek surface water on a rotating basis around its materials mining operations which will increase the recharge gross from about 43 acres to more than 150 acres.

[185]/ Geoscience Support Services, Antidegradation Study for the Proposed Lytle Creek North Wastewater Reclamation Plant, Including the Lytle and Bunker Hill-A Basins, July 21, 2004.

[186]/ Geoscience Support Services, Evaluation of Ground Water Impacts from the Proposed Lytle Creek Ranch Development, September 30, 2008.

[187]/ Roberson Water Consulting, Ground Water Technical Report – Lytle Creek Ranch Specific Plan, San Bernardino County, March 2008.

***Preliminary Determination 4.7**. Less-than-significant impact.*

Although a substantial portion of the project site will be retained as open space, the conversion of this primarily vacant site to a more urbanized use will generate additional urban runoff that would be discharged into Lytle and Sycamore Creeks. These impacts could affect both surface and groundwater downstream of the project site and could adversely affect the water quality of groundwater resources that provide a water supply source to a number of private and municipal water systems that are dependent upon that water source. The project will, however, be required to implement BMPs and fully comply with all applicable State water quality laws and regulations.

In addition, other related projects that may occur within the general project area may produce cumulative water quality impacts. Those related projects will, however, be required to implement BMPs and fully comply with all applicable State water quality laws and regulations. As such, because all related projects must fully comply with applicable water quality requirements, cumulative impacts would not manifest at a level of significance.

Although conversion of the project site to a more urbanized use will generate additional urban runoff that would be discharged into Lytle and Sycamore Creeks, the effects of the proposed project on hydrology and water quality would not be cumulatively considerable.

4.4.6 Recommended Mitigation Measures

- **Mitigation Measure 4-1**. Prior to the approval of any subdivision map (except for an "A" level map for financing purposes only) in which dry extended detention basins or wet ponds are located, the Applicant shall prepare and, when acceptable, the City Engineer shall accept an inspection plan for each of the basins demonstrating that routine inspections for possible vector harborage will be performed monthly within 72 hours after a storm event or under such alternative inspection schedule as may be determined by the City Engineer.

- **Mitigation Measure 4-2**. Source Control BMPs. The following source control BMPs, or such other comparable measures as may be established by the City Engineer, shall be imposed for subsequent subdivisions maps approved by the City within the project boundaries.

  (1) The master homeowners' association (HOA) and/or property owners' association (POA) will be given a copy of the SWQMP. Annually, the representatives of the HOA/POA, their employees, landscapers, property managers, and other parties responsible for proper functioning of the BMPs shall receive verbal and written training regarding the function and maintenance of the project's BMPs. The homeowners will be provided annual notices of water quality issues through an association-published newsletter.

  (2) Vegetated buffer strips shall be properly maintained with vegetation but not over fertilized. These grass swales or vegetated buffer zones shall be placed between driveways and streets to capture runoff from driveways containing vehicle oils and other vehicle-related pollutants.

(3) Resident education and participation will be implemented to manage pollutants that contribute to biological oxygen demand. For example, residents shall be encouraged to keep pets on leashes and to remove feces in order to limit organic material in storm water runoff. Residents shall be further encouraged to irrigate their properties at certain times of the day in order to limit nuisance flow runoff carrying pesticides and other organic material.

(4) Vehicle leak and spill control shall be implemented by educating and requiring vehicle and equipment maintenance, proper vehicle and maintenance fueling, and education of how to handle accidental spills. Stringent fines shall be applied to those who violate these requirements and participate in illegal dumping of hazardous material. Street and storm drain maintenance controls shall be put in place with signs posted prohibiting illegal dumping into street and storm drains.

(5) Household hazardous waste collection facilities shall be put into place for proper disposal of fertilizers, pesticides, cleaning solutions, paint products, automotive products, and swimming pool chemicals. Proper material storage control shall be encouraged to keep materials from causing groundwater contamination, soil contamination, and storm water contamination.

- **Mitigation Measure 4-3**. Water Quality Monitoring. Prior to the issuance of any grading permits, the Applicant shall submit, and when acceptable, the City Engineer shall approve, a long-term water monitoring program designed to ensure that the project's proposed BMPs meet or exceed applicable water quality standards established by the California Regional Water Quality Control Board, Santa Ana Region (SARWQCB) and contained in the then current NPDES Permit. In accordance with that program, the Applicant shall institute regularly testing of the water quality at the storm drainage outlets within Lytle and Sycamore Creeks. If the monitoring program's test results determine that the water quality standards established by the SARWQCB are not being met, corrective actions acceptable to the SARWQCB and the City Engineer shall be promptly taken to improve the quality of surface runoff discharged from the outlets to a level in compliance with the adopted SARWQCB standards.

- **Mitigation Measure 4-4**. Final Design Plans. Prior to the issuance of grading permits in Neighborhoods II, III, or IV, final design plans for the proposed Lytle Creek flood control revetment shall be submitted to, and when deemed acceptable, approved by the City Engineer. As determined by the City Engineer, the final design of the Lytle Creek flood control revetment shall provide adequate structural protection for affected I-15 Freeway bridge structures. Design for the toe-down of the Lytle Creek west bank revetment shall take into account the maximum scour potential that may occur at the I-15 Freeway bridge to ensure that adequate protection is provided for both adjacent on-site and off-site development area and the bridge structure.

4.4.7 Significant Unavoidable Adverse Effects

As mitigated and with implementation of those BMPs designed to control on-site water quality from storm water and non-storm water runoff and erosion and sediment, the proposed project would not be expected to significantly impact downstream receiving waters at Lytle and Sycamore Creeks. Approval of final flood control facilities by the City Engineer will ensure that flood hazards are reduced to a less-than-significant level.

4.5 BIOLOGICAL RESOURCES

Issues considered under this biological resource assessment include, but are not limited to, potential impacts to terrestrial and aquatic resources. Terrestrial biological resources encompass impacts to State and federally protected species and other sensitive species as well as their habitats, sensitive vegetation communities, and wildlife corridors. Aquatic resources include impacts to State and federal jurisdictional water such as streams, lakes, drainages, creeks, vernal pools, and marshes and aquatic habitats such as wetlands and riparian areas.

4.5.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- Glenn Lukos Associates, Jurisdictional Delineation for the Lytle Creek Ranch Property, 2,447.30-Acre Property Located in the City of Rialto and Unincorporated Portions of San Bernardino County, California, February 8, 2008, revised October 9, 2008, revised March 25, 2009, revised April 20, 2009 (see Appendix III-E).
- PCR Services Corporation, Addendum to the Biological Resources Assessment for the Lytle Creek Ranch Specific Plan (September 2009), September 29, 2009 (see Appendix III-D-A).
- PCR Services Corporation, Biological Resources Assessment, Lytle Creek Specific Plan, City of Rialto, San Bernardino County, California, September 2009 (see Appendix III-D-B).

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.5.2 Regulatory and Policy Setting

As part of the proposed project's review and approval, a number of performance criteria and standard conditions must be met, including compliance with those terms, provisions, and requirements of applicable laws that relate to federal, State, and local regulatory agencies governing impacts to sensitive habitats, sensitive plant and wildlife species, wetlands, riparian habitats, and stream courses. Special status species are those plants or animals which are recognized by the United States Fish and Wildlife Service (USFWS) and/or the California Department of Fish and Game (CDFG) as being "rare," "endangered," or "threatened."

4.5.2.1 United States

The following information presents a general discussion of certain federal statutes, regulations, and related policies that may be applicable to an understanding of the proposed project's regulatory and policy setting.

- **Federal Endangered Species Act of 1973**. Generally speaking, "take" of a species listed under the Federal Endangered Species Act (16 U.S.C. 1531-1543) (FESA) as "threatened" or "endangered" is prohibited without a permit or USFWS authorization.

"Take" is defined under FESA as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification as forms of "take" under certain circumstances.

Section 7 and Section 10 of the FESA provide for incidental "take" permitting processes; that is, they provide processes wherein "take" incidental to an otherwise lawful activity may be permitted in certain circumstances and under certain conditions. Section 7 may be used for projects with a federal nexus (e.g., projects which require a federal permit or receive federal funds). Section 10 may be used for private projects without a federal nexus. If there is not a federal nexus, a property owner whose actions are expected to "take" a federally listed species is required to prepare a habitat conservation plan (HCP) for such listed species and obtain an "incidental take" permit to ensure that the action would not jeopardize the continued existence of the listed species.

Under Section 7 of the FESA, federal agencies, in consultation with and with the assistance of USFWS or National Marine Fisheries Service (NMFS) are required to "insure that any action authorized, funded, or carried out by such agency. . .is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined. . .to be critical, unless such agency has been granted an exemption" (16 U.S.C. 1536[a][2]). For federal projects or, in many cases, for private projects requiring some form of federal action, authorization, or funding, Section 7 allows for consultation between the acting agency and the USFWS to determine what measures may be necessary to compensate for the incidental take of a listed species. If a listed species or federally-designated "critical habitat" for that species occurs in a portion of the project subject to federal jurisdiction or activity [such as within "waters of the United States" (WoUS)], then consultation under Section 7 is usually permissible (and may be required). When an agency requests formal consultation under Section 7, a formal report ("biological opinion") is prepared giving the USFWS or the NMFS opinion about whether the agency action is "likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat" (16 U.S.C. 1536[b][3] and 50 CFR 402.14[h]). If the USFWS or NMFS answers those questions in the negative, it will issue an "incidental take statement" that authorizes a specified level of take by the project.

Critical habitat is a regulatory term (used in the FESA) which is intended to guide the actions of federal agencies and which refers to specific geographic areas that are essential for the conservation of a threatened or endangered species and that may require special management considerations.[1] Critical habitat designation does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other special conservation area. It does not allow governmental or other public access to private

[1]/ As specifically defined in Section 3 of the FESA: "The term 'critical habitat' for a threatened or endangered species means (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the [Federal Endangered Species] Act, on which are found those physical or biological features. . .(a) Essential to the conservation of the species; and. . .(b) Which may require special management considerations or protection; and. . .(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species." Section 3(3) defines "conservation" as "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this [Federal Endangered Species] Act are no longer necessary."

lands and does not close areas to access or use. Critical habitat designations placed on privately-owned lands do not impose any particular obligations on those owners or on non-federal agencies or require the modification of any of their activities on or use of those lands. Federal agencies must consult with the USFWS on activities they undertake, fund, or permit that may affect critical habitat. Critical habitat is determined using the best available scientific and commercial information about the physical and biological needs of the species, after taking into consideration the economic impact and any other relevant impact of specifying any particular area as critical habitat.

For this project, it is expected that the United States Army Corps of Engineers (USACE) will consider issuing a permit under the Federal Clean Water Act (CWA). This agency action is expected to result in the USACE's consulting with the USFWS on the effect of such action with regards to the San Bernardino kangaroo rat (SBKR) and least Bell's vireo (LBV), both of which have been recorded within the approximately 2,466.5 acre "LCRSP study area."[2,3]

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[2]/ Due to the various project-specific, site-specific, and/or area-specific biological studies conducted as part of or referenced in this biological resource analysis, several distinct "study areas" are referenced in this analysis. For purposes of this analysis, the following "study areas" are defined as and include:

(1) The "LCRSP study area" (2,466.5 acres) includes both the 2,447.3-acre project site and the following additional "off-site" acreage (totaling 19.2 acres): (a) an approximately 2.3-acre road easement located under the I-15 Freeway, (b) an approximately 3.6-acre existing SoCalGas easement located north of Neighborhood I on County-owned property, (c) an approximately 2.6-acre existing utility road situated near the southeastern end of Neighborhood II, (d) an approximately 10.1-acre area associated with proposed improvements to an off-site levee north of Neighborhood II, and (d) areas north of Neighborhood IV and south of Neighborhood II that will be temporarily impacted during levee construction totaling approximately 0.6 acre. Excluded from the LCRSP study area is the additional 0.7 off-site acre area associated with the existing Lytle Creek Road right-of-way which will be impacted as a result of the removal and replacement of storm drain facilities south of Neighborhood IV. As these improvements will be made within existing developed areas, no biological resource impacts associated with these improvements are anticipated. Therefore, because of the already disturbed and developed character of this 0.7 off-site acre right-of-way, it has not been included within the LCRSP study area. It should be noted, that the 2,447.3-on-site acre project site includes the existing 216.8-acre SBKR Conservation Area previously set aside for SBKR habitat in connection with the LCNPD.

(2) The "jurisdictional delineation study area" (2,467.2 acres) includes both the 2,447.3-acre project site and the additional off-site acreage (totaling 19.9 acres). For purposes of the delineation, however, the jurisdictional delineation study area recognizes that a 137.8-acre portion was previously addressed as part of the LCNPD (Tract 15900). Approximately 46.0 of these 137.8 acres were found to contain some jurisdictional areas. All jurisdictional impacts to those 46.0 acres have already been completed, the required mitigation implemented, and no additional impacts are proposed under the LCRSP. As for the remaining 91.8 acres, they were found not to contain either State of federal jurisdictional waters.

(3) The "biological cumulative impacts study area" (BCISA or regional study area) (187,127 acres) is a geographically defined area which has been included in this analysis for purposes of establishing a biologically relevant context for the proposed project's impacts analysis. Because of the nature of the species and habitat present on the project site, use of either the City's jurisdictional boundaries or a list of related projects was determined to not provide a sufficiently broad area in which similar biological resources would be affected, the geographic extent was established to encompass the open space within southwestern San Bernardino County. This area is defined to be bordered by Haven Avenue on the west, the lower elevation slopes of the mountains leading into the Angeles and San Bernardino National Forests on the north, and generally and inclusive of, the Jurupa Mountains and the Santa Ana River to the south and east, respectively. This area contains a regional complex of relevant habitats, species' populations, and biological systems. The acreages assessed within the BCISA include potentially suitable habitat available for species dependent upon Riversidean alluvial fan sage scrub (RAFSS) (31,502 acres), grassland and agriculture (5,766 acres), chaparral (25,981 acres), and riparian (1,237 acres). For RAFSS, the assessment also examined cumulative impacts in the broader context of the distribution of all RAFSS (including Los Angeles, San Bernardino, and Riverside Counties), and the broader context of all alluvial fan sage scrub within the coastal southern California floristic province including Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties.

With regards to the LCRSP study area, critical habitat has been designated for the SBKR. Under the 2008 revised critical habitat designation, Unit 2 (Lytle/Cajon Creek Wash) encompasses approximately 3,421 acres in San Bernardino County. This unit contains habitat along and between Lytle and Cajon Creeks, from the 1-15 Freeway bridge and underpass in Lytle Creek and Kenwood Avenue/Cajon Boulevard junction in Cajon Creek downstream to Highland Avenue. As illustrated in Figure 4.5-1 (San Bernardino Kangaroo Rat Critical Habitat Designation within the LCRSP Study Area), Unit 2 (as revised) contains about 1,212 acres within the LCRSP study area.[4]

Hydro-geomorphological processes that apparently rejuvenate and maintain the dynamic mosaic of alluvial fan sage scrub are largely intact in Lytle and Cajon Creeks and the remaining habitat allows dispersal between those drainages. Federal agencies considering actions on those lands within this unit are to consider whether such lands may require special management considerations or protection to minimize impacts associated with flood control operations, water conservation projects, sand and gravel mining, urban development, or other activities.

- **Federal Clean Water Act**. Section 404 of the Federal Clean Water Act (CWA) established a program regulating the discharge of dredged and fill material into waters of the United States (WoUS), including wetlands. The USACE is authorized to issue permits to allow for such discharges in compliance with and consistent with the CWA. WoUS are generally defined under the CWA as rivers, creeks, steams, and lakes extending to their headwaters and any associated wetlands. The permit review process entails an assessment of potential adverse impacts to USACE jurisdictional WoUS and wetlands. The basic premise of the program is that no discharge of dredged or fill material should be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. Project proponents must first show that they have taken steps to avoid, where practicable, wetland impacts, minimized potential impacts to WoUS, and provided compensation for any remaining, unavoidable impacts through activities to restore, enhance, or create WoUS.

  Regulated activities are controlled by a permit review process administered by the USACE. For those projects that have the potential to produce significant impacts, an individual permit may be required. For many projects, however, the USACE administers a nationwide permit (NWP) program establishing an expedited permit process for particular categories of activities (e.g., minor road crossings, utility line backfill, and bedding). Generally, an individual permit is required if over 0.5 acres of WoUS or if over 300 linear feet of jurisdictional non-ephemeral waters will be affected. In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters (such as rivers, lakes, and intermittent streams) extends to the ordinary high water mark (OHWM).[5]

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[3]/ An approximately 137.8-acre portion of the LCRSP study are were previously entitled as part of the LCNPD (Tract No. 15900) and impacts to those areas were previously analyzed and mitigated in the County-certified Lytle Creek North FEIR.

[4]/ No other critical habitat for any other listed species occurs within the LCRSP study area.

[5]/ The OHWM is defined as "that line on the shore established by the fluctuation of water indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." The USACE defines wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR

Unless otherwise exempt under a NWP, project proponents for federal permits that involve dredge or fill activities in surface waters (including wetlands) are required to obtain certification from the State verifying that the proposed activity will comply with applicable State water quality standards. Project proponents must concurrently apply for a Section 401 water quality certification stating that the proposed project will not violate the State's water pollution control laws. In California, Section 401 certification actions are the responsibility of the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

The mission of the RWQCB is to develop and enforce water quality objectives and implement plans which will best protect the beneficial uses of the State's waters, recognizing local differences in climate, topography, geography, and hydrology. Section 401 of the CWA requires that "[a]ny applicant for a federal permit for activities that involve a discharge to waters of the state, shall provide the federal permitting agency a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act." Before the USACE will issue a Section 404 permit, project proponents must apply for and receive a Section 401 water quality certification from the SWRCB or the applicable RWQCB. An application for a Section 401 water quality certification will typically include a conceptual water quality management plan addressing the project's key water quality features and ensuring the integrity of water quality during and post-construction.[6]

- **Rivers and Harbors Act**. Section 10 of the Rivers and Harbors Act (33 U.S.C. 401 *et seq.*) (RHA) requires authorization from the USACE for the construction of any structure in or over any navigable WoUS, the excavation and/or dredging or deposition of material in these water, or any obstruction or alteration in a "navigable water."[7] "Navigable

328.3[b]). In accordance with the Corps's "Wetland Delineation Manual" (1987) and subsequent guidance provided in the "Arid West Interim Regional Supplement" (2006), a wetland ecosystem must possess wetland hydrology and support hydrophytic vegetation and hydric soils. Over the years, the USACE has modified their regulations, typically due to evolving policy or judicial decisions, through the issuance of Regulatory Guidance Letters (RGL), memorandum, or more expansive instructional guidebooks. These guidance documents help to update and define how jurisdiction is claimed and how these WoUS will be regulated. The most recent modification was issued on June 26, 2008 in the form of RGL No. 08-02, which defines the use, review criteria, and applicability of requesting an "Approved or Preliminary Jurisdictional Determination." The most significant modification in recent years was issued on June 5, 2007, when the USACE and the United States Environmental Protection Agency (USEPA) jointly issued a series of guidance documents outlining the requirements and procedures, effective immediately, to establish jurisdiction under Section 404 of the CWA and the Section 10 of the Rivers and Harbors Act. These documents are intended to be used for all jurisdictional delineations but also provide specific guidance for the jurisdictional determination of potentially jurisdictional features affected by the United States Supreme Court rulings in Rapanos v. the United States and Carabell v. the United States (jointly referred to as Rapanos). The Rapanos case outlines the conditions and criteria utilized by the Corps to assess and claim jurisdiction over non-navigable, ephemeral tributaries. Under a plurality ruling, the court noted that certain "not relatively permanent waters" (i.e. ephemeral), non-navigable tributaries must have a "significant nexus" to downstream traditional "navigable waters of the U.S." to be jurisdictional. An ephemeral tributary has a significant nexus to a downstream "navigable water of the U.S." when it has "more then a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity" of a traditional "navigable water of the U.S." A significant nexus is established through the consideration of a variety of hydrologic, geologic, and ecological factors specific to the particular drainage feature in question.

[6]/ Under separate authorities granted by State law (Porter-Cologne Water Quality Control Act), the SWRCB or applicable RWQCB may assert jurisdiction over dredge or fill activities within non-federal, State waters through issuance of waste discharge requirements (WDRs). Processing of WDRs is similar to that of a Section 401 water quality certification and, addressing impacts to non-federal waters, may be streamlined within the Section 401 process at the SWRCB's or applicable RWQCB's discretion.

[7]/ Section 10 of the RHA and Section 404 of the CWA overlap in some activities involving wetlands. Permits for activities regulated under both statutes are processed simultaneously by the USACE.

waters" of the United States are those subject to the ebb and flow of the tide shoreward to the mean high water mark and/or presently used or having been used in the past or are susceptible for use to transport interstate or foreign commerce. The term includes coastal and inland waters, lakes, rivers, and streams that are navigable, and the territorial seas.

- **Federal Migratory Bird Treaty Act**. Unless otherwise permitted by statute, the Federal Migratory Bird Treaty Act (16 U.S.C. 703-711) (MBTA) makes it unlawful to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird included in the terms of this Convention. . .or any part, nest, or egg of any such bird."

4.5.2.2 State of California

The following information presents a general discussion of certain State statutes, regulations, and related policies that may be applicable to an understanding of the proposed project's regulatory and policy setting.

- **California Endangered Species Act**. The California Endangered Species Act (Section 2050 *et seq*., California Fish and Game Code) (CESA) establishes the policy of the State to conserve, protect, restore, and enhance threatened and endangered species and their habitats and to acquire lands for such species.[8] The CESA prohibits the "take" of State-listed threatened and endangered species without appropriate authorization. The CESA defines the term "take" more narrowly than does FESA, such that some habitat modification actions that might constitute prohibited "take" under FESA might not qualify as prohibited "take" under CESA. For projects that affect both a State and federally-listed species, compliance with the FESA will satisfy the CESA if the California Department of Fish and Game (CDFG) determines that the federal incidental take authorization is consistent with the CESA under Section 2080.1 of the California Fish and Game Code (CFGC). For projects that result in a take of a State-listed species that is not also federally listed, a take permit must be obtained under Section 2081(b) or other applicable provisions of the CFGC.

- **California Fish and Game Code**. Some potentially relevant components of the CFGC are separately discussed below.

  - ◊ **Streambed Alteration Agreement**. Under Sections 1601-1616 of the CFGC, persons, agencies, or other project operators are required to notify the CDFG prior to implementing any activities that will substantially divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the CEQA

[8]/ The CESA defines an "endangered" species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease". The State defines a "threatened" species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts."

process. When an existing fish or wildlife resource will be substantially and adversely affected, the CDFG is required to propose reasonable project measures to protect the resource. These modifications are formalized in a streambed alteration agreement (SAA) with the project operator.

◊ **Statutes Protecting Certain Birds and Mammals**. Section 3503 of the CFGC states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulations made pursuant thereto." Section 3513 states that it is "unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA."

Some sensitive mammals and birds are protected by the State as "fully protected mammals" or "fully protected birds," as described in Sections 4700 and 3511 of the CFGC, respectively. California "species of special concern" (CSC) are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. The CDFG maintains a "special animals" list that is updated bi-annually with the current status of sensitive wildlife species. This list is primarily a working document for the CDFG's CNDDB project. Informally listed taxa are not protected per se but warrant consideration in the preparation of biotic assessments for CEQA compliance and other purposes. For some species, the CNDDB is only concerned with specific portions of the species' life history (e.g., roosts, rookeries, or nest sites).

◊ **California Native Plant Protection Act**. The California Native Plant Protection Act (Sections 1900-1913, CFGC) (NPPA) requires all State agencies to utilize their authority to carry out programs to conserve endangered and rare native plants. Provisions of the NPPA prohibit the taking of State-listed plants from the wild and require notification of the CDFG at least ten days in advance of any change in land use. Additionally, Sections 1901 and 1913 provide that notification is required prior to ground disturbance that would result in the removal of threatened or endangered plant species. Notification allows the CDFG to salvage listed plant species that would otherwise be destroyed.

4.5.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **San Bernardino County General Plan**.[9] The Conservation Element contains general information concerning the biological resources within the Valley Region. The County

[9]/ In 1998, the County and 15 participating cities signed a "Memorandum of Understanding" (MOU) with the USFWS and CDFG to participate in the development of a "San Bernardino Valley-Wide Multi-Species Habitat Conservation Plan," with a target date for approval by the end of 2000. No public documents have been prepared and the planning efforts for that HCP do not appear to be active at this time.

General Plan notes that the "dominant aquatic feature within the Valley Region is the Santa Ana River watershed. The upstream reaches are located within San Bernardino County. Key riverine resources within the area are Day Creek, Etiwanda Creek, Sevaine Creek, Lytle Creek, Cajon Wash, San Timoteo Wash, and Mill Creek. The Santa Ana Watershed Planning Authority identified several of these riverine resources as 'Essential Resource Conservation Areas' within the County."[10,11]

In the context of the proposed project, those biological resource goals, objectives, and programs presented in the County General Plan that appear to be most closely related to the unincorporated County portion of the LCRSP study area are presented below.

- Goal CO2. The County will maintain and enhance biological diversity and healthy ecosystems throughout the County.

  - ◊ Policy CO2.1. The County will coordinate with State and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs.

    Programs. (1) All County Land Use Map changes and discretionary land use proposals, for areas within the Biotic Resource Overlay or Open Space Mapping on the Resources Overlay, shall be accompanied by a report that identifies all biotic resources located on the site and those on adjacent parcels, which could be adversely affected by the proposal. The report shall outline mitigation measures designed to eliminate or reduce impacts to identified resources. An appropriate expert such as a qualified biologist, botanist, herpetologist or other professional "life scientist" shall prepare the report. (2) The County shall require the conditions of approval of any land use application to incorporate the County's identified mitigation measures in addition to those that may be required by State or federal agencies to protect and preserve the habitats of the identified species. This measure is implemented through the land use regulations of the County Development Code and compliance with CEQA, CESA, [F]ESA and related environmental laws and regulations. (3) The County shall coordinate with local, State, and federal agencies to create a specific and detailed wildlife corridor map for the County of San Bernardino. The map will identify movement corridors and refuge areas for large mammal, migratory species, and desert species dependent on transitory resource based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting land use conversion within County jurisdictional areas. The

[10]/ *Op. Cit*., San Bernardino County General Plan, Conservation Element, p. V-3.

[11]/ As indicated by the Santa Ana Watershed Project Authority (SAWPA), Lytle Creek is among the list of 17 areas which "have been identified by watershed planning participants as vital areas for acquisition and conservation" (Source: Santa Ana Watershed Project Authority [EIP Associates], Santa Ana Integrated Watershed Plan, Volume 2: Environmental and Wetlands Component, 2002, pp. 10 and 101). The area illustrated therein is located to the south of the confluence of Cajon and Lytle Creeks (*Ibid*., Figure 3-4, p. 103). The inclusion of Lytle Creek on that list does not constitute a policy declaration by the SAWPA that the illustrated portion of Lytle Creek constitutes an "essential resource conservation area."

mapping will be included in the Open Space and Biological Resource Overlays.

◊ Policy CO2.2. Provide a balanced approach to resource protection and recreational use of the natural environment.

◊ Policy CO2.4. All discretionary approvals requiring mitigation measures for impacts to biological resources will include the condition that the mitigation measures be monitored and modified, if necessary, unless a finding is made that such monitoring is not feasible.[12]

Programs. The County shall require all new roadways, roadway expansion, and utility installations within the wildlife corridors identified in the Open Space and Biological Resource Overlays to provide suitable wildlife crossings for affected wildlife. Design will include measures to reduce or prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats. A qualified biologist will assist with the design and implementation of wildlife crossings including culverts, overcrossings, undercrossings, and fencing.

- **San Bernardino County Development Code**. As specified in Section 82.11.010 of the County Development Code: "The Biotic Resources (BR) Overlay established by Section 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) implements [County] General Plan policies regarding the protection and conservation of beneficial rare and endangered plants and animal resources and their habitats, which have been identified within unincorporated areas of the County." The BR Overlay shall be applied to those areas that have been identified by the County, State, or federal agencies as habitat for species of unique, rare, threatened, or endangered species or their habitats, as listed in the County General Plan (Section 82.11.020). Specific application requirements (Section 82.11.030) and conditions of approval (Section 82.11.040) are required when a land use is proposed or an existing land use is increased by more than 25 percent of disturbed area within a BR Overlay.

  As illustrated in Figure 4.1-9 (San Bernardino County General Plan – Portion of the Biotic Resources Overlay Map), the LCRSP study area is not located within a designed BR Overlay district. As further illustrated in Figure 4.1-10 (San Bernardino County General Plan – Open Space Element/Resources Overlay), a portion of the LCRSP study area is designated as a "wildlife corridor" in the County General Plan.

4.5.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

[12]/ *Op. Cit*., San Bernardino County General Plan, Conservation Element, pp. V-15 through V-18.

- **City of Rialto General Plan**. The City General Plan acknowledges that, as with all urban areas, habitat areas in the City have been highly modified from their once pristine condition. In the context of the proposed project, those biological resource goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

  - Goal 1.1. Conserve, protect and enhance the natural resources in Rialto to ensure their optimal use and support to the benefit of all present and future citizens of Rialto.[13]

  - Goal 6.1. Conserve and enhance Rialto's biological resources, facilitating development in a manner which reflects the characteristics, sensitivities and constraints of these resources.

    - ◊ Policy 6.1.1. Designate those areas along Lytle Creek which may contain rare or endangered species as "Biological Resource Management Areas."

    - ◊ Policy 6.1.2. Require that all proposed development in these "Biological Resource Management Areas" be subject to a biological study, to be prepared by a qualified professional, to determine whether there will be any impact to rare, threatened or endangered species, and identify mitigation measures where appropriate.

    - ◊ Policy 6.1.5. Pursue voluntary open space, wildlife corridors, or conservation easements to protect sensitive species or their habitats.[14]

  Applicable or potentially applicable biological resource policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. No City Municipal Code excerpts are cited herein.

4.5.3 Environmental Setting

4.5.3.1 Regional Setting

Global Climate Change

With regards to global climate change, the "Proceedings of the National Academy of Sciences" (PHAS) recently presented scientific evidence regarding global warming. The report did not speculate as to the cause of global warming but, among other issues, presented the following conclusions regarding the likely impacts of global climate change on biological diversity: "Global warming is now 0.6°C in the past three decades and 0.8°C in the past century. It is no longer correct to say 'most global warming occurred before 1940.' A better summary is: slow global warming, with large fluctuations, over the century up to 1975, followed by rapid warming at a rate ≈0.2°C per decade. Global warming was ≈0.7°C between the late 19th Century (the earliest

[13]/ *Op. Cit*., City of Rialto General Plan, Conservation Element, p. X-1.
[14]/ *Ibid*., p. X-13 and X-14.

time at which global mean temperature can be accurately defined) and 2000, and continued warming in the first half decade of the 21st Century is consistent with the recent rate of +0.2°C per decade."

The PHAS study concluded that "the planet as a whole, is approximately as warm now as at the Holocene maximum and within ≈1°C of the maximum temperature of the past million years. We [the study's authors] conclude that global warming of more than ≈1°C, relative to 2000, will constitute 'dangerous' climate change as judged from likely effects on sea level and extermination of species. . .Extinctions are already occurring as a result of various stresses, mostly human-made, including climate change. . .Some species are less mobile than others, and ecosystems involve interactions among species, so such rates of climate change, along with habitat loss and fragmentation, new invasive species, and other stresses are expected to have severe impact on species survival."[15]

As reported by the Intergovernmental Panel on Climate Change (IPCC), there is medium confidence that approximately 20-30 percent of species assessed are likely to be at increased risk of extinction if increases in global warming exceed 1.5-2.5°C (relative to 1980-1999). As global average temperature increase exceeds about 3.5°C, model projections suggest significant extinction (40-70 percent of species assessed) around the globe.[16]

South Coast Linkages Report[17]

In November 2000, a one-day wildlife conference sponsored by The Nature Conservancy, the California Wilderness Coalition, the California Department of Parks and Recreation, and the United States Geological Survey lead to the publication of a report, entitled "Missing Linkages: Restoring Connectivity to the California Landscape,"[18] which identified 232 "habitat linkages" throughout California and the subsequent establishment of a non-profit organization calling itself the South Coast Wildland (SCW). The identification of "habitat linkages" by SCW neither constitute an adopted government plan nor does it result in any regulation of land uses within or adjacent to those identified areas. Accordingly, SCW's linkages proposal is presented herein for informational purposes only.

As illustrated in Figure 4.5-2 (South Coast Ecoregion – South Coast Missing Linkages [South Coast Wildland]), the following linkages were identified in the general vicinity of the LCRSP study area: (1) "Linkage 32" (Cajon Pass), identified as a "landscape linkage, choke-point"[19] and with a ranking of "high priority"; (2) "Linkage 34" (Lytle Creek Drainage), identified as a

[15]/ Hansen, James, *et al*., Global Temperature Change, Proceedings of the National Academy of Sciences, September 26, 2006, Vol. 103, No. 39, pp. 14288-14293.

[16]/ *Op. Cit*., Summary for Policymakers of the Synthesis Report of the IPCC Fourth Assessment Report, Draft November 16, 2007, p. 25.

[17]/ The information and analysis presented as part of the South Coast Linkage Project and South Coast Wildlands Project imposes no statutory or regulatory obligations upon the Applicant or Lead Agency and is presented herein for informational purposes only.

[18]/ This initial report was subsequently updated in March 2008 with the group's publication of "South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion."

[19]/ A "landscape linkage" is defined as a large, regional connection between habitat blocks (core areas) meant to facilitate animal movement and other essential flows between different sections of a landscape. These linkages are not necessarily constricted but are thought essential to maintain connectivity function in the ecosystem. A "choke-point" is defined as a narrow, impacted, or otherwise tenuous habitat linkage connecting two or more habitat blocks (core areas). Choke-points are thought essential to maintain landscape-level connectivity but are particularly in danger of losing connectivity function (Source: Missing Linkages: Restoring Connectivity to the California Landscape, Conference Proceedings, Appendix F).

"landscape linkage, choke-point" and with a ranking of "low priority"; and (3) "Linkage 37" (Etiwanda), identified as a "choke-point" and with a "low priority" ranking.[20]

SCW subsequently identified 15 linkages within a portion of southern California which it described as being "of crucial biological value that are likely to be irretrievably compromised by development projects over the next decade unless immediate conservation action occurs."[21] One such linkage was labeled the "San Gabriel Mountains – San Bernardino Mountains." That linkage was roughly 130,000 acres in size and encompassed a substantial portion of the LCRSP study area.

As illustrated in Figure 4.5-3 (Vegetation Types in the San Gabriel – San Bernardino Connection [South Coast Wildland]), SCW stated that the linkage area supported a diversity of natural communities and a complexity of microhabitats and that the majority of the "San Gabriel – San Bernardino Mountains" connection was dominated by chaparral, with higher elevations supporting montane hardwood conifer and mixed coniferous forests, with oak woodlands in deep ravines, and a diversity of riparian habitats at intermediate and lower elevations. SCW stated that a number of designated sensitive natural communities occurred within this linkage area, including Riversidean alluvial fan sage scrub, southern sycamore alder riparian woodland, southern riparian forest, California walnut woodland, canyon live oak ravine forest, coastal and valley freshwater marsh, and coastal sage scrub.[22]

With regards to the "San Gabriel – San Bernardino Mountains" linkage, based on an analysis of 23 focal species considered by SCW to be sensitive to habitat loss and fragmentation and representative of a broad range of habitat and movement requirements, SCW identified potential routes between existing protected areas, formulating a "least-cost corridor" (i.e., lowest relative cost for a species to move between protected core habitat or population areas) for five selected species (i.e., mountain lion, American badger, Nelson's bighorn sheep, mule deer, and Pacific kangaroo rat). The species-specific corridors were then combined to create a "least cost union" (i.e., best zone available for focal species movement).

The size and configuration of that union was then analyzed relative to the habitat needs of the 23 focal species in order to propose a "linkage design" (i.e., target area for linkage conservation efforts). Species that SCW believed required habitat outside of the "least-cost union" to protect the long-term viability of the population include American badger, San Bernardino kangaroo rat, California treefrog, Santa Ana speckled dace, slender-horned spineflower, California sagebrush, and white alder.[23] Habitat for those species was added to the linkage design. SCW believed that its proposed linkage design would provide live-in and move-through habitat for multiple species, including mountain lion, mule deer, dusky-footed woodrat, Pacific kangaroo rat, California spotted owl, mountain quail, rock wren, wrentit, San Diego horned lizard, chaparral whipsnake, metalmark butterfly, green hairstreak butterfly, Tarantula hawk, and the giant flower-loving fly. The linkage design was also intended, *inter alia*, to provide area to buffer against edge effects, reduce contaminants in streams, allow natural processes to operate "with minimal constraints from adjacent urban areas," and allow species populations to respond to climate change.

[20]/ Penrod, K., Hunter, R, and Merrifield, M., Missing Linkages: Restoring Connectivity to the California Landscape, Conference Proceedings, 2001.

[21]/ Penrod, Kristeen, *et al*., South Coast Missing Linkages Project – A Linkage Design for the San Gabriel – San Bernardino Connection, May 2004, pp. 2-3.

[22]/ *Ibid*., pp. 4-5.

[23]/ *Ibid.*, p. 24.

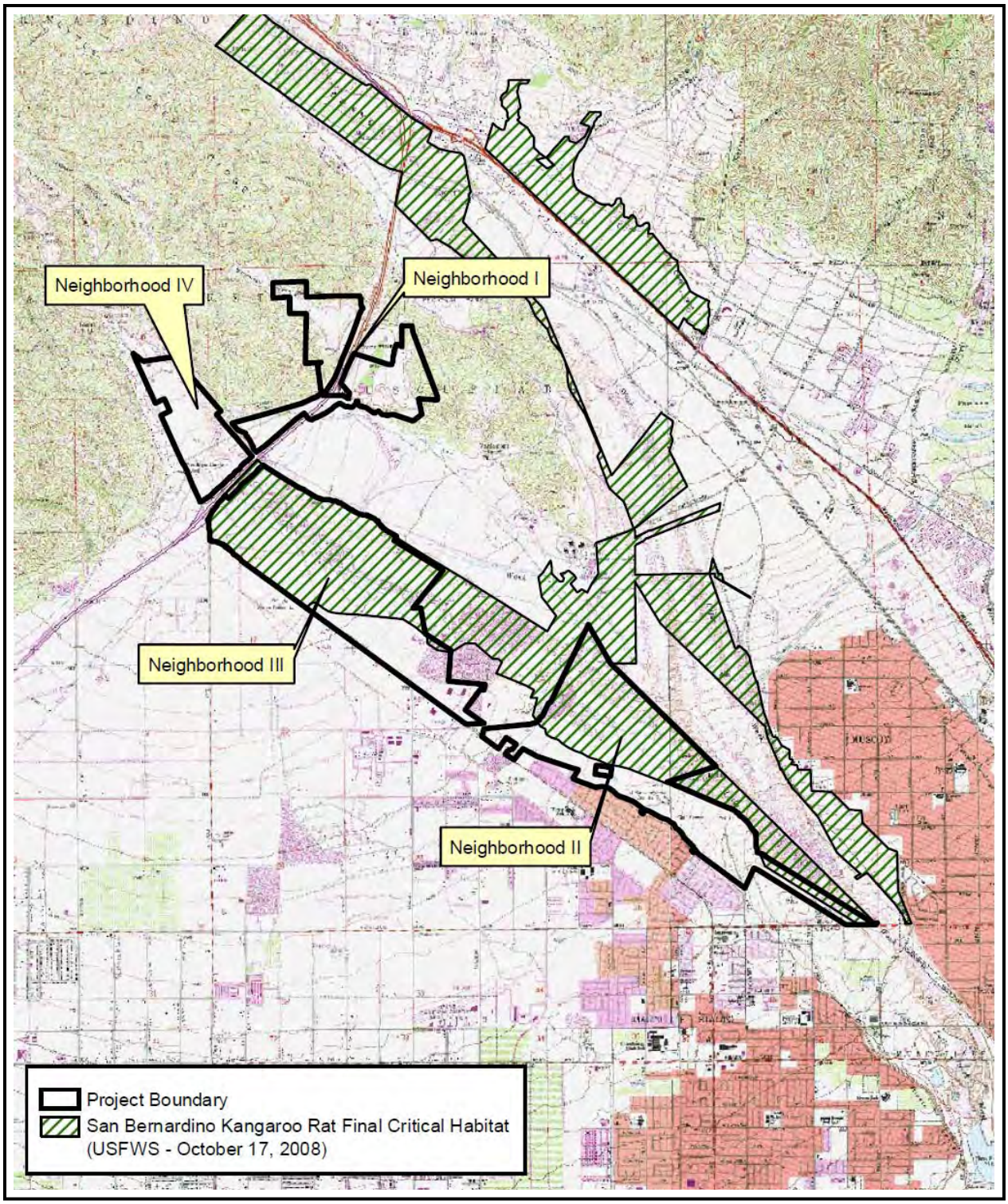

Figure 4.5-1
SAN BERNARDINO KANGAROO RAT CRITICAL HABITAT DESIGNATION WITHIN THE LCRSP STUDY AREA
Source: PCR Services Corporation

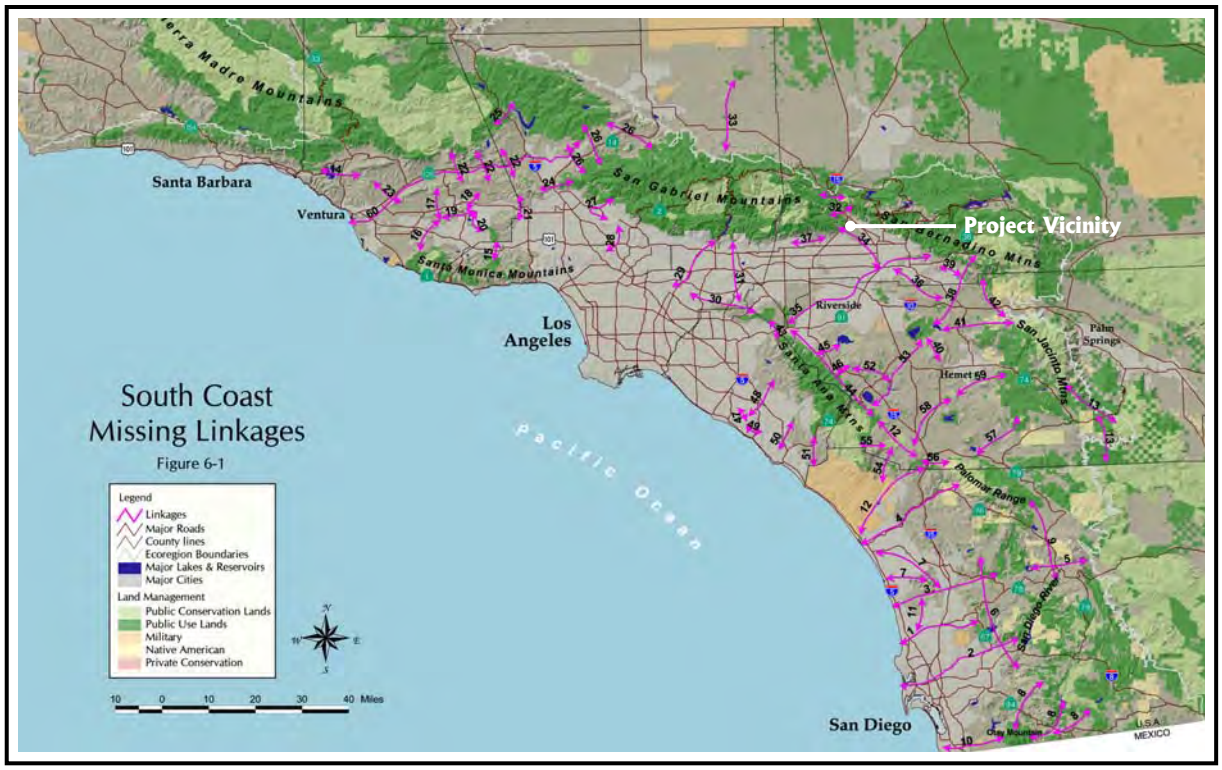

Figure 4.5-2
SOUTH COAST ECOREGION SOUTH COAST MISSING LINKAGES (SOUTH COAST WILDLAND)
Source: South Coast Wildland

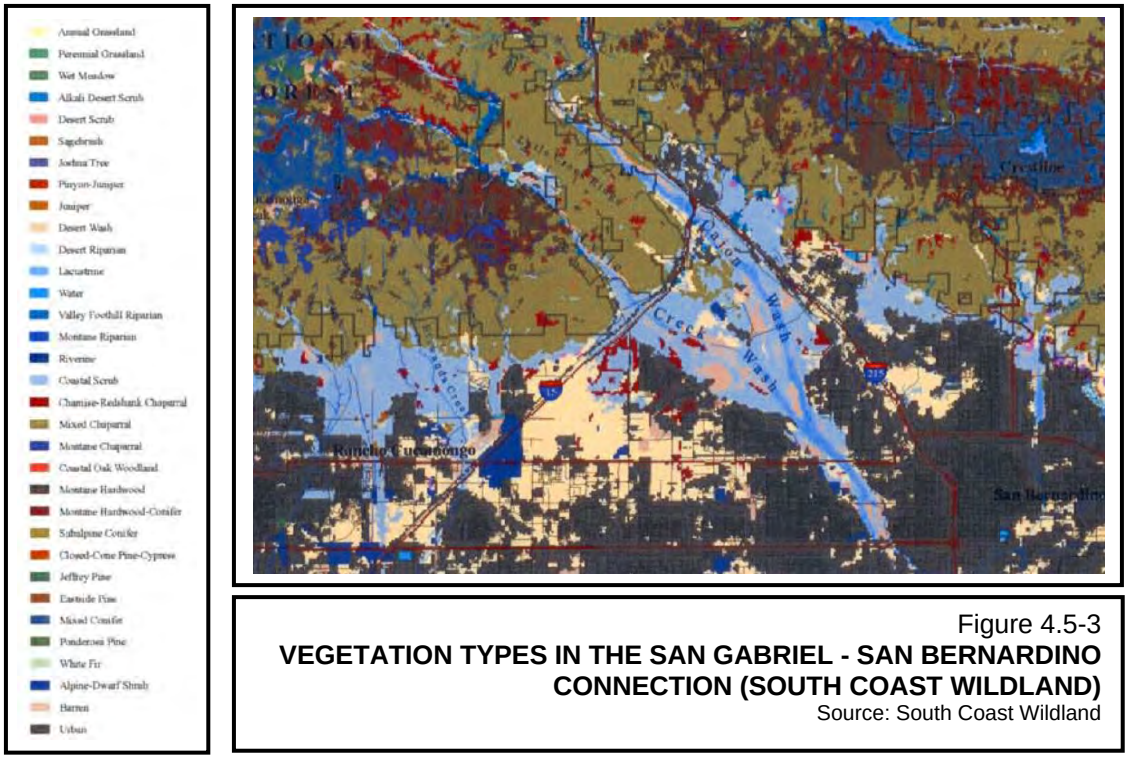

Figure 4.5-3
VEGETATION TYPES IN THE SAN GABRIEL - SAN BERNARDINO CONNECTION (SOUTH COAST WILDLAND)
Source: South Coast Wildland

As noted in Figure 4.5-4 (South Coast Wildland's San Gabriel – San Bernardino Linkage [2004]), SCW identified a substantial portion of the project site for conservation and/or wildlife management purposes. Besides those linkages which were delineated, SCW recommended that additional areas be added, including lands in and around Cajon and Lytle Wash. SCW stated that the "Cajon and Lytle Wash additions" would "protect key riparian movement corridors and natural hydrological processes, as well as preserving live-in habitat for several species. These additions include riparian and upland habitat, incorporating a 1 km (0.6 mi) buffer (0.5 km) to either side of each creek. Maintaining the natural flow regime is vital for sustaining riparian and alluvial fan scrub habitats."[24]

In March 2008, updating its 2001 report, SCW published "South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion," presenting additional information concerning SCW's independent assessment of the "San Gabriel – San Bernardino Connection." As described therein and as illustrated in Figure 4.5-5 (South Coast Wildland's A Linkage Design for the San Gabriel – San Bernardino Connection [2008]), a substantial portion of the project site was included in the "least cost union" and in the "linkage design." Conservation and/or wildlife management efforts were promoted.

In describing this linkage, SCW noted: "At first glance, the linkage between the San Bernardino and the San Gabriel Mountain Ranges seems simply to be a matter of getting plants and animals across Interstate 15, indeed, for most species, the freeway is the most obvious barrier between core population centers, and National Forest land abuts both sides of the freeway for several miles. However, a Linkage Design that simply maintained and improved permeability along I-15's frontage with Forest Service land would fail to provide connectivity for lowland species along the southern foothills, and could result in Baldy Mesa becoming an island or peninsula of habitat, hemmed in by urban and agricultural land on the north, increasing dense ranchette development on the south and west, and I-15 on the south and east. Therefore, the Linkage Design has three roughly parallel routes to accommodate diverse species and ecosystem functions."[25] Those routes include the "southern strand" which encompasses coastal and Sevaine creeks to Lytle and Cajon Creeks and "serving the movement needs of the endangered San Bernardino kangaroo rat and slender-horned spineflower, as well as the Pacific kangaroo rat, tarantula hawk, giant flower-loving fly, and California sagebrush."[26]

Regional Inventory of General Habitat Types

A regional perspective is useful in understanding the importance of on-site populations for many habitats and species For the purposes of establishing a proper context for this impact analysis, as illustrated in Figure 4.5-6 (Regional Impact Analysis Study Area), the approximately 187,127-acre "biological cumulative impacts study area" (BCISA or regional study area) is defined to be bordered by Haven Avenue on the west, the lower elevation slopes of the mountains leading into the Angeles and San Bernardino National Forests on the north, and generally and inclusive of the Jurupa Mountains and the Santa Ana River (SAR) to the south and east, respectively. The northern and eastern boundary along the foothills reaches a maximum elevation of 3,500-feet above mean sea level (MSL) where the same habitats characterizing the LCRSP study area generally transition into montane habitats. Farther north and east, deep canyons and high elevations characterize the landscape and represent a different set of habitat types, elevation

[24]/ *Ibid.*, p. 25.
[25]/ South Coast Wildland, South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion, March 2008, p. 16.
[26]/ *Ibid.*, p. 17.

gradients, and suite of plant and wildlife species than those found within the defined region. The southern boundary is generally congruent with the northern boundary of urban development within metropolitan western Riverside County. The western boundary delineates the eastern limit of dense urban development and is, therefore, an appropriate boundary from a biological perspective.

Within this geographically defined area, the amount of potentially suitable habitat available for species dependent upon sage scrub communities, including Riversidean alluvial fan sage scrub (RAFSS), is presently estimated to be approximately 31,502 acres. For species dependent upon more open habitat (including grassland and agriculture), there presently exists approximately 5,766 acres of suitable habitat within the region. In addition, as indicated in Table 4.5-1 (Regional Inventory of General Habitat Types), the region supports approximately 25,981 and 1,237 acres of potentially suitable habitat for chaparral-dependent and riparian-restricted species, respectively.

Table 4.5-1
REGIONAL INVENTORY OF GENERAL HABITAT TYPES

General Habitat Type	Within Regional Study Area[1] (acres)	Within LCRSP Study Area[2] (acres)	Percent of LCRSP Study Area within Regional Study Area (%)
Scrub (including RAFSS)	31,502	1,252.8	4.0
Chaparral	25,981	363.3	1.4
Grassland[3]	5,766	371.7[5]	6.4
Riparian	1,237	38.4[6]	3.1
Total[4]	64,486	2,026.2	3.1

Notes:
1. See also Table 4.5-23 (Regional Analysis of Impacts to Suitable Habitat for Sensitive Wildlife Species Observed or Expected within Biological Cumulative Impact Study Area).
2. See also Table 4.5-2 (Plant Communities with the LCRSP Study Area).
3. Includes other open areas such as vineyards, golf courses, and agriculture.
4. Total habitat acreage represented (2,026.2 acres) within the LCRSP study area does not equal the total acreage for the LCRSP study area (2,466.5 acres) represented elsewhere in the analysis due to exclusion of developed areas for purposes of this regional analysis. In addition, a total of approximately 64,486 acres of habitat were mapped within the 187,127-acre region. The difference is primarily a reflection of the amount of existing development in the defined region.
5. Within the LCRSP study area grassland communities include grasslands and combinations thereof (156.9 acres), golf course (158.6 acres), and ruderal (56.2 acres).
6. Within the LCRSP study area riparian communities include riparian and combinations thereof (28.5 acres) and basin (9.9 acres).

Source: PCR Services Corporation

4.5.3.2 Local Setting

A project-specific and site-specific biological resources assessment[27] (BRA) was conducted by PCR Services Corporation (PCR) for the proposed project and the information presented in that study independently reviewed by the Lead Agency, acting through independent consultants working under contract to the City. The BRA updated a separate biological resource assessment completed in 1995 based on surveys performed in 1993-1994 by Michael

[27]/ PCR Services Corporation, Biological Resources Assessment, Lytle Creek Specific Plan, City of Rialto, San Bernardino County, California, September 2009.

Brandman Associates (MBA).[28] Based on its independent review of the PCR (2009) and MBA (1995) biological resource assessments, the Lead Agency concluded that the information derived from those studies presents an adequate and objective assessment of the project's existing biological resource setting.

The PCR (2009) analysis summarized information derived through an extensive literature review and field investigations conducted in 2004-2008. The field investigations included the development of a detailed map of the plant communities and included focused sensitive plant surveys, species-specific surveys and habitat assessments, and a species' trapping program. During these investigations, biologists also assessed the potential for the LCRSP study area to host additional sensitive species and/or habitats and regulated resources.

The current version of the CNDDB, a CDFG sensitive resources account database, was reviewed for all pertinent information regarding the locations of known observations of sensitive species and habitats in the vicinity of the LCRSP study area. Federal Register species listings, species survey protocols, and species data provided by the USFWS and CDFG were reviewed in conjunction with anticipated federally and State-listed species potentially occurring within the vicinity. A number of primary and secondary sources were reviewed, including focused surveys conducted on the adjoining LCNPD site, several government agency wildlife publications, and several regional flora and fauna field guides. All pertinent references used are listed in Appendix III-D (Biological Resources Assessment).

Plant Communities

A general discussion of those plant associations (plant communities)[29] mapped within the LCRSP study area are provided below. The location of each of the plant communities is shown by planning area in Figure 4.5-7 (Plant Communities - Neighborhood I), Figure 4.5-8 (Plant Communities - Neighborhood II), Figure 4.5-9 (Plant Communities - Neighborhood III [East]), Figure 4.5-10, (Plant Communities - Neighborhood III [West]), and Figure 4.5-11 (Plant Communities - Neighborhood IV). Table 4.5-2 (Plant Communities within the LCRSP Study Area) lists each of the plant communities observed as well as their respective acreages within the LCRSP study area. Mixed plant communities (e.g., California buckwheat scrub/non-native grassland) are named so that the more dominant or majority community component occurs first and the minority component occurs second.

Vegetation communities described herein are based on the "National Vegetation Classification System," adopted by the CDFG. This hierarchical system applies quantifiable classification rules to define floristic units known as alliances and, below them, associations. As indicated by the CDFG: "The primary purpose of the classification is to assist in the location and determination of significance and rarity of various vegetation types. Thus, ranking of natural communities by their rarity and threat is an important facet of the classification. In this document, as in previous CNDDB community lists, asterisks denote special communities that are either known or believed to be of high priority for inventory in CNDDB. Lead and trustee agencies may request that impacts to these communities be addressed in environmental documents."[30]

[28]/ Michael Brandman Associates, The Villages at Lytle Creek, Specific Plan/Sunwest Reclamation Plan, Biological Resources Assessment, September 1995.

[29]/ The terms "plant association" and "plant community" are used interchangeably herein.

[30]/ California Department of Fish and Game, List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database, California Natural Diversity Database, September 2003 Edition, pp. 2-3.

According to the CDFG's classification, the following communities within the LCRSP study area are considered sensitive natural communities and high priorities for inventory in the CNNDB: (1) RAFSS (32.005.02) (where RAFSS is the sole or dominant plant community); (2) white sage scrub (32.030.00); (3) southern willow scrub (61.208.00); (4) California sycamore alliance (61.310.00); and (5) southern cottonwood willow riparian (61.130.02).[31]

Other scrub habitats in southern California may also be considered sensitive due to their potential significance to any of the following: (1) the long-term sustainability of sensitive species' populations (e.g., CAGN); (2) their contribution to important ecotones (e.g., at the edge of riparian habitat); and/or (3) their being relatively large blocks of relatively undisturbed habitat within a regional habitat linkage. In the LCRSP study area, the scrub habitats that are not identified as sensitive by the CDFG in the CNDDB do not meet these criteria since they occur as relatively small isolated patches, are often disturbed at their edges, and are fragmented so as to diminish their values and functions as natural communities. Such communities within the LCRSP study area include Riversidean sage scrub (32.005.00), California buckwheat scrub (32.040.00), and California sagebrush-California buckwheat scrub (32.110.00)[32] (including mixed communities where these communities are dominant). Based on the small, isolated nature and level of disturbance associated with these communities, as they occur within the LCRSP study area, these communities are not considered sensitive herein.

Certain areas were previously entitled under the LCNPD and impacts to those areas were previously analyzed and mitigated in the Lytle Creek North FEIR. Portions of those areas have been subsequently disturbed by ongoing development activities (e.g., grading for roads and utilities for Rosena Ranch) and any existing habitat and/or vegetation once located thereupon has been removed from those areas. For the remaining previously-analyzed and previously-mitigated areas, the existing conditions were reexamined and compared against the description of existing conditions and analysis of biological resources in the Lytle Creek North FEIR to confirm whether any substantial changes have occurred in those areas.

Those plant communities identified in Table 4.5-2 (Plant Communities with the LCRSP Study Area) are described below. Those sensitive plant communities that exist within the LCRSP study area are separately addressed later in this section.

- **Riversidean sage scrub**. Riversidean sage scrub (RSS) is the driest, most inland expression of the collection of sage scrub or coastal scrub series and ranges throughout southern California. It typically occurs on steep slopes, severely drained soils, or clays that release soil moisture slowly. Typical stands of this type of sage scrub are fairly open and dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and foxtail chess (*Bromus madritensis* ssp. *rubens*). Additional species characteristic of this plant community include deerweed (*Lotus scoparius*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), our Lord's candle (*Yucca whipplei*), matchweed (*Gutierrezia californica*), and bushmallow (*Malacothamnus fasciculatus*). Within the LCRSP study area, the dominant shrubs in the RSS include California sagebrush, California buckwheat, and white sage. Associated shrub species include black sage and deerweed.

[31]/ *Op. Cit*., List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database, September 2003 Edition pp. 4, 38, and 39.
[32]/ *Ibid*., pp. 4 and 6.

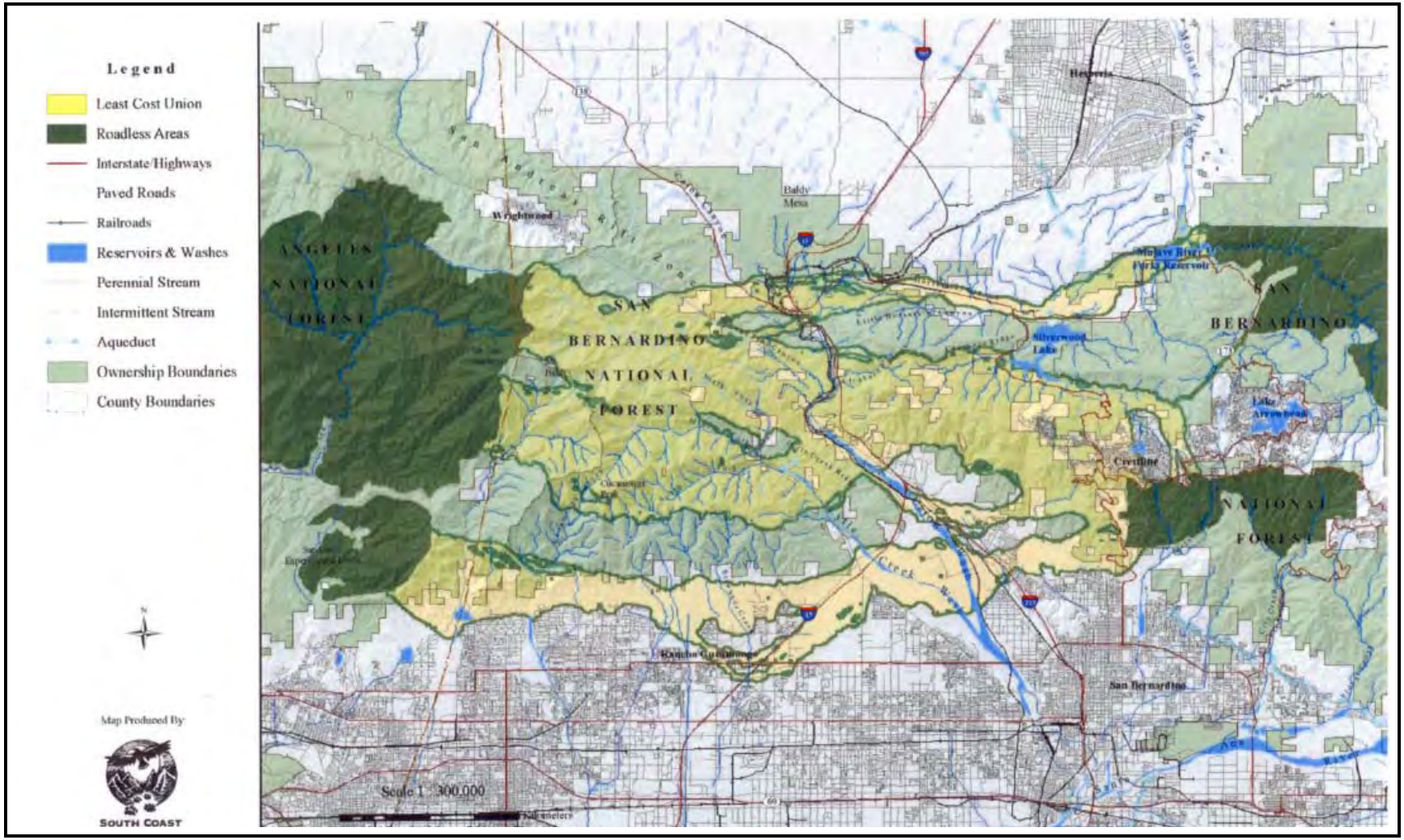

Figure 4.5-4
SOUTH COAST WILDLAND'S
SAN GABRIEL – SAN BERNARDINO LINKAGE (2004)
Source: South Coast Wildland

Figure 4.5-5
SOUTH COAST WILDLAND'S
A LINKAGE DESIGN FOR THE SAN GABRIEL – SAN BERNARDINO CONNECTION (2008)
Source: South Coast Wildland

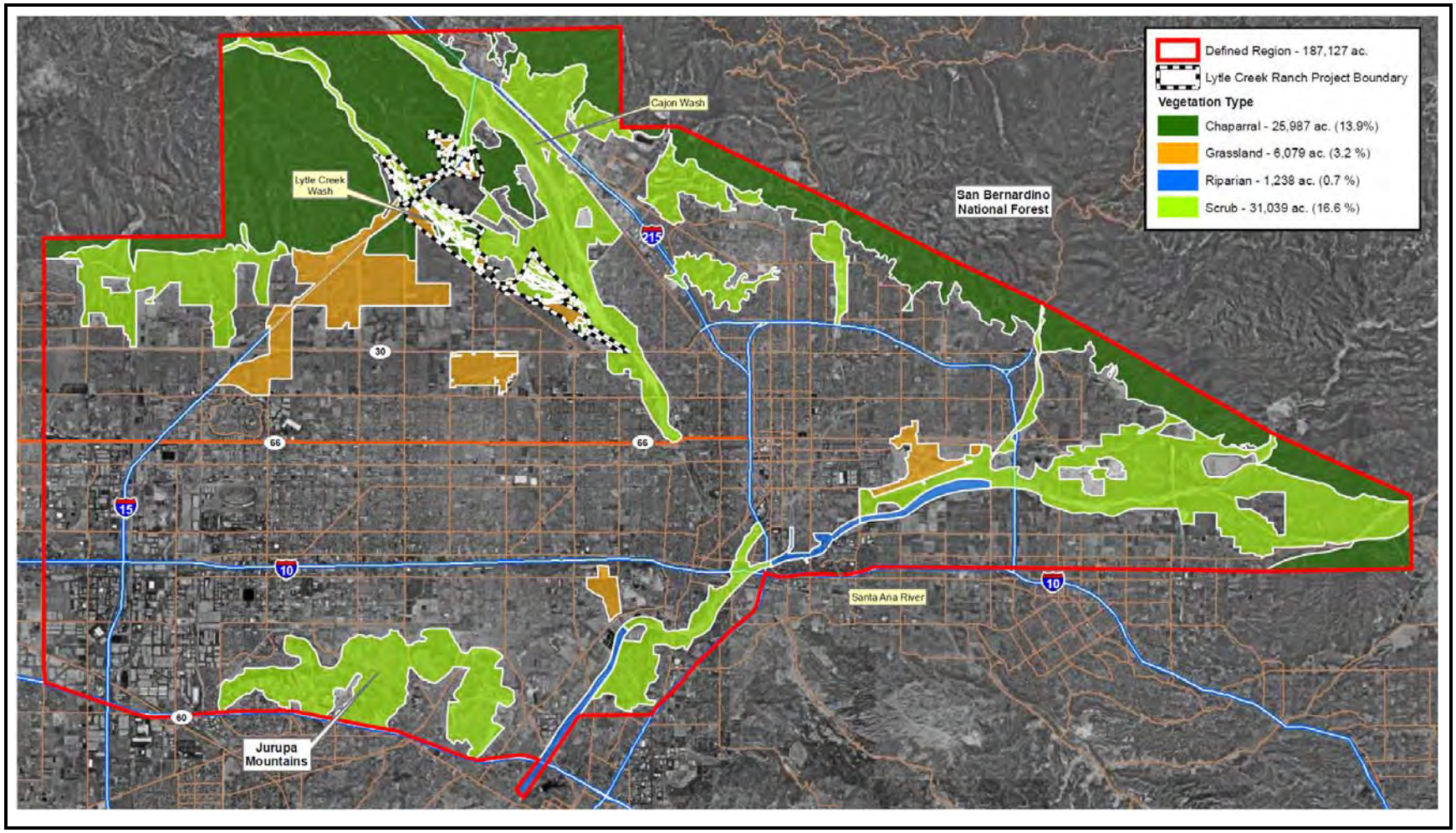

Figure 4.5-6
REGIONAL IMPACT ANALYSIS STUDY AREA
Source: PCR Services Corporation

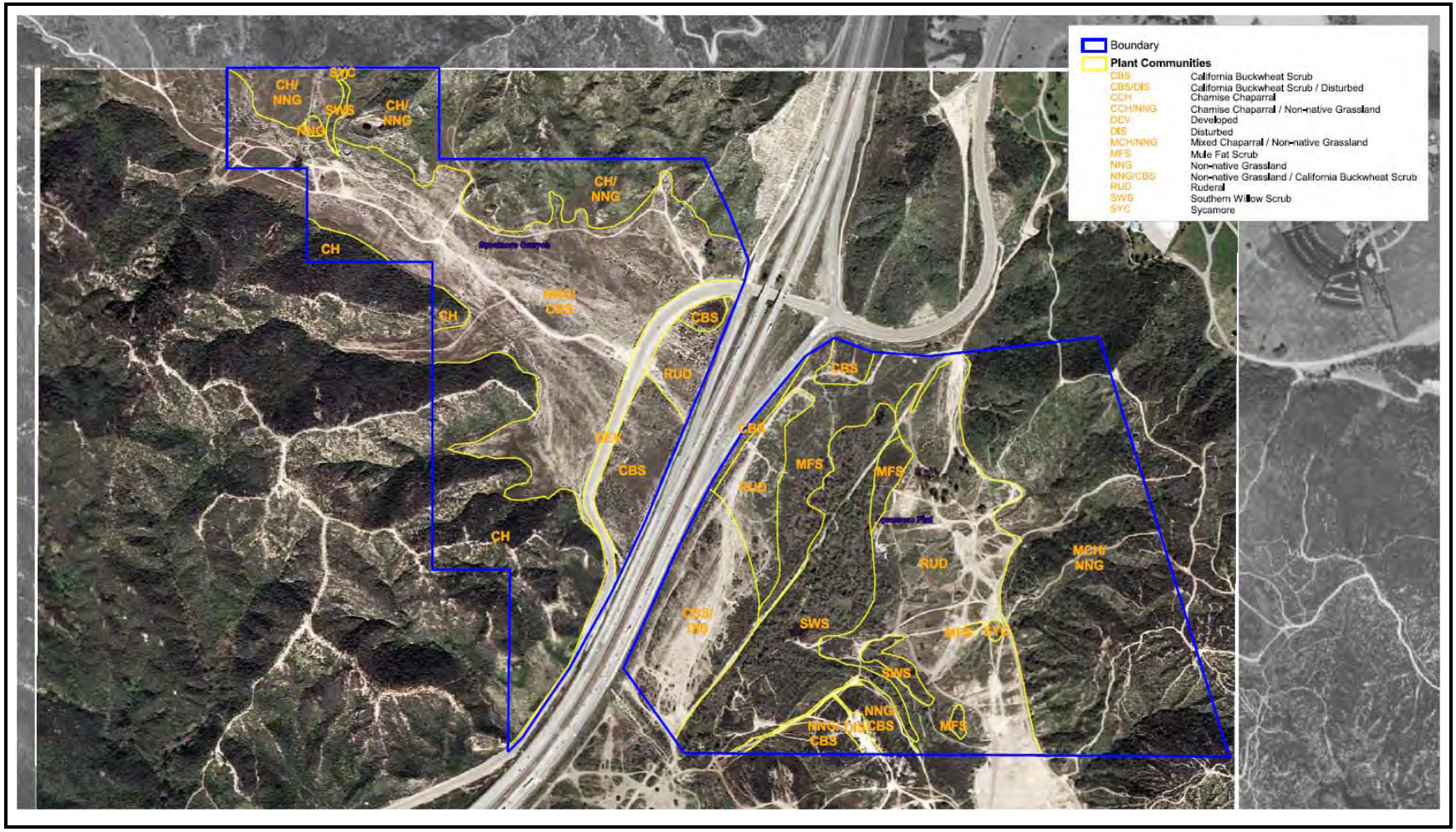

Figure 4.5-7
PLANT COMMUNITIES - NEIGHBORHOOD I
Source: PCR Services Corporation

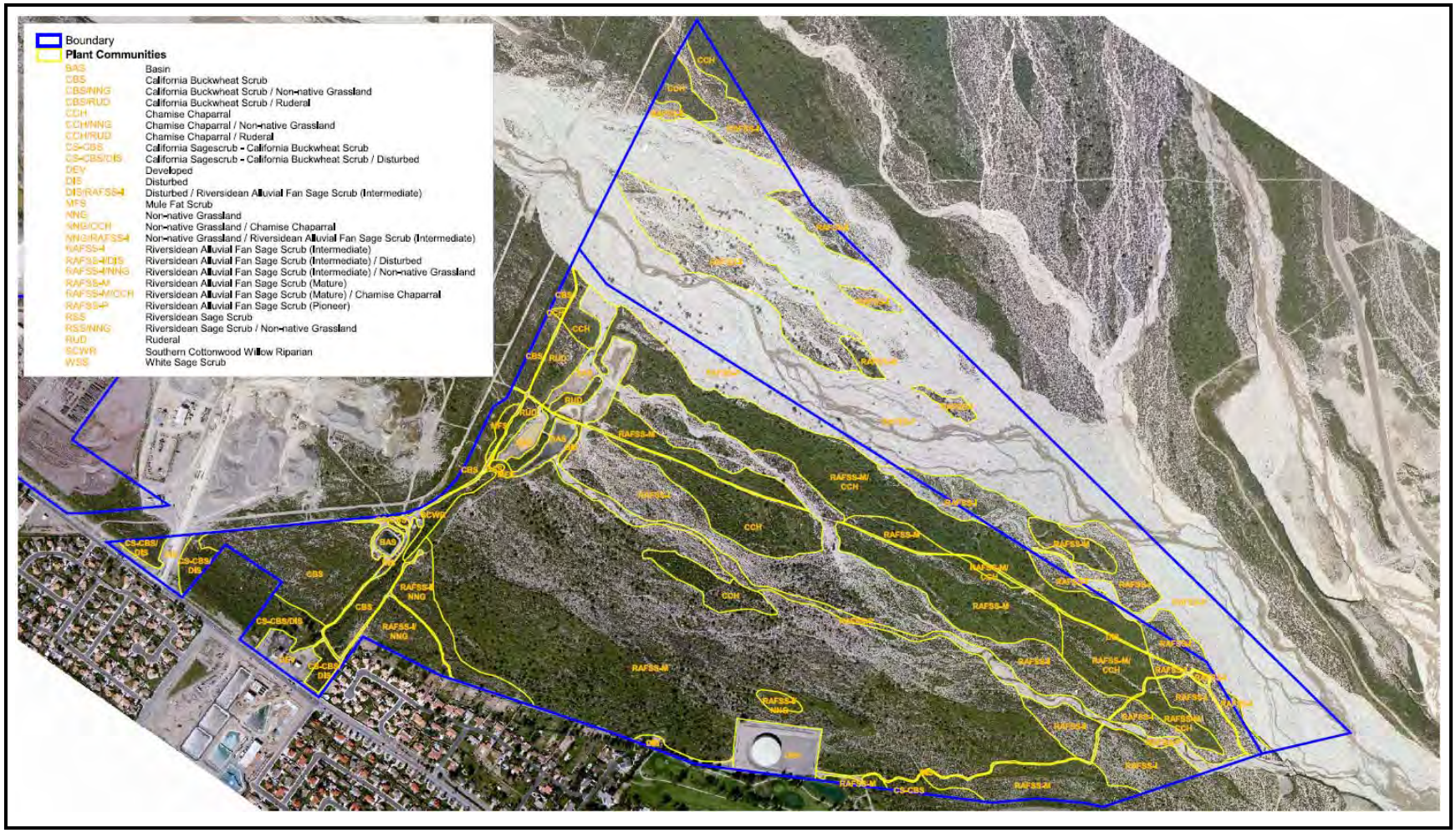

Figure 4.5-8
PLANT COMMUNITIES - NEIGHBORHOOD II
Source: PCR Services Corporation

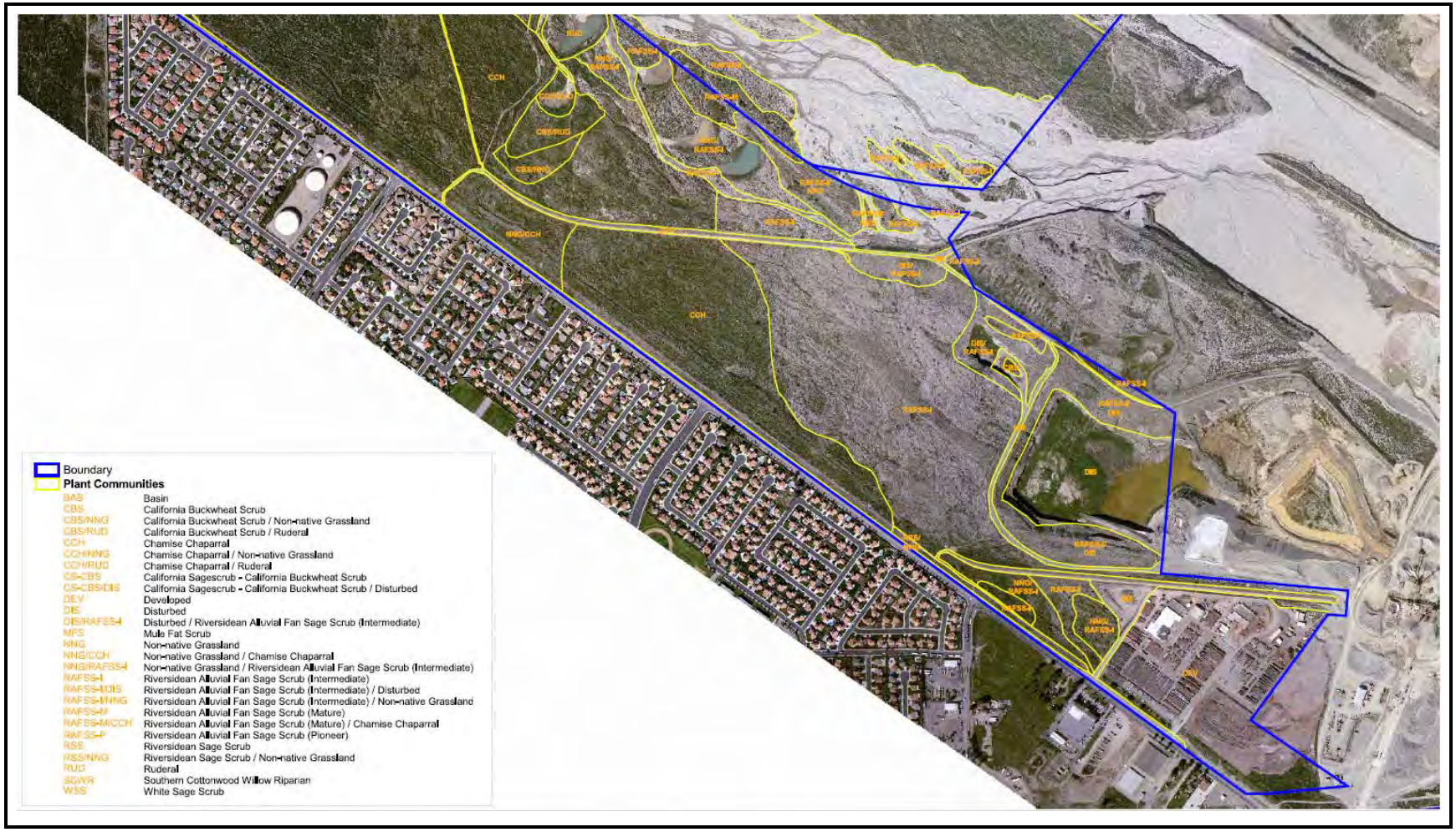

Figure 4.5-9
PLANT COMMUNITIES - NEIGHBORHOOD III (EAST)
Source: PCR Services Corporation

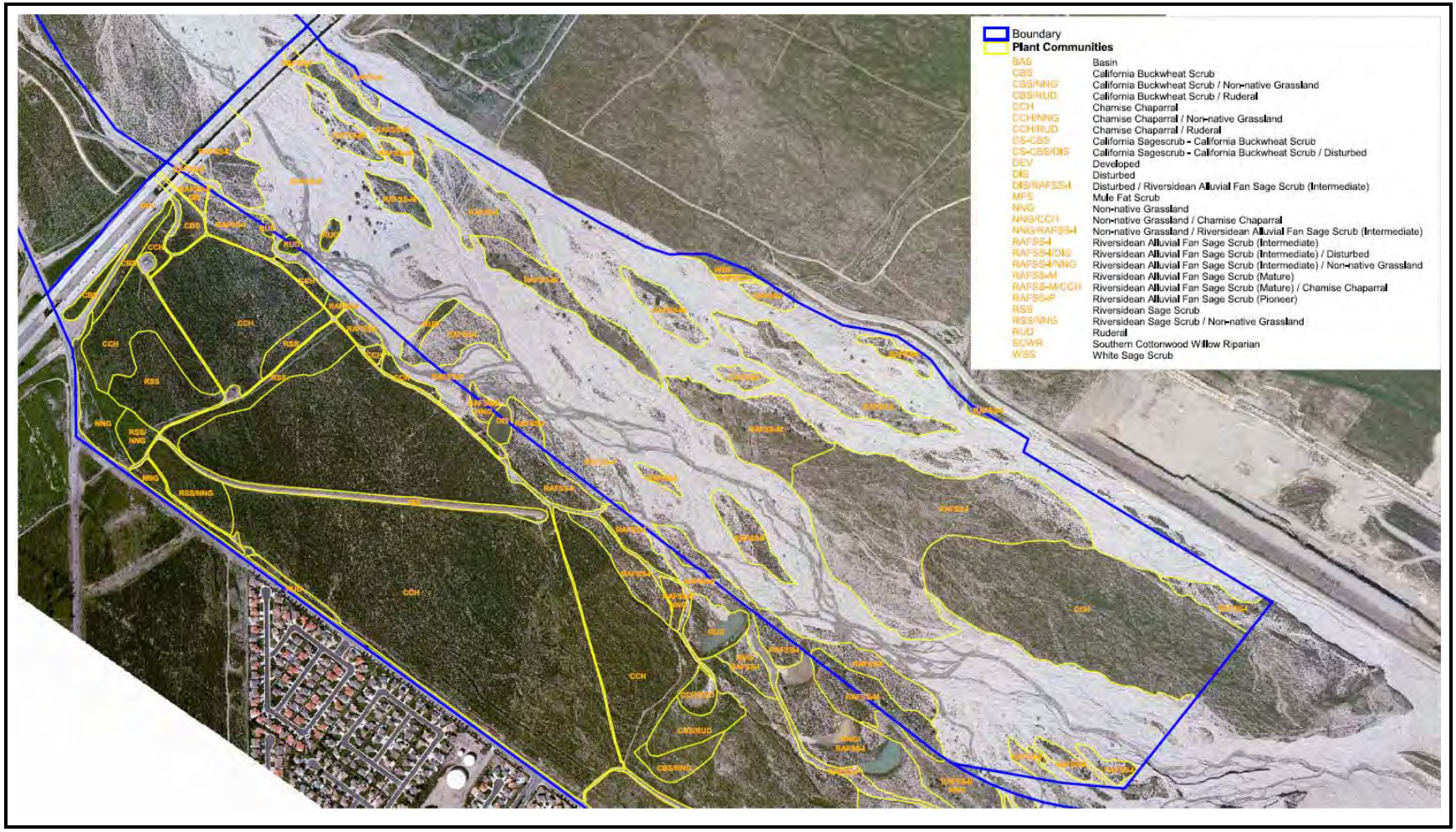

Figure 4.5-10
PLANT COMMUNITIES - NEIGHBORHOOD III (WEST)
Source: PCR Services Corporation

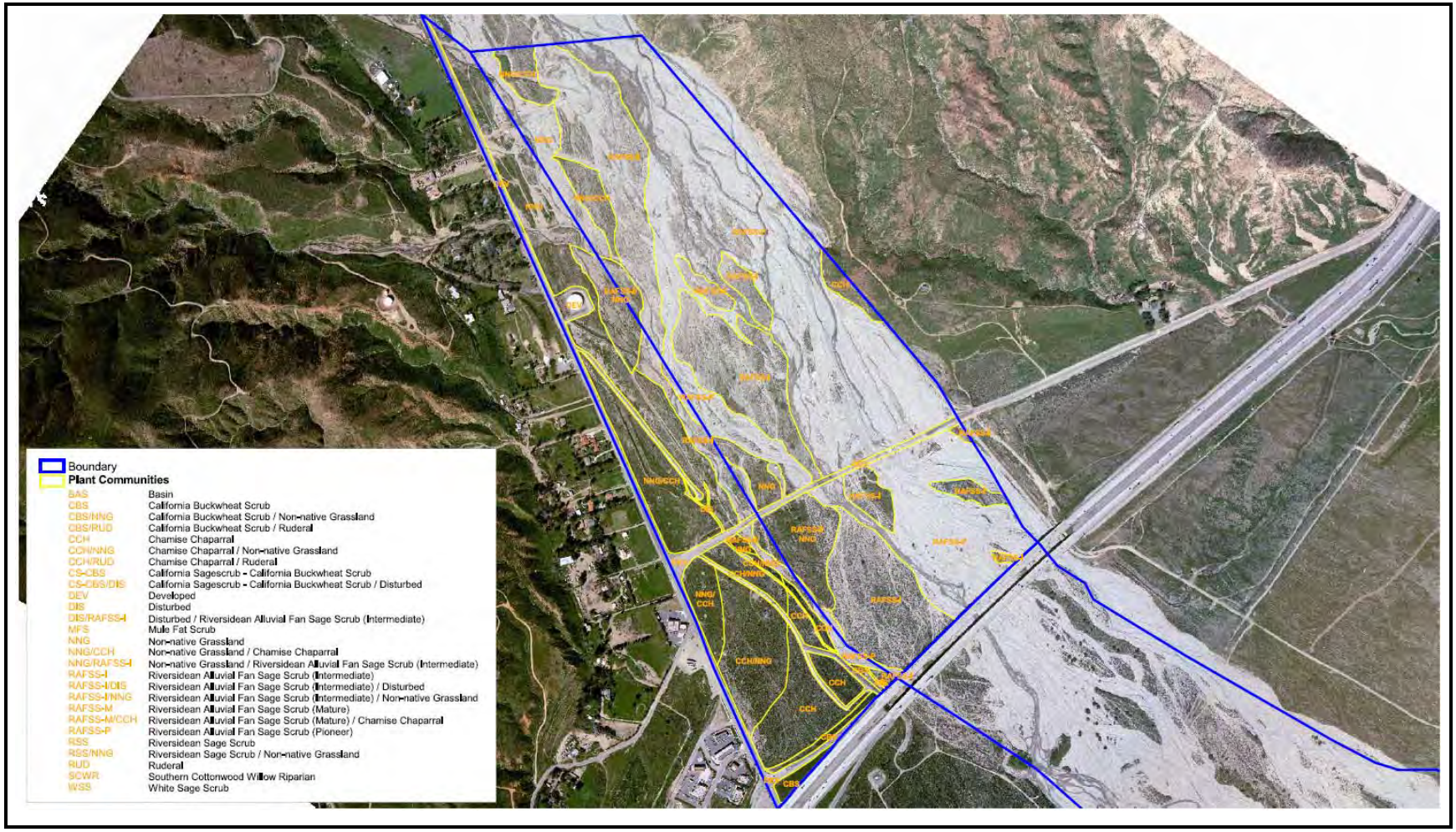

Figure 4.5-11
PLANT COMMUNITIES - NEIGHBORHOOD IV
Source: PCR Services Corporation

Table 4.5-2
PLANT COMMUNITIES WITHIN THE LCRSP STUDY AREA

Plant Community[1]	On-Site Portion (acres)			Off-Site Portion (acres)					Total LCRSP Study Area
	Project Site	SoCalGas Easement[3]	LCNPD[4]	SoCalGas Easement[3]	Existing Utility Road[5]	Road Under I-15 Freeway[5]	Off-Site Levee[5]	Off-Site Temporary Levee	
Scrub Communities									
Riversidean Sage Scrub	12.6	0.0	0.0	0.0	0.0	0.0	1.1	0.0	13.7
Riversidean Sage Scrub/Non-Native Grassland	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Riversidean Alluvial Fan Sage Scrub (Pioneer)[2]	484.2	0.0	0.0	0.0	0.0	0.0	5.8	0.0	490.0
Riversidean Alluvial Fan Sage Scrub (Intermediate)[2]	356.9	0.0	0.0	0.0	0.0	0.1	0.9	0.5	358.4
RAFSS (Intermediate)/Non-Native Grassland[2]	31.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.9
RAFSS (Intermediate)/Disturbed[2]	16.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	16.1
Riversidean Alluvial Fan Sage Scrub (Mature)[2]	207.9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	208.0
RAFSS (Mature)/Chamise Chaparral[2]	39.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.3
White Sage Scrub[2]	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
California Buckwheat Scrub	33.7	0.0	0.0	0.0	0.0	0.3	0.0	0.0	34.0
California Buckwheat Scrub/Non-Native Grassland	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
California Buckwheat Scrub/Disturbed	15.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9
California Buckwheat Scrub/Ruderal	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
California Sagebrush-California Buckwheat Scrub	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3
California Sagebrush-California Buckwheat Scrub/ Disturbed	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.1
Subtotal – Scrub Communities	1,242.9	1.0	0.0	0.0	0.0	0.5	7.8	0.6	1,252.8
Chaparral Communities									
Northern Mixed Chaparral	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6
Northern Mixed Chaparral/Non-Native Grassland	52.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.6
Chamise Chaparral	240.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	240.9
Chamise Chaparral/Non-Native Grassland	40.5	0.0	7.0	0.0	0.0	0.0	0.0	0.0	47.5
Chamise Chaparral/Ruderal	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Subtotal – Chaparral Communities	356.2	0.0	7.0	0.0	0.0	0.0	0.1	0.0	363.3
Grassland Communities									
Non-Native Grassland	32.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	32.8
Non-Native Grassland/Riversidean Sage Scrub	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	9.8
Non-Native Grassland/RAFSS (Intermediate)	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0
Non-Native Grassland/California Buckwheat Scrub	67.8	0.0	1.4	0.0	0.0	0.0	0.0	0.0	69.2
Non-Native Grassland/Chamise Chaparral	24.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.1
Subtotal – Grassland Communities	145.2	0.0	11.7	0.0	0.0	0.0	0.0	0.0	156.9

Table 4.5-2 (Continued)
PLANT COMMUNITIES WITHIN THE LCRSP STUDY AREA

Plant Community[1]	On-Site Portion (acres)			Off-Site Portion (acres)					Total LCRSP Study Area
	Project Site	SoCalGas Easement[3]	LCNPD[4]	SoCalGas Easement[3]	Existing Utility Road[5]	Road Under I-15 Freeway[5]	Off-Site Levee[5]	Off-Site Temporary Levee	
Riparian Communities									
Southern Cottonwood Willow Riparian[2]	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Southern Willow Scrub[2]	15.7	1.8	0.0	1.9	0.0	0.0	0.0	0.0	19.4
California Sycamore Alliance[2]	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Mule Fat Scrub	2.2	1.0	0.5	0.7	0.0	0.0	0.0	0.0	4.4
Mule Fat Scrub/Disturbed	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Subtotal – Riparian Communities	22.6	2.8	0.5	2.6	0.0	0.0	0.0	0.0	28.5
Disturbed and Developed Communities									
Basin	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9
Ruderal	55.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0	56.2
Disturbed	244.3	0.1	79.8	0.0	2.6	1.3	0.0	0.0	328.1
Disturbed/ RAFSS (Intermediate)	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5
Disturbed/ Northern Mixed Chaparral	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9
Golf Course	158.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	158.6
Ornamental	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Subtotal – Disturbed Communities	484.0	0.1	79.8	0.9	2.6	1.3	0.0	0.0	568.7
Developed	54.7	0.0	38.8	0.1	0.0	0.5	2.2	0.0	96.3
Subtotal – Developed Communities	54.7	0.0	38.8	0.1	0.0	0.5	2.2	0.0	96.3
Total	2,305.6	3.9	137.8	3.6	2.6	2.3	10.1	0.6	2,466.5[6]

Notes:
1. The plant communities are composed of numerous plant species. General plant species observations were completed during the 2004-2008 surveys of the LCRSP study area.
2. Plant communities considered rare or warranting consideration by the CNDDB.
3. SoCalGas holds a 7.5-acre, 100-foot easement for an interstate gas line (which includes a 3.9-acre segment through Neighborhood I and a 3.6-acre segment which extends off-site to the north). The project proposes no improvements within the easement area; however, it is anticipated that SoCalGas, at a future date and independent of the LCRSP project, may undertake improvements to the existing maintenance road, including installing rip-rap and constructing a V-ditch in this easement area to address drainage and erosion issues. This improvement will be addressed independent of the LCRSP project.
4. Acreage in this column represents the portion of this community that falls within the area previously entitled and approved for development as part of the LCNPDP.
5. Off-site areas include the 2.6-acre existing utility road at the downstream end of Neighborhood II, the 2.3-acre road easement under the I-15 Freeway, the 3.6 acre off-site SoCalGas segment, a 10.1-acre area associated with the off-site levee, and an additional 0.6 acre associated with temporary impacts associated with the levee construction.
6. Not included herein is the 0.7 off-site acre area associated with the existing Lytle Creek Road right-of-way which will be impacted as a result of the removal and replacement of storm drain facilities south of Neighborhood IV. Because these improvements will be made within an existing developed area, no biological resource impacts are anticipated.

Source: PCR Services Corporation

The RSS community comprises approximately 13.7 (12.6 on-site and 1.1 off-site) acres of the LCRSP study area and is found in the southeastern portion of Neighborhood II, in the western portion of Neighborhood III, and within the off-site levee north of Neighborhood II.

- **Riversidean sage scrub/non-native grassland**. Riversidean sage scrub/non-native grassland (RSS/NNG) comprises about 0.8 acre and support non-native grasses, such as slender wild oat (*Avena barbata*), foxtail chess, and soft chess (*Bromus hordeaceus*) within a more open mosaic of native shrubs. Additional weedy species observed include filaree (*Erodium* spp.), tocalote (*Centaurea melitensis*), and black mustard (*Brassica nigra*). RSS/NNG is found within the southeast portion of Neighborhood III.

- **Riversidean alluvial fan sage scrub**. Alluvial fan sage scrub (AFSS) is a plant community that grows on sandy, rock alluvia deposited by streams that experience infrequent episodes of severe overbank flooding. This vegetation dominates major outwash fans at the mouths of canyons along the coastal side of the Transverse and Peninsular Ranges of southern California. Alluvial scrub is composed of an assortment of drought-deciduous subshrubs and large evergreen wood shrubs that are adapted to porous, low-fertility substrates and to survival of intense, periodic flooding and erosion. Early classification work on this plant community commonly recognized three types or phases of alluvial scrub related to such factors as the scouring action of flood channels, distance from the flood channel, time since the last catastrophic flood, and substrate features such as texture and moisture content. These three types of AFSS are commonly referred to as: (1) "pioneer" (vegetation is sparse with a low species' diversity and stature and is found within active stream channels or recently scoured streambeds); (2) "intermediate" (vegetation is rather dense and is composed mainly of subshrubs); and (3) "mature" (composed of fully developed subshrubs and wood shrubs).

  According to the earlier studies, when areas supporting AFSS are permanently precluded from experiencing flooding (such as in the case of areas "downstream" of flood control improvements or protected by flood control structures), they commonly develop into an upland community, often dominated by chaparral where they remain as a climax community. Conversely, episodic floods can eliminate existing stands of intermediate or mature alluvial scrub and initiate new pioneer stands.

  The alluvial scrub community is distinguished by its vegetative composition, which, according to available research, contrasts in several respects with that of the Riversidean and coastal sage scrub community. As a vegetation type or plant community, alluvial scrub has been classified more specifically by the CNDDB as RAFSS (32.005.02) and is considered rare and worthy of consideration according to the CDFG's "List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database." As indicated by CDFG, RAFSS is categorized within the scale-broom series but the CDFG also acknowledges the difficulty of assigning series to communities that experience succession. A more detailed discussion of the appropriate ways to classify floristic variations of RAFSS can be found in Appendix III-D (Biological Resources Assessment).

  For the purposes of the EIR, the alluvial scrub that occurs within the LCRSP study area will be referred to as Riversidean alluvial fan sage scrub (RAFSS) which is, to date, the most widely used terminology. It is important to note that RAFSS is, however, a subset of AFSS, with broad similarities in the set of species that make up AFSS assemblages

throughout the southern California floristic province. For the purpose of analysis, RAFSS is divided into three phases due to the distinctions in relative age, topography, and vegetation present within the LCRSP study area and the varying habitat functions and values these phases represent.

Total RAFSS vegetation occurring within the LCRSP study area (including pioneer [490.0 acres], intermediate [358.4 acres], and mature [208.0 acres] phases but excluding mixed communities) is about 1,056.4 (1,049.0 on-site and 7.4 off-site) acres. The RAFSS vegetation within the LCRSP study area is described below and summarized in Table 4.5-3 (Riversidean Alluvial Fan Sage Scrub within the LCRSP Study Area).

Table 4.5-3
RIVERSIDEAN ALLUVIAL FAN SAGE SCRUB WITHIN THE LCRSP STUDY AREA

RAFSS Type	Hydrologically Connected (acres)		Hydrologically Disconnected (acres)		Total (acres)		
	On-Site	Off-Site	On-Site	Off-Site	On-Site	Off-Site	Total
Intermediate RAFSS	170.2	0.7	186.7	0.8	356.9	1.5	358.4
Intermediate RAFSS/Disturbed	0.2	0.1	15.8	0.0	16.0	0.1	16.1
Intermediate RAFSS/ Non-Native Grassland	19.2	0.0	12.7	0.0	31.9	0.0	31.9
Mature RAFSS	15.6	0.0	192.3	0.1	207.9	0.1	208.0
Mature RAFSS/ Chamise Chaparral	8.2	0.0	31.1	0.0	39.3	0.0	39.3
Pioneer RAFSS	450.6	5.7	33.6	0.1	484.2	5.8	490.0
Total	664.0	6.5	472.2	1.0	1,136.2	7.5	1,143.7

Source: PCR Services Corporation

Including mixed communities, where RAFSS is dominant, these communities add an additional 87.3 acres (31.9 acres of intermediate RAFSS/non-native grassland, 16.1 acres of intermediate RAFSS/disturbed, and 39.3 acres of mature RAFSS/chamise chaparral) for a total of approximately 1,143.7 (1,136.2 on-site and 7.5 off-site) acres of RAFSS within the LCRSP study area. Of that, a total of approximately 473.2 (472.2 on-site and 1.0 off-site) acres of RAFSS vegetation is no longer hydrologically connected to Lytle Creek (i.e., outside the existing 100-year floodplain); therefore, these acres are expected to convert to non-RAFSS habitat over the long-term.[33] RAFSS that is hydrologically connected includes about 670.5 (664.0 on-site and 6.5 off-site) acres of the approximately 1,143.7 total acres of RAFSS within the LCRSP study area.

◊ **Pioneer Riversidean alluvial fan sage scrub**. Pioneer Riversidean alluvial fan sage scrub (P-RAFSS) is characterized by sparse vegetation within the open channel areas of the LCRSP study area. Species composition is similar to the intermediate RAFSS (I-RAFSS), although vegetation does not exceed 10 percent

[33]/ The phrase "long-term" is relative and the time required for succession to a non-RAFSS community cannot be quantified at this time based upon currently available scientific literature. Scientific literature, however, suggests that succession may, at least in some circumstances, take much longer than previously thought, possibly on the order of hundreds of years.

cover. In addition to the characteristic shrubs of RAFSS, "weedy" species and other disturbance-followers also occur in this phase. Within the LCRSP study area, a total of approximately 490.0 (484.2 on-site and 5.8 off-site) acres of P-RAFSS occur in a narrow band through the central portions of Neighborhoods II, III, and IV, primarily within and along the active wash and within the off-site levee. Of this total, about 33.6 (33.5 on-site and 0.1 off-site) acres are hydrologically disconnected and, therefore, are no longer exposed to the natural flood regime characteristic of this community. This vegetation generally provides suitable habitat for the SBKR.

◊ **Intermediate Riversidean alluvial fan sage scrub**. Within the LCRSP study area, intermediate Riversidean alluvial fan sage scrub (I-RAFSS) is dominated by California sagebrush, scale-broom, our Lord's candle, California buckwheat, deerweed, hairy yerba santa (*Eriodictyon trichocalyx*), and slender buckwheat (*Eriogonum gracile* var. *gracile*). Within the LCRSP study area, a total of approximately 358.4 (356.9 on-site and 1.5 off-site) acres of I-RAFSS occurs along the northern boundary of Neighborhoods II, III, and IV and within the off-site road and levee. Of this, 187.8 (186.8 on-site and 1.0 off-site) acres are hydrologically disconnected (i.e., outside the existing 100-year floodplain). This vegetation generally provides suitable habitat for the SBKR.

◊ **Intermediate Riversidean alluvial fan sage scrub/non-native grassland**. Intermediate Riversidean alluvial fan sage scrub/non-native grassland (I-RAFSS/NNG) supports dominant shrubs characteristic of this community comprising on the order of 30 percent cover. Non-native grasses, such as ripgut grass (*Bromus diandrus*), foxtail chess, and slender wild oat, comprise about 40 percent cover. A total of approximately 31.9 acres of this community occurs throughout the LCRSP study area, of which, 12.7 on-site acres are hydrologically disconnected. This vegetation generally provides suitable habitat for the SBKR.

◊ **Intermediate Riversidean alluvial fan sage scrub/disturbed**. Intermedian Riversidean alluvial fan sage scrub/disturbed (I-RAFFSS/D) is characterized by RAFSS with evidence of disturbance. This community comprises a total of about 16.1 (16.0 on-site and 0.1 off-site) acres within Neighborhoods III and IV and the off-site road. Of this, approximately 15.8 on-site acres are hydrologically disconnected. This vegetation generally provides suitable habitat for the SBKR.

◊ **Mature Riversidean alluvial fan sage scrub**. Within the LCRSP study area, mature Riversidean alluvial fan sage scrub (M-RAFSS) is dominated by scale-broom, California buckwheat, birch-leaf mountain mahogany (*Cercocarpus betuloides*), spiny redberry, and California juniper. Other species present throughout this community include our Lord's candle, pinebush (*Ericameria pinifolia*), California sagebrush, deerweed, beavertail cactus (*Opuntia basilaris*), western sycamore (*Platanus racemosa*), squawbush (*Rhus trilobata*), and matchweed. Forb species include nest straw (*Stylocline* sp.), California filago (*Filago californica*), chia (*Salvia columbariae*), yarrow (*Eriophyllum* sp.), Parry's spineflower (*Chorizanthe parryi* var. *parry*), Turkish rugging (*Chorizanthe staticoides*), lastarriaea (*Lastarriaea coriacea*), and oat (*Avena* spp.). Within the LCRSP study area, a total of about 208.0 (207.9 on-site and 0.1 off-site) acres of

M-RAFSS occurs in benches throughout the southern portion of Neighborhood II and throughout the northern portion of Neighborhood III.

Approximately 192.4 (192.3 on-site and 0.1 off-site) acres of the assemblages of M-RAFSS in the LCRSP study area have been removed from exposure to episodic flooding by flood control structures and/or mining operations. This assemblage generally does not provide suitable habitat for the SBKR but may provide refugia for this species during catastrophic flood events.

◊ **Mature Riversidean alluvial fan sage scrub/chamise chaparral**. Mature RIversidean alluvial fan sage scrub/chamise chaparral (M-RAFSS/CCH) within the LCRSP study area is an ecotone community and supports species characteristic of both communities for which it is named. This community comprises approximately 39.3 acres within Neighborhood II. Of this, about 31.1 on-site acres are hydrologically disconnected (i.e., outside the existing 100-year floodplain). This assemblage generally does not provide suitable habitat for SBKR but may provide refugia for this species during catastrophic flood events.

- **White sage scrub**. White sage scrub within the LCRSP study area is dominated by white sage. This community may be in a transitional phase from some form of RSS to white sage scrub due to recent fire and other disturbances that have created a more monotypic scrub community in this area. This community is located along the northern boundary of the northern portion of Neighborhood III and comprises about 1.2 acres.

- **California buckwheat scrub**. This community is dominated by California buckwheat. Other species observed within this community include California sagebrush, deerweed, scale-broom, oat, and other non-native grasses. About 34.0 (33.7 on-site and 0.3 off-site within the off-site road) acres of California buckwheat scrub (CBS) are found within the LCRSP study area, primarily near roads and disturbed slopes along the western edges of Neighborhoods II and III.

- **California buckwheat scrub/non-native grassland**. California buckwheat scrub/non-native grassland (CBS/NNG) is dominated by California buckwheat, foxtail chess, slender wild oat, Mediterranean schismus (*Schismus barbatus*), soft chess, and cheat grass (*Bromus tectorum*). Associated species within this community include common fiddleneck (*Amsinckia menziesii*) and black mustard. This community comprises approximately 2.7 acres within Neighborhood III.

- **California buckwheat scrub/disturbed**. California buckwheat scrub/disturbed (CBS/D) exhibits evidence of disturbance, including clearing and continual use of dirt roads. This community within the LCRSP study area is dominated by California buckwheat, hairy golden-aster (*Heterotheca sessiliflora*), black mustard, foxtail chess, California sagebrush, slender buckwheat, and twiggy wreathplant (*Stephanomeria virgata*). This community occurs within the southwest corner of the eastern portion of Neighborhood I and comprises approximately 16.9 acres (1.0 on-site acre within that segment of the SoCalGas easement included within the LCRSP study area).

- **California buckwheat scrub/ruderal**. California buckwheat sccrub/ruderal (CBS/RUD) is dominated by California buckwheat and non-native weedy species. This community totals approximately 4.4 acres within Neighborhood III.

- **California sagebrush-California buckwheat scrub**. California sagebrush-California buckwheat scrub (CSS-CBS) is dominated by California sagebrush and California buckwheat. Other component species observed within the LCRSP study area include pinebush, deerweed, hairy yerba santa, and California croton (*Croton californicus*). This vegetation community may also contain common sunflower (*Helianthus annuus*), patches of non-native ruderal species, such as mustard (*Brassica* sp.), and non-native grasses in areas where disturbances have occurred. There are about 5.3 acres of CSS-CBS scrub in small patches along the southern boundary and in the southwest corner of Neighborhood II.

- **California sagebrush-California buckwheat scrub/disturbed**. California sagebrush-California buckwheat scrub disturbed (CSS-CBS/D) is dominated by California sagebrush and California buckwheat but shows evidence of disturbance. Non-native species found within this community include slender wild oat, tocalote, black mustard, horehound (*Marrubium vulgare*), and red-stemmed filaree (*Erodium cicutarium*). This community occurs in the southeastern and western portions of Neighborhood II and comprises approximately 30.1 acres.

- **Northern mixed chaparral**. Northern mixed chaparral (NMCH) is normally dominated by robust, broad-leaved sclerophyll shrubs. Usually, there is little or no understory vegetation but often there is a thick accumulation of leaf litter. Suitable site factors include dry, rocky, often steep slopes with little soil. On the site, NMCH is dominated by buck brush (*Ceanothus cuneatus*), redberry (*Rhamnus* sp.), chamise (*Adenostoma fasciculatum*), California sagebrush, squawbush, and California buckwheat. This community accounts for approximately 20.6 acres of the LCRSP study area and occurs in the southeastern section of Neighborhood II.

- **Northern mixed chaparral/non-native grassland**. North mixed chaparral/non-native grassland (NMCH/NNG) within the LCRSP study area supports tall, dense shrubs that do not form a dense, continuous canopy due to invasion by non-native grasses. This community is dominated by ceanothus species (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), chamise, and non-native grasses. This community comprises approximately 52.6 acres along the slopes in the eastern half of Neighborhood I.

- **Chamise chaparral**. Chamise chaparral (CCH) consists of a relatively low-growing chaparral dominated by chamise. This community often occurs on xeric slopes and ridges and is adapted to frequent fires by crown sprouting. California buckwheat occurs throughout this community within the LCRSP study area as a subdominant species. Associated species observed include white sage, California sagebrush, pinebush, black sage, deerweed, hairy yerba santa, and California croton. Understory species include oat, telegraph weed (*Heterotheca grandiflora*), and horehound. About 240.9 (240.8 on-site and 0.1 off-site) acres of CCH occur throughout the LCRSP study area.

- **Chamise chaparral/non-native grassland**. Chamise chaparral/non-native grassland (CCH/NNG) is dominated by chamise and oat. This community supports subdominant and associated shrubs characteristic of CCH; however, there is a greater presence of non-native and disturbance-tolerant species, including ripgut grass, annual sunflower, and black mustard. This community comprises a total of about 47.5 acres (7.0 acres within the previously entitled LCNPD) within the northwestern portion of Neighborhood I and the eastern portion of Neighborhood IV.

- **Chamise chaparral/ruderal**. Chamise chaparral/ruderal (CCH/R) is dominated by chamise and disturbance tolerant species, such as mustard. This community occurs in the central portion of Neighborhood III and totals approximately1.7 acres.

- **Non-native grassland**. Non-native grassland (NNG) typically occurs in upland areas with deep soils of relatively flat terrain or gradual slopes below 3,000-feet above MSL. Typical species include annual grasses of Mediterranean origin and numerous associated annual forbs. Dominant non-native grassland species observed within the LCRSP study area include ripgut grass, foxtail chess, oat, and soft chess. About 32.8 acres (0.5 acres within the previously entitled LCNPD) of NNG occur primarily within Neighborhood IV with small patches found within Neighborhood I.

- **Non-native grassland/Riversidean sage scrub**. Non-native grassland/Riversidean sage scrub (NNG/RSS) is dominated by non-native grasses, especially oats, with scattered shrubs, such as California sagebrush, California buckwheat, deerweed, and white sage. This community, totaling about 9.8 acres, was mapped adjacent to Neighborhood I in that portion of the LCRSP study area that was part of the LCNPD.

- **Non-native grassland/intermediate Riversidean alluvial fan sage scrub**. Non-native grassland/intermediate Riversidean alluvial fan sage scrub (NNG/I-RAFSS) is dominated by non-native grasses, including oat, foxtail chess, and ripgut grass as well as scattered shrubs characteristic of RAFSS. This community totals approximately 21.0 acres within Neighborhood III.

- **Non-native grassland/California buckwheat scrub**. Non-native grassland/California buckwheat scrub (NNG/CBS) is dominated by hairy golden-aster, oat, cheat grass, nest straw, dove weed (*Eremocarpus setigerus*), and common sunflower with California buckwheat and slender buckwheat scattered throughout. This community, totaling about 69.2 acres (1.4 acres within the previously entitled LCNPD), occurs throughout Sycamore Canyon (within the western portion of Neighborhood I) and a small portion along the southern boundary of the eastern portion of Neighborhood I.

- **Non-native grassland/chamise chaparral**. Non-native grassland/chamise chaparral (NNG/CCH) is dominated within the LCRSP study area by non-native grasses that comprise at least 40 percent cover. Shrubs account for about 30 percent cover with chamise as the dominant and hairy yerba santa as a co-dominant shrub. Within the LCRSP study area, additional species observed in this community include California everlasting (*Gnaphalium californicum*), stephanomeria (*Stephanomeria* sp.), and peak rush-rose (*Helianthemum scoparium*). This community occurs within Neighborhoods III and IV comprises approximately 24.1 acres.

- **Southern cottonwood willow riparian**. Southern cottonwood willow riparian (SCWR) is dominated within the LCRSP study area by Fremont cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), and mule fat (*Baccharis salicifolia*). A few eucalyptus trees (*Eucalyptus* sp.) also occur within this community within the LCRSP study area. Approximately 1.7 acres of SCWR occur in the western portion of Neighborhood II adjacent to water flowing from basins to the north.

- **Southern willow scrub**. Southern willow scrub (SWS) is characterized by dense, broad-leaved, winter-deciduous, riparian thickets dominated by several willow species (*Salix*

spp.), with scattered emergent Fremont's cottonwood and western sycamore, and a sparse understory. Within the LCRSP study area, SWS is dominated by arroyo willow, mule fat, and Mexican elderberry (*Sambucus mexicanus*). This community totals approximately 19.4 (17.5 on-site [1.8 acres within the on-site SoCalGas easement] and 1.9 off-site [within the off-site SoCalGas easement included in the LCRSP study area]) acres and is primarily located within the drainage within the eastern portion of Neighborhood I (in Sycamore Flat). A small patch is also located within a drainage area in the northwest corner of Neighborhood I. Within the LCRSP study area, stands of SWS are recovering from an October 2003 fire that burned this vegetation community in its entirety. Consequently, on-site stands of southern willow scrub are under-developed at the present time.

- **California sycamore alliance**. The California sycamore alliance is a floristic group within the more general riparian forest and woodland habitat type. This community occurs in two small patches within Neighborhood I and exists as remnant riparian habitat with evidence of disturbance in the surrounding area. This community is dominated by western sycamore and totals about 0.3 acre.

- **Mule fat scrub**. Mule fat scrub (MFS) is dominated by mule fat. Within the LCRSP study area, other species occurring in this community include willow (*Salix* sp.), tamarisk (*Tamarix ramosissima*), California buckwheat, and deerweed. Within the LCRSP study area, a total of approximately 4.4 (3.2 on-site [1.0 within the on-site SoCalGas easement and 0.5 within the LCNPD] and 0.7 off-site [within the off-site SoCalGas easement included within the LCRSP study area]) acres of MFS are found in the eastern portion of Neighborhood I (within the Sycamore Flat East[34] riparian corridor) in small area along the western boundary of Neighborhood II near the basins.

- **Mule fat scrub/disturbed**. Mule fat scrub/disturbed (MFS/D) is dominated by mule fat but exhibits evidence of disturbance, such as bare patches and the presence of weedy species. A total of approximately 2.7 acres of MFS/D occur in the eastern portion of Neighborhood I, within a portion of the Sycamore Flat East riparian corridor.

- **Basin**. The term basin has been designated for those areas of the LCRSP study area that constitute introduced structures designed for holding water. The basins may be maintained periodically and generally exist in an unvegetated state. Basins are differentiated from developed areas due to the presence of water which may support certain wildlife species. Several basins occur within the western portion of Neighborhood II and are associated with mining activities. Other basins used for groundwater recharge are not included in this category as they do not hold water for most of the year and, therefore, do not provide an aquatic habitat. Basins comprise a total of about 9.9 acres.

- **Ruderal**. RUD areas typically have few native species and resources and characterized by a predominance of non-native weedy species that readily colonize disturbed ground. Within the LCRSP study area, species characterizing this community include black mustard, red-stemmed filaree, horehound, horseweed (*Conyza canadensis*), tree tobacco (*Nicotiana glauca*), tocalote, and hairy golden-aster. RUD areas occupy about 56.2 (55.3 on-site and 0.9 off-site [within the off-site SoCalGas easement included within the LCRSP study area]) acres within Neighborhoods I, II, and III.

[34]/ As referred to herein, the term "Sycamore Flat East" refers to a portion of Neighborhood I (Sycamore Flat) located to the east of the I-15 Freeway.

- **Disturbed**. Disturbed areas consist of regularly maintained areas that lack vegetation. Within the LCRSP study area, disturbed areas primarily include dirt roads, cleared areas/easements, areas cleared for geotechnical testing, areas recently damaged by wildfire, and an area adjacent to the Cemex USA mine at the eastern end of Neighborhood III. Portions of Neighborhood I that were approved as part of the LCNPD have been disturbed as part of recent construction activities. These areas occupy approximately 328.1 (324.2 on-site [0.1 within the SoCalGas easement and 79.8 within the LCNPD] and 1.3 off-site [within the roadway under the I-15 Freeway]) acres within Neighborhoods I through IV.

- **Disturbed/intermediate Riversidean alluvial fan sage scrub**. Disturbed/intermediate Riversidean alluvial fan sage scrub (D/I-RAFSS) has species characteristic of RAFSS but with evidence of significant disturbance. This community comprises approximately 9.5 acres within Neighborhood III.

- **Disturbed/northern mixed chaparral**. Disturbed/northern mixed chaparral (D/NMC) supports dominant plant species similar to those of northern mixed chaparral communities (such as buck brush, redberry, chamise, California sagebrush, squawbush, and California buckwheat) and also plant species supported in disturbed areas. The disturbed/northern mixed chaparral community accounts for approximately 4.9 acres in the southeastern portion of Neighborhood II.

- **Golf course**. The El Rancho Verde Royal Vista Golf Course encompasses about 158.6 acres and occurs in the southeastern portion of Neighborhood II.

- **Ornamental**. Ornamental vegetation includes olive trees and other non-native tree species generally used for landscaping. A total of approximately 1.5 acres of ornamental vegetation occurs in several small patches within and near the golf course area within Neighborhood II.

- **Developed**. Developed areas are mostly devoid of vegetation due to on-going disturbances and include paved roads, water tanks, mining operations, and other infrastructure. About 96.3 (93.5 on-site [38.8 within the previously entitled LCNPD] and 2.8 off-site [0.1 within that segment of the SoCalGas easement within the LCRSP study area, 0.5 within the roadway under the I-15 Freeway, and 2.2 within the levee area) acres have been characterized as developed. Approved areas categorized as recently developed include paved roads, buildings, graded pads, and other cleared areas that are in the process of conversion to fully developed areas.

Wildlife

While a few wildlife species are entirely dependent on a single or on only a few natural communities, other wildlife species use most or all of the entire mosaic of plant communities. The LCRSP study area potentially constitutes functional habitat for a variety of wildlife species, both locally and within the larger biological region. The following section discusses wildlife populations within the LCRSP study area, segregated by taxonomic group. Representative examples of each group observed or expected within the LCRSP study area are provided below and more thoroughly presented in Appendix III-D (Biological Resources Assessment). Sensitive wildlife species occurring or potentially occurring within the LCRSP study area are discussed in a later section. Additional information concerning observed or potentially occurring wildlife is presented in Table 4.5-4 (Sensitive Wildlife Species within the LCRSP Study Area).

Table 4.5-4
SENSITIVE WILDLIFE SPECIES WITHIN THE LCRSP STUDY AREA

Scientific Name	Common Name	Federal	State	Preferred Habitat	Occurrence Within Study Area
Invertebrates					
Order Diptera	**Flies**				
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly[1]	FE	None	Found in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside Counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation.	No
Fishes					
Cyprinidae	**Minnows and Carp**				
Gila orcutti	arroyo chub	None	CSC	Slow water stream sections with mud or sand bottoms. Feed heavily on aquatic vegetation and associated invertebrates.	No
Rhinichthys osculus ssp. *3*	Santa Ana speckled dace[2]	None	CSC	Prefer stony habitat where there are hiding spaces between stones, washed by moderate current.	No
Catostomus santaanae	Santa Ana sucker[3]	FT	CSC	Permanent streams with rocky bottoms.	No
Amphibians					
Pelobatidae	**Spadefoot Toads**				
Spea hammondii	western spadefoot	None	CSC	Prefers burrow sites within relatively open areas in lowland grasslands, chaparral, and pine-oak woodlands, areas of sandy or gravelly soil in alluvial fans, washes, and floodplains. Requires temporary pools for reproduction.	P
Bufonidae	**True Toads**				
Bufo californicus	arroyo toad[4]	FE	CSC	Shallow, exposed streamsides, quiet water stretches, or overflow pools with silt-free sandy or gravelly bottoms. Nearby sandy terraces, dampened in places by capillary action, with some scattered vegetation.	No

Table 4.5-4 (Continued)
SENSITIVE WILDLIFE SPECIES WITHIN THE LCRSP STUDY AREA

Scientific Name	Common Name	Federal	State	Preferred Habitat	Occurrence Within Study Area
Ranidae	**True Frogs**				
Rana muscosa (southern California DPS)	mountain yellow-legged frog	FE	CSC	Prefers rocky stream courses in the mountains of southern California. Inhabits mid- to upper-elevation, perennial streams, often in locations with bedrock pools. Always encountered within a few feet of water.	No
Reptiles					
Emydidae	**Box and Water Turtles**				
Emys (=Clemmys) marmorata pallida	southwestern pond turtle[5]	None	CSC	Lakes, marshes, rivers, streams, and irrigation ditches with emergent vegetation such as watercress, cattails, or water lilies.	No
Phrynosomatidae	**Iguanid Lizard Family**				
Phrynosoma coronatum (blainvillei)	coast (San Diego) horned lizard[6]	None	CSC	Prefers sandy riparian and sage scrub habitats but also occurs in valley-foothill hardwood, conifer, , pine-cypress, juniper and annual grassland habitats below 6,000 feet, open country, especially sandy areas, washes, flood plains, and windblown deposits.	Ob
Teiidae	**Whiptail Family**				
Cnemidophorus hyperythra beldingi	Belding's orange-throated whiptail	None	CSC	Chaparral, non-native grassland, Riversidean sage scrub, and juniper and oak woodlands. Associated with riparian areas and alluvial fan scrub habitats.	P
Anniellidae	**Legless Lizard Family**				
Anniella pulchra pulchra	silvery legless lizard	None	CSC	Frequents sparse vegetation of beaches, chaparral, pine-oak woodland, and streamside growth of sycamores, cottonwoods, and oaks. Needs loose soil for burrowing, moisture, warmth, and plant cover.	P

Table 4.5-4 (Continued)
SENSITIVE WILDLIFE SPECIES WITHIN THE LCRSP STUDY AREA

Scientific Name	Common Name	Federal	State	Preferred Habitat	Occurrence Within Study Area
Colubridae	**Colubrid Snakes**				
Salvadora hexalepis virgultea	coast patch-nosed snake	None	CSC	Desert and rocky areas in chaparral covered hillsides and canyons.	P
Thamnophis hammondii	two-striped garter snake	None	CSC	Coastal California along watercourses permanent fresh water, and near streams with rocky beds and riparian growth.	No
Viperidae	**Vipers**				
Crotalus ruber ruber	northern red-diamond rattlesnake	None	CSC	Chaparral, woodland, grassland, and desert. In rocky areas and dense vegetation.	No
Birds					
Accipitridae	**Hawks, Kites, Harriers and Eagle Family**				
Aquila chrysaetos	golden eagle[7]	None	CSC, SFP	Mountains, deserts, and open country; prefer to forage over grasslands, deserts, savannahs and early successional stages of forest and shrub habitats.	Ob
Elanus leucurus	white-tailed kite	None	SFP	Grasslands with scattered trees, near marshes, along highways.	Ob, F
Circus cyaneus	northern harrier[8]	None	CSC	Coastal salt marshes, freshwater marshes, grasslands, and agricultural fields; occasionally forages over open desert and brushlands.	Ob, F
Falconidae	**Falcons**				
Falco peregrinus anatum	American peregrine falcon[9]	None	SE, SFP	Found in a variety of habitats including mixed conifer, pinyon-juniper, sagebrush, riparian, grassland habitats, agricultural, and urban areas.	Ob, F
Strigidae	**Owls**				
Athene cunicularia	burrowing owl[10]	None	CSC	Dry grasslands, desert habitats, open-pinyon-juniper and ponderosa pine woodlands below 5,300 feet elevation. Prefers berms, ditches, and grasslands adjacent to rivers, agricultural, and scrub areas.	Ob

Table 4.5-4 (Continued)
SENSITIVE WILDLIFE SPECIES WITHIN THE LCRSP STUDY AREA

Scientific Name	Common Name	Federal	State	Preferred Habitat	Occurrence Within Study Area
Strigidae (Continued)	**Owls** (Continued)				
Asio otus	long-eared owl	None	CSC	Riparian bottomlands grown tall with willows and cottonwoods. Also coast live oaks along riparian areas with adjacent open areas for foraging.	P
Apodidae	**Swifts**				
Chaetura vauxi	Vaux's swift[11]	None	CSC	Associated with old-growth Douglas fir, redwood, and other coniferous forest with large trees for roosting.	Ob
Tyrannidae	**Tyrant Flycatchers**				
Empidonax traillii	willow flycatcher[12]	None	SE	Low brushy vegetation in wet areas, especially riparian willow thickets.	Ob
Empidonax traillii extimus	southwestern willow flycatcher[13]	FE	SE	Low brushy vegetation in wet areas, especially riparian willow thickets.	No
Laniidae	**Shrike Family**				
Lanius ludovicianus	loggerhead shrike[14]	None	CSC	Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	Ob
Vireonidae	**Vireo Family**				
Vireo bellii pusillus	least Bell's vireo[15]	SE	FE	Found especially in willow and mesquite thickets near water.	Ob
Porulidae	**Wood Warblers**				
Dendroica petechia brewsteri	yellow warbler[16]	None	CSC	Riparian woodlands, montane chaparral, open ponderosa pine and mixed coniferous habitat with significant brush.	Ob
Icteria virens	yellow-breasted chat[17]	None	CSC	In southern California, nest in dense willow woodlands and thickets or other riparian areas with a developed understory.	Ob

Table 4.5-4 (Continued)
SENSITIVE WILDLIFE SPECIES WITHIN THE LCRSP STUDY AREA

Scientific Name	Common Name	Federal	State	Preferred Habitat	Occurrence Within Study Area
Sylviidae	**Old World Warblers, Gnatcatchers**				
Polioptila californica californica	coastal California gnatcatcher[18]	FT	CSC	Coastal sage scrub vegetation below 2,500-feet AMSL in Riverside County and generally below 1,000-feet AMSL along the coastal slope; generally avoids steep slopes and dense vegetation for nesting.	No
Icteridae	**Blackbird Family**				
Agelaius tricolor	tricolored blackbird	None	CSC	Highly colonial species. Required open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	P
Mammals					
Phyllostomidae	**Leaf-Nosed Bats**				
Macrotus californicus	California leaf-nosed bat	None	CSC	Desert scrub. By day, roosts in abandoned mine tunnels. Migrating bat species.	P, F
Molossidae	**Free-tailed Bats**				
Eumops perotis	western mastiff bat[19]	None	CSC	Many open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Ob
Nyctinomops femorosaccus	pocketed free-tailed bat[20]	None	CSC	More arid habitat such as pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Roosts in rock crevices, caverns, or buildings.	Ob
Vespertilionidae	**Evening Bats**				
Antrozous pallidus	pallid bat	None	CSC	Wide variety of habitats but most common in open, dry habitats with rocky areas for roosting.	P, F

Table 4.5-4 (Continued)
SENSITIVE WILDLIFE SPECIES WITHIN THE LCRSP STUDY AREA

Scientific Name	Common Name	Federal	State	Preferred Habitat	Occurrence Within Study Area
Vespertilionidae (Continued)	**Evening Bats** (Continued)				
Corynorhinus townsendii	Townsend's big-eared bat	None	CSC	Arid western desert scrub and pine forest regions.	P, F
Leporidae	**Hares and Rabbit Family**				
Lepus californicus bennettii	San Diego black-tailed jackrabbit[21]	None	CSC	Open brushlands and scrub habitats between sea level and 4,000 feet elevation.	Ob
Heteromyidae	**Pocket Mice and Kangaroo Rat Family**				
Perognathus longimembris brevinasus	Los Angeles pocket mouse[22]	None	CSC	Coastal sage scrub, and grasslands, desert cactus, creosote bush and sagebrush habitats.	Ob
Chaetodipus fallax fallax	northwestern San Diego pocket mouse[23]	None	CSC	Chaparral, coastal sage scrub (Riversidean and Diegan), desert scrub, grassland, juniper woodland and scrub, and Riversidean alluvial fan sage scrub	Ob
Dipodomys merriami parvus	San Bernardino kangaroo rat[24]	FE	None	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	Ob
Muridae	**Mice, Rats, and Vole Family**				
Neotoma lepida intermedia	San Diego desert woodrat	None	CSC	Variety of habitats, often in the vicinity of rocky outcrops; prefer moderate to dense canopies.	P
Onychomys torridus ramona	southern grasshopper mouse	None	CSC	Grasslands, desert areas, especially scrub with friable soils.	P
Mustelidae	**Weasels, Skunks, and Otters Family**				
Taxidea taxus	American badger	None	CSC	Drier, open stages of shrubland, forest, and herbaceous habitats with friable soils.	No

Notes:
1. No suitable habitat for this species occurs within the study area.
2. Not expected to occur within the study area due to the lack of perennial water flow in the "on-site" reach of Lytle Creek. Furthermore, the nearest location in the CNDDB is 3.5 miles northwest from the study area within the upper reaches of Lytle Creek and was last observed in 1996. The project is not anticipated to have any hydro-geomorphic effects on the main channel of Lytle Creek.

Table 4.5-4 (Continued)
SENSITIVE WILDLIFE SPECIES WITHIN THE LCRSP STUDY AREA

Notes:

3. Not expected to occur within the study area due to the lack of perennial water flow in the "on-site" reach of Lytle Creek. Furthermore, the nearest location in the CNDDB is 6 miles southeast from the study area in the Santa Ana River and was last observed in 1998. The project is not anticipated to have any hydro-geomorphic effects on the main channel of Lytle Creek.
4. According to the USFWS database, the arroyo toad has been documented in Cucamonga Creek and Cajon Creek in 1999 and 2000, respectively. Biologists performed habitat evaluations for the arroyo toad within Lytle Creek North in 1997. No suitable habitat for this species was found. Concurrently, diurnal surveys for this species were conducted in potentially suitable habitat within Sycamore Flat. No characteristic signs of this species were found in Sycamore Flat. Furthermore, habitat evaluations completed for Neighborhoods II, III, IV, and the habitat mitigation area during the 2004-2005 survey season did not detect suitable habitat for arroyo toad. This species is, therefore, considered to be absent from the study area and surrounding areas.
5. Habitat evaluations completed for Neighborhoods I, II, III, IV, and the habitat mitigation area during the 2004-2005 survey season did not detect suitable habitat for the southwestern pond turtle. This species is, therefore, considered to be absent from the study area and surrounding areas.
6. The subspecies within the study area is presumed by the CDFG to be *blainvillei* and it occurs throughout the study area. This species was also previously observed in the 1993-1994 survey season.
7. This species was observed on several occasions near the most northern portions of the study area and within the western portion of Neighborhood I. This species was also previously observed in the 1993-1994 survey season.
8. One individual northern harrier was observed on one occasion in the spring of 2005 and again in the spring of 2006 within Neighborhood II.
9. One individual American peregrine falcon was observed during the winter season in early 2006 perched on a snag within Neighborhood II.
10. A habitat assessment and burrow survey conducted in 2006 and 2007 determined that the proposed development area is not occupied by this species. No evidence of occupation by burrowing owls (past or present) was observed; therefore, Phase III (census and mapping) surveys for this species were not deemed necessary within the development footprint. Habitat within the study area is generally too dense to support this species. Burrowing owl was, however, incidentally observed in September of 2006, February of 2007, and January 2009 within the proposed "on-site" habitat mitigation area, likely due to removal of chamise. This species is thought to be over-wintering within the SBKR Conservation Area; however, the breeding status of this species within the proposed habitat mitigation area is not known at this time and there is no evidence of breeding within the proposed development area.
11. Vaux's swift was observed within Neighborhood II in the spring of 2006.
12. Two transient willow flycatchers were observed on a single occasion in the spring of 2006 along the southern boundary of Neighborhood II in an area lacking riparian habitat. In 2007, focused surveys detected one migrant willow flycatcher on May 17 in the Sycamore Flat riparian corridor in Neighborhood I. As these birds were not detected on subsequent site visits, it is presumed that they are transient migrants of unknown subspecies but not of the subspecies *extimus*.
13. Surveys conducted in 1998 detected seven individual flycatchers on a single survey date. Due to the date of initial observation (June 8) and the failure to detect any flycatchers during subsequent visits, it was presumed that the observations were migratory birds of unknown subspecies. Surveys for the SWWF performed in 1997, 1999, and 2002 within Neighborhood I (Sycamore Flat) did not detect this species within the study area. Two transient willow flycatchers were observed during 2006 in Neighborhood II in an area lacking riparian habitat. In 2007, focused surveys detected one migrant willow flycatcher on May 17 in the Sycamore Flat riparian corridor in Neighborhood I. This individual is also believed to be a migratory transient as it was not seen on the subsequent four focused surveys. In addition, due to recent fires, the quality of the riparian habitat within Sycamore Flat has diminished. This subspecies is, therefore, not expected to occur within the study area.
14. Observed on several occasions in the spring of 2006 within the western portion of Neighborhood III.
15. Focused surveys performed for this species in 1997, 1999, and 2002 within the Sycamore Flat area of Neighborhood I did not detect this species within the study area. At least one male and two pairs of LBV were, however, observed in 2006. In addition, one breeding pair was observed off-site just north of Neighborhood I in 2007.
16. Detected on a few occasions within the eastern portion of Neighborhood I in the spring of 2006.
17. Detected during focused LBV and southwestern willow flycatcher surveys within Neighborhood I (Sycamore Flat).

Table 4.5-4 (Continued)
SENSITIVE WILDLIFE SPECIES WITHIN THE LCRSP STUDY AREA

Notes (Continued):
18. Focused surveys performed for the CAGN in 2005, 2006, and 2007 did not detect this species within the study area.
19. Detected by O'Farrell in the central portion of Neighborhood III using acoustic equipment in August 2007.
20. Detected by O'Farrell in Neighborhoods II, III, and IV using acoustic equipment in August 2007.
21. Observed throughout the study area in suitable habitat at various times of year during the 2004 through 2006 survey seasons. This species was also previously observed in the 1993-1994 survey season.
22. Although this species was not found within Neighborhoods I or II, the Los Angeles pocket mouse was caught during trapping efforts by O'Farrell within the SBKR Conservation Area of Neighborhood III and within Neighborhood IV in 2005, 2006, and 2007. Neighborhood IV currently supports highly suitable habitat for this species.
23. O'Farrell trapped this species throughout the study area in 2005 and 2006.
24. Numerous trapping surveys have been conducted to ascertain the presence and distribution of this species within the study area as within nearby "Lytle Creek North Planned Development Project." Survey results beginning in 1997 and continuing to the present indicate that this species primarily occupies the active wash. Trapping conducted by O'Farrell determined that a restricted portion of the upland terrace/bench within Neighborhoods II and III (some of which is isolated from the wash) also supports this species.

Legend:
Ob Observed.
P There remains the possibility for this species to occur within the study area due to the presence of potentially suitable habitat.
No Species not observed or not expected to occur within the study area due to the lack of suitable habitat, the negative results of focused surveys, or the study area's location outside of the species' range.
F For raptor and bat species: if present, would utilize the site for foraging only.
N For raptor and bat species: if present, would utilize the site for nesting only.
B For raptor and bat species: if present, would utilize the site for both foraging and nesting.

Key to Species Listing Status Codes:
FE Federally Listed as Endangered
FT Federally Listed as Threatened
FPE Federally Proposed as Endangered
FPT Federally Proposed as Threatened
FPD Federally Proposed for Delisting
SE State Listed as Endangered
ST State Listed as Threatened
SCE State Candidate for Endangered
SCT State Candidate for Threatened
SFP State Fully Protected
SR State Rare
CSC California Special Concern Species

Source: PCR Services Corporation

- **Fish**. Arroyo chub (*Gila orcutti*), Santa Ana speckled dace (*Rhinichthys osculus ssp. 3*) and Santa Ana sucker (*Catostomus santaanae*) are known to exist regionally but were neither observed nor are expected to occur within the LCRSP study area. Focused surveys for these species were not conducted due to the lack of perennial water flow through the on-site reach of Lytle Creek.

  The proposed project is not anticipated to have any hydro-geomorphic effects on the main channel of Lytle Creek. Similarly, the LCRSP study area is not expected to support trout. Although known to naturally occur as well as be stocked by CDFG within the upper reaches of Lytle Creek, this species is not expected to occur within the LCRSP study area due to the lack of perennial water flow through the on-site reach of Lytle Creek.

- **Amphibians**. Terrestrial amphibian species may or may not require standing water for reproduction and avoid desiccation by burrowing underground within crevices in trees, rocks, logs, and under stones and surface litter during the day and dry seasons. Due to their secretive nature, terrestrial amphibians are infrequently observed but may be quite abundant if conditions are favorable. Aquatic amphibians are dependent on standing or flowing water for reproduction. Such habitats include fresh water marshes and open water (reservoirs, permanent and temporary pools and ponds, and perennial streams). Although the LCRSP study area supports both aquatic and terrestrial amphibian habitats, most of the habitat is too dry to support more than a few species.

  Western toad (*Bufo boreas*) and Pacific treefrog (*Hyla regilla*) were both observed or detected during the various field visits conducted between 2005 and 2008. In addition, the following additional amphibian species were not observed but have the potential to occur within the LCRSP study area: black-bellied slender salamander (*Batrachoseps nigriventris*), Pacific slender salamander (*Batrachoseps pacificus*), yellow-blotched salamander (*Ensatina eschscholtzi crocreater*), western spadefoot (*Spea hammondii*), California treefrog (*Hyla cadaverina*), and bullfrog (*Rana catesbeiana*).

- **Reptiles**. Reptilian diversity and abundance typically varies with habitat type and character. Some species prefer only one or two natural communities; however, most will forage in a variety of communities. A number of reptile species prefer open habitats that allow free movement and high visibility. Most species occurring in open habitats rely on the presence of small mammal burrows for cover and escape from predators and extreme weather.

  The fine sandy soils of the RAFSS found in the LCRSP study area are the most suitable for most of the reptile species that occur or that are expected to occur within the LCRSP study area. Most of these species will also use the RSS and chaparral habitats within the LCRSP study area. Perennial sources of water typically attract several species of snakes, although most reptiles prefer dry conditions and avoid wet areas. Within the LCRSP study area, ponded water and the basins containing perennial water within the western edge of Neighborhood II may be frequented by the common kingsnake (*Lampropeltis getulus*), gopher snake (*Pituophis melanoleucus*), and western rattlesnake (*Crotalus viridis*).

  Reptile species observed within the LCRSP study area include, but are not limited to, the common zebra-tailed lizard (*Callisaurus draconoides draconoides*), coast horned lizard

(*Phrynosoma coronatum*), western fence lizard (*Sceloporus occidentalis*), spiny granite lizard (*Sceloporus orcutti*), side-blotched lizard (*Uta stansburiana*), coastal whiptail (*Cnemidophorus tigris stejnegeri*), southern Pacific rattlesnake (*Crotalus viridis helleri*), and San Diego gopher snake (*Pituophis melanoleucus annectens*). As indicated in Table 4.5-4 (Sensitive Wildlife Species within the LCRSP Study Area), a number of additional reptile species have a potential to be resident within the LCRSP study area.

- **Birds**. The habitat within the LCRSP study area provides foraging and cover habitat for year-round and seasonal avian residents. Bird species commonly observed within the LCRSP study area include, but are not limited to, the California towhee (*Pipilo crissalis*), California thrasher (*Toxostoma redivivum*), northern mockingbird (*Mimus polyglottos*), common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), Costa's hummingbird (*Calypte costae*), Anna's hummingbird (*Calypte anna*), Bewick's wren (*Thryomanes bewickii*), cactus wren (*Campylorhynchus brunneicapillus*), Bell's sage sparrow (*Amphispiza belli belli*), white-throated swift (*Aeronautes saxatalis*), bushtit (*Psaltriparus minimus*), house finch (*Carpodacus mexicanus*), and California quail (*Callipepla californica*). Birds observed in the introduced ponds or basins include great blue heron (*Ardea herodias*), mallard (*Anas platyrhynchos*), cinnamon teal (*Anas cyanoptera*), American coot (*Fulica americana*), killdeer (*Charadrius vociferus*), and great egret (*Ardea alba*). Only a few individuals of each of these species were observed. The basins are small and are not expected to support numerous waterfowl or shorebirds.

  The habitats within the LCRSP study area do provide some foraging and breeding habitat for raptors. Scrub habitats, such as RSS, RAFSS, California buckwheat scrub, and California sagebrush-California buckwheat scrub provide more cover for prey species than grassland and other open habitats, making scrub habitats less desirable for foraging. The barren wash areas do not provide habitat for prey species. Cliff faces for nesting do not exist within the LCRSP study area and may only exist adjacent to the LCRSP study area in the area of the existing Cemex USA quarry.

  With the exception of the golf course in Neighborhood II and the Sycamore Flat area within Neighborhood I, where a red-tailed hawk (*Buteo jamaicensis*) nest was observed during the 2006 survey season, the LCRSP study area generally lacks large stands of trees and riparian habitat that would provide breeding habitat for raptors. Nevertheless, the trees in the RAFSS and chamise chaparral habitats provide perches for foraging raptors, including the red-tailed hawk. Adjacent ranch and low-density residential areas support stands of exotic trees that provide suitable nest sites for raptorial bird species.

  The following raptor species have been observed within the LCRSP study area during the various survey seasons: the State fully protected (SFP) white tailed kite (*Elanus leucurus*) osprey (*Pandion haliaetus*), CSC northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperi*), red-tailed hawk, red-shouldered hawk (*Buteo lineatus*), SFP golden eagle (*Aquila chrysaetos*), American kestrel (*Falco sparverius*), and the State endangered and SFP American peregrine falcon (*Falco peregrinus anatum*).

- **Mammals**. Mammals observed or otherwise detected within the LCRSP study area include the desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), San Diego pocket mouse (*Chaetodipus fallax*), SBKR, LAPM, Dulzura kangaroo rat (*Dipodomys simulans*), desert wood rat (*Neotoma lepida*), California mouse (*Peromyscus californicus*), cactus mouse (*Peromyscus eremicus*),

deer mouse (*Peromyscus maniculatus*), western harvest mouse (*Reithrodontomys megalotis*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), and bobcat (*Felis rufus*). As indicated in Table 4.5-4 (Sensitive Wildlife Species within the LCRSP Study Area), a number of other mammal species are expected to be resident within the region and may occasionally utilize the LCRSP study area to forage or for cover.

Wildlife Movement

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, inhospitable environments, and human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas providing suitable habitat, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic material. Corridors effectively act as links between different populations of a species. Corridors mitigate the effects of habitat fragmentation by: (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as "wildlife corridor," "travel route," and "wildlife crossing" to refer to areas in which wildlife move from one area to another.

Although the nature of each of the types of movement is species specific, large open spaces will generally support a diverse wildlife community and provide for all types of movement, each of which may also be represented at a variety of scales from immobile plants to many square-mile home ranges. The resources available within the LCRSP study area support all categories of movement on some scale. Local and regional wildlife movements within the LCRSP study area are discussed below.

- **Local Wildlife Movement**. The LCRSP study area provides the natural resources necessary (e.g., seasonal water source within the wash, scrub and chaparral vegetative cover on the floodplain terraces, limited riparian habitat, and relatively flat topography) to support a variety of wildlife that utilize the LCRSP study area for local movement. Biological surveys within the LCRSP study area have detected wildlife trails, bedding areas, burrows, tracks, and scat. Observations made during the course of field work for this assessment confirmed the presence of a variety of reptiles, birds, and medium to large mammals (such as coyote and mule deer). The home range and average dispersal distance of many of the species detected may be entirely contained within the LCRSP study area and immediate vicinity. Populations of animals (such as insects, amphibians, reptiles, small mammals, and a few bird species) may find all their resource requirements without moving far from or outside the LCRSP study area. Daily

movement by these animals in search of food, water, shelter, and mates is likely concentrated on the vegetated floodplain terraces and upland habitat "islands" within the wash due to the lack of vegetation in most of the active wash. Wildlife species (such as coyote) were, nonetheless, observed in the unvegetated portions of the wash. Many species are expected to occasionally expand their home range or disperse from their natal territory to eventually move outside the LCRSP study area.

Although wildlife movement along the upper terrace between Neighborhoods II and III is somewhat hindered by the presence of the Cemex USA quarry, the open channel portion of Lytle Creek remains relatively unobstructed along the length of the LCRSP study area. While Glen Helen Parkway, which crosses over Lytle Creek upstream of the I-15 Freeway in Neighborhood IV, was recently (2006) widened, four culverts have been built to accommodate wildlife not making surface crossings. Three of these culverts are 6-feet high by 4-feet wide box culverts and one is an arch culvert that is 12-feet high and 42-feet wide. These dimensions are sufficient to allow crossing of small and medium sized animals.

Continuous wildlife movement through the LCRSP study area is made possible by the presence of Lytle Creek. Although wildlife may utilize upland areas outside the floodplain for cover and foraging, these areas do not function as a continuous corridor for species moving through the LCRSP study area. The wash and the associated network of "islands" within it serves as the main wildlife movement corridor within the LCRSP study area between the San Bernardino National Forest to the northwest and the confluence with Cajon Wash downstream. Sycamore Flat East is a smaller corridor allowing movement in a north-south direction within the LCRSP study area between Lytle Creek and the Muscupiabe Hills.

- **Regional Movement**. The criteria used to identify and characterize wildlife movement corridors are based on the body of theoretical and empirical knowledge of corridors, the nature of habitat areas with and surrounding the LCRSP study area, the analysis of regional aerial photographs and topographic maps, observations of wildlife within the LCRSP study area, and information from the SCW report.

  As illustrated in Figure 4.5-2 (South Coast Ecoregion – South Coast Missing Linkages [South Coast Wildland]), SCW depicts one linkage within the LCRSP study area: "Linkage 34" (Lytle Creek Drainage).[35] Lytle Creek is characterized as a constrained landscape linkage with the major constraints to wildlife movement being gravel mining, roads, and urbanization. The severity of the threats to the connectivity function of the linkage is moderately low.

  From a regional perspective, the LCRSP study area is a topographic low point which is connected to and south of a large open space area (San Bernardino National Forest) and north of, but not connected to, a smaller open space area (Jurupa Mountains). Northwest-bound wildlife movement within Lytle Creek is unobstructed into the western portion of the San Bernardino Mountains (north and west of the I-15 Freeway). Several constraints to movement, however, exist along this regional corridor. The presence of the I-15 and I-215 Freeways limit the LCRSP study area's function as a point of connectivity to the north and northwest. Eastbound and westbound wildlife movement

[35]/ *Op. Cit*., Missing Linkages: Restoring Connectivity to the California Landscape.

from the LCRSP study area to the downstream portions of Lytle Creek is inhibited by the presence of dense urban development (i.e., Cities of Fontana, Rialto, and San Bernardino). Southbound movement is also restricted by the lack of vegetative cover within existing urban development. Nevertheless, the presence of several mitigation banks northeast of the LCRSP study area ensures connectivity for wildlife movement near the confluence of Lytle and Cajon Creeks (e.g., Vulcan Materials Company's "Cajon Creek Habitat Conservation Management Area").

Although the I-15 Freeway bisects the LCRSP study area, wildlife movement along Lytle Creek can occur, in part, as a result of the presence of a large freeway overpass (about 2,100 feet in length). Glen Helen Parkway also bisects Lytle Creek just upstream of the I-15 Freeway but accommodates wildlife movement due to the presence of four culverts. Similarly, the approximately 3,635 feet long Cajon Creek overpass (where the I-15 and I-215 intersect) allows movement of wildlife along this drainage north of the LCRSP study area. Wildlife movement is, however, limited downstream from the LCRSP study area by the absence of habitat areas (previously impacted by urbanization and mining).

Approximately four miles downstream from the southeastern LCRSP study area boundary, Lytle Creek flows into a flood control basin. From the flood control basin, the wash splits into two concrete-lined channels that do not contain the natural resources (vegetative cover) to support a high diversity of wildlife species. These channelized portions of the wash could be used by wildlife species that are adapted to the urban environment (such as coyote, raccoon, skunk, and opossum), species that do not necessarily require a "wildlife corridor" to move through an urban area. The channelized, concrete-lined portions of the channel would not, however, be expected to support mule deer, bobcat, grey fox, or mountain lion which utilize more native habitat areas and shy away from urban areas. Furthermore, the channelized, concrete-lined portions of the wash would not be expected to support a high diversity of other wildlife (i.e., amphibians, reptiles, and birds) due to the lack of vegetation and suitable substrates.

Lytle Creek remains channelized, concrete-lined, and unvegetated for approximately three miles before its confluence with Warm Creek. Warm Creek then flows for approximately one mile before its confluence with the Santa Ana River. As a result of the three miles of channelized, concrete-lined wash with no vegetative cover, most wildlife would not be expected to continue downstream from the LCRSP study area. The channelized and unvegetated three-mile portion of the wash effectively acts as a barrier to regional movement for most species.

The LCRSP study area supports a high diversity of wildlife species and contains the resources to support local and regional wildlife movement. The value of the LCRSP study area as a regional corridor is highly constrained downstream (south) due to dense urban development, the concrete-lined nature of the wash, and the lack of vegetative cover. Lytle Creek does, however, function as a regional wildlife corridor between the San Bernardino Mountains (to the north) and the confluence of Lytle and Cajon Creeks (to the southeast).

Jurisdictional Waters

In addition to the terrestrial biological resources (i.e., plant communities and wildlife) described herein, this biological resource section also analyzes impacts to aquatic resources, including

drainage courses that are subject to regulation by: (1) the USACE under Section 404 of the CWA; (2) the CDFG under the streambed alteration agreement (SAA) process; and (3) the RWQCB under Porter-Cologne.

Project-specific information concerning the presence of jurisdictional waters is based on the information and analysis presented in a site-specific jurisdictional delineation report submitted and independently reviewed by the Lead Agency.[36] The primary focus of the jurisdictional delineation was to: (1) determine the extent of permanent and temporary impacts to federal and State jurisdictional waters which would result from the proposed project, inclusive of both the approximately 2,447.3-acre project site and other off-site areas (totaling about 19.9 acres); and (2) provide a general assessment of the total acreage of federal and State jurisdictional waters existing within the approximately 2,467.2-acre "jurisdictional delineation study area."[37]

The analysis assumed the worst-case scenario for temporary and/or permanent impacts necessary to construct the proposed levee adjacent to Neighborhoods II, II, and IV. The levee design is assumed at an elevation of 10 feet with a 2:1 slope.

- **Methodology**. As described below, the methodology consisted of an aerial photographic review and formal delineation of the project's proposed development footprint, including the "temporary impact zone" extending 80-linear feet, as depicted in Figure 2-15 (Lytle Creek Ranch Specific Plan – Conceptual Levee Construction Section), into the creek from the toe of slope of the proposed levee.

  - ◊ **Open space area methodology**. Lytle Creek is a dynamic, alluvial fan drainage system. During any given storm season, the total number of braided stream channels within the creek fluctuate and are dependent upon the total precipitation received during an individual storm event as well as an entire storm season. As a result, the total number of braided channels within Lytle Creek varies on an annual basis.

    During abnormally low rainfall years, a stream braid that is typically active may not exhibit signs of function and may appear to be a remnant. Additionally, during an abnormally high rainfall year, a remnant stream braid that does not typically exhibit function may actually become temporarily active. Since Lytle

[36]/ Glenn Lukos Associates, Jurisdictional Delineation for the Lytle Creek Ranch Property, a 2,447.30-Acre Property Located in the City of Rialto and Unincorporated Portions of San Bernardino County, California, February 8, 2008, revised April 20, 2009.

[37]/ The delineation and impact analysis was divided into the four on-site neighborhoods and associated off-site areas including: (1) an approximately 2.3-acre road located under the I-15 Freeway that will be improved by the project; (2) an approximately 3.6-acre existing SoCalGas easement located north of Neighborhood I on County-owned property; (3) an approximately 2.6-acre existing utility road situated near the southeastern end of Neighborhood II; (4) an approximately 10.1-acre area associated with proposed improvements to an off-site levee north of Neighborhood II and an approximately 0.6-acre area north of Neighborhood IV and south of Neighborhood II and (5) an approximately 0.7-acre developed right-of-way in Lytle Creek Road which will be impacted as a result of the removal and replacement of storm drain facilities south of Neighborhood IV. The delineation and analysis recognizes that, in the area of Neighborhood I, an approximately 137.8-acre portion of the "jurisdictional delineation study area" was previously addressed as part of the fully-entitled LCNPD (Tract 15900). Approximately 46.0 of these 137.8 acres were found to contain some jurisdictional areas. All jurisdictional impacts to those 46.0 acres have already been completed, the required agency-imposed mitigation has already been implemented, and no additional impacts are anticipated under the proposed LCRSP. As part of the entitlement activities associated with the LCNPD, the remaining 91.8 acres were determined not to contain either State of federal jurisdictional waters. Within those 91.8 acres, no jurisdictional waters have subsequently developed.

Creek is a dynamic, braided stream system, the jurisdictional boundaries of this creek are difficult to determine as they fluctuate on an annual basis.

The project proposes to retain a majority of Lytle Creek within the jurisdictional delineation study area as open space; therefore, the proposed open space portions of Lytle Creek were assessed by review of recent 200-scale aerial photography to determine the locations of potential areas of USACE, CDFG, and RWQCB jurisdiction within the creek (up to the existing slopes). Once the aerial photographic review was complete, a field review of the creek was completed, as necessary, to verify whether or not portions of the creek would qualify as USACE, CDFG, or RWQCB jurisdiction. Since this portion of Lytle Creek is proposed as open space, no linear foot totals were calculated for Lytle Creek itself outside of the temporary and permanent impact areas.

◊ **Development footprint methodology.** A formal delineation was conducted of the temporary and permanent impact areas within the jurisdictional delineation study area (including Lytle Creek, its tributaries, and remnant basin features) based upon and within the overall project's proposed development footprint and its associated flood control protection. The project's proposed footprint included the toe of slope of the proposed levee adjacent to Lytle Creek and extends into the creek for an additional 80 feet to include potential temporary impacts for the proposed project. The delineation utilized the recent aerial photographs described in the open space area methodology and USGS topographic maps to determine the locations of potential areas of USACE, CDFG, and RWQCB jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils, and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the USACE's 1987 "Corps of Engineers Wetlands Delineation Manual"[38] (Wetland Manual) and updated using the 2006 "Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region" (Arid West Supplement).[39] While in the field, the jurisdictional areas were recorded onto a 200-scale topographic/aerial base map of the property using visible landmarks.

USACE jurisdictional waters were determined using a 10-year flood event as the OHWM. A 10-year flood event was estimated to result in a five-foot elevation rise within Lytle Creek and its associated tributaries and remnant basin features. For the purposes of the delineation, the boundaries of USACE jurisdiction within the project's proposed development footprint were determined to be the lower elevations and active portions of the tributaries and braided channels within the Lytle Creek alluvial fan system, whereas the upper terraces of this system were considered to be outside of the OHWM.

- **USACE Jurisdictional Waters**. USACE jurisdiction associated with the jurisdictional delineation study area totals about 464.98 (461.91 on-site and 3.07 off-site) acres, of which 1.65 on-site acres consist of jurisdictional wetlands. This total includes: (1)

[38] United States Army Corps of Engineers (Environmental Laboratory), Wetlands Delineation Manual, Technical Report Y-87-1, 1987.

[39]/ United States Army Corps of Engineer (Environmental Laboratory), Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Technical Report 06-16, December 2006.

approximately 7.48 on-site acres within Neighborhood I (1.65 acres of which consists of jurisdictional wetlands); (2) approximately 0.06 acre within the on-site portion of the SoCalGas easement within Neighborhood I; (3) about 123.67 acres within Neighborhood II; (4) approximately 228.59 acres (3.71 acres of which are within remnant basin feature) within Neighborhood III; and (5) about 102.11 acres within Neighborhood IV.

Of the approximately 3.07 off-site acres of USACE jurisdiction: (1) approximately 0.06 acre (none of which consists of jurisdictional wetlands) are associated with that segment of the off-site SoCalGas easement within the LCRSP study area; (2) approximately 2.66 acres (none of which consists of jurisdictional wetlands) are associated with the levee improvements between Neighborhoods II and III; and (3) about 0.35 acre (none of which consists of jurisdictional wetlands) are associated with the levee improvements at the western end of Neighborhood IV. No USACE jurisdiction exists within the 2.6-acre off-site construction access road between Neighborhood II and Highland Avenue or within the 2.3-acre roadway under the I-15 Freeway connecting Neighborhoods III and IV.

As summarized in Table 4.5-5 (United States Army Corps of Engineers On-Site Jurisdictional Totals) and Table 4.5-6 (United States Army Corps of Engineers Off-Site Jurisdictional Totals), the total linear-footage of USACE jurisdiction within the jurisdictional delineation study area is 80,717 linear feet, including 78,567-linear feet within the LCRSP boundaries and 2,150-linear feet located in off-site area.

Table 4.5-5
UNITED STATES ARMY CORPS OF ENGINEERS
ON-SITE JURISDICTIONAL TOTALS

Neighborhood (On-Site Area)	**Jurisdictional Waters** (acres)	**Jurisdictional Wetlands** (acres)	**Remnant Basin Features** (acres)	**Total Jurisdiction** (acres)	**Linear Feet**
I	5.83	1.65	0.00	7.48	39,919
I (SoCalGas Easement)	0.06	0.00	0.00	0.06	2,120
II	123.67	0.00	0.00	123.67	5,856
III	224.88	0.00	3.71	228.59	17,868
IV	102.11	0.00	0.00	102.11	12,804
Total[1]	456.55	1.65	3.71	461.91	78,567

Notes:
1. The delineation and analysis recognizes that, in the area of Neighborhood I, an approximately 137.8-acre portion of the "jurisdictional delineation study area" was previously addressed as part of the fully-entitled LCNPD (Tract 15900). Approximately 46.0 of these 137.8 acres were found to contain some jurisdictional areas. Since all jurisdictional impacts to those 46.0 acres have already been completed, the required agency-imposed mitigation has already been implemented, and no additional impacts are anticipated under the proposed LCRSP, acreage of jurisdictional waters within this 137.8-acre area is not added to the acreages in this table.

Source: Glenn Lukos Associates

Figure 4.5-12 (Jurisdictional Delineation Map - Neighborhood I), Figure 4.5-13 (Jurisdictional Delineation Map - Neighborhood II and Associated Off-Site Areas), Figure 4.5-14 (Jurisdictional Delineation Map - Neighborhood III), and Figure 4.5-15 (Jurisdictional Delineation Map - Neighborhood IV) illustrate the extent of USACE and CDFG jurisdiction within the jurisdictional delineation study area.

Table 4.5-6
UNITED STATES ARMY CORPS OF ENGINEERS
OFF-SITE JURISDICTIONAL TOTALS

Neighborhood (Off-Site Area)	Jurisdictional Water (acres)	Jurisdictional Wetlands (acres)	Total Jurisdiction (acres)	Linear Feet
I (SoCalGas Easement)	0.06	0.00	0.06	843
II (Levee Construction)	2.66	0.00	2.66	1,032
II (Utility Road)	0.00	0.00	0.00	0.00
III (Road under I-15)	0.00	0.00	0.00	0.00
IV (Temporary Impact Area)	0.35	0.00	0.35	275
Total	3.07	0.00	3.07	2,150

Source: Glenn Lukos Associates

- **CDFG Jurisdictional Waters**. CDFG jurisdiction associated with the jurisdictional delineation study area totals about 527.9 acres (25.26 acres consist of vegetated riparian habitat). Of the approximately 527.9 acres of CDFG jurisdiction, about 520.64 acres (23.60 acres consist of vegetated riparian habitat) are within the LCRSP boundaries. This total includes: (1) about 26.51 acres (20.33 acres consist of vegetated riparian habitat) within Neighborhood I; (2) about 2.63 acres (2.62 acres consist of vegetated riparian habitat) within the on-site SoCalGas easement in Neighborhood I; (3) about 134.61 (7.19 consist of unvegetated and 0.32 consists of vegetated riparian habitat within remnant basin/infiltration pond) acres within Neighborhood II; (4) about 237.16 (3.71 consist of unvegetated and 0.33 consists of vegetated riparian habitat within remnant basin/ infiltration pond) acres within Neighborhood III; and (5) about 119.73 acres within Neighborhood IV (none of which contains vegetated habitat).

  The remaining approximately 7.26 acres of CDFG jurisdiction (1.66 acres consist of vegetated riparian habitat) is located outside the LCRSP boundaries. Of the 7.26 acres of CDFG jurisdiction outside the LCRSP boundaries: (1) about 1.66 acres (all of which consist of vegetated riparian habitat) are within the segment of the off-site SoCalGas easement within the LCRSP study area; (2) about 5.25 acres (none of which consists of vegetated riparian habitat) are within the levee construction/repair between Neighborhoods II and III; and (3) about 0.35 acre (none of which consists of vegetated riparian habitat) are within the levee construction at the western end of Neighborhood IV. No CDFG jurisdiction exists within the 2.6-acre off-site utility roadway between Neighborhood II and Highland Avenue and no CDFG jurisdiction exists within the 2.3-acre roadway easement on top of the proposed levee under the I-15 Freeway connecting Neighborhoods III and IV.

  As indicated in Table 4.5-7 (California Department of Fish and Game On-Site Jurisdictional Totals) and Table 4.5-8 (California Department of Fish and Game Off-Site Jurisdictional Totals), within the jurisdictional delineation study area, the total linear footage of CDFG jurisdiction is 100,034 linear feet. Of this total, 96,905 linear feet are within the LCRSP boundaries and 3,129 linear feet are located off the site. Figure 4.5-12 (Jurisdictional Delineation Map - Neighborhood I), Figure 4.5-13 (Jurisdictional Delineation Map - Neighborhood II and Associated Off-Site Areas), Figure 4.5-14 (Jurisdictional Delineation Map - Neighborhood III), and Figure 4.5-15 (Jurisdictional Delineation Map - Neighborhood IV) illustrate the extent of CDFG jurisdiction within the jurisdictional delineation study area.

- **RWQCB Jurisdiction Waters**. RWQCB jurisdiction includes all areas within USACE jurisdiction as described above. Additionally, an infiltration pond system and one small drainage associated with the infiltration pond system (totaling approximately 7.19 acres), located adjacent to Lytle Creek in Neighborhood II, are "isolated" USACE waters and are not subject to regulation pursuant to Section 401 or 404 of the CWA; however, the Regional Water Quality Control Board, Santa Ana Region (SARWQCB) may elect to assert jurisdiction pursuant to Section 13260 of the California Water Code (Porter-Cologne Act) over "isolated" waters and specify WDRs for the proposed project.

Significant Nexus Determination

The regulatory and policy setting, as provided earlier in this section, discussed the most recent guidance provided by the United States Environmental Protection Agency (USEPA) and USACE on determining the extent of federal jurisdictional waters.[40] On June 5, 2007, the USEPA and USACE issued joint guidance (Rapanos Guidance) that addresses the scope of jurisdiction pursuant to the CWA in light of the United States Supreme Court's decision in the consolidated cases of Rapanos v. United States and Carabell v. United States (Rapanos). For project sites that include waters, other than "traditional navigable waters" (TNWs)[41] and/or their adjacent wetlands or "relatively permanent waters" (RPWs)[42] tributary to TNWs and/or their adjacent wetlands, the USACE must apply the "significant nexus standard"[43] that includes the data set presented in the "approved jurisdictional determination form," as set forth in Appendix III-E (Jurisdictional Delineation Report).[44]

[40]/ The agencies assert jurisdiction over the following waters: (1) traditional navigable waters (TNWs); (2) wetlands adjacent to traditional navigable waters; (3) non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and (4) wetlands that directly abut such tributaries. The agencies decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: (1) non-navigable tributaries that are not relatively permanent; (2) wetlands adjacent to non-navigable tributaries that are not relatively permanent; and (3) wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary. The agencies generally will not assert jurisdiction over swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow), and ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

[41]/ The USACE defines a "traditional navigable water" (TNW) as a navigable WoUS. TNWs are considered jurisdictional and include all waters currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce; waters subject to the ebb and flow of the tide; all interstate waters; all other waters, including intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce, including any such waters: (i) which are or could be used by interstate or foreign travelers for recreation or other purposes; or (ii) from which fish or shellfish are or could be taken and sold to interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce; all impoundments of waters otherwise defined as WoUS under the definition; or any other waters that are part of a tributary system to interstate waters or to navigable WoUS (33 C.F.R. 328.3[a]), pursuant to Section 404 of the CWA.

[42]/ The USACE defines a "relatively permanent water" (RPW) as a relatively permanent water body which is considered jurisdictional under the Rapanos Guidance if it is tributary to or if it directly abuts a TNW (i.e., typical non-navigable, perennial, and intermittent streams and wetlands). The USACE defines a "non-RPW" as a non-relatively permanent water body. Non-RPWs are considered jurisdictional if they have a "significant nexus" to a TNW or a jurisdictional RPW (i.e., typical intermittent or ephemeral streams of southern California).

[43]/ The agencies apply the significant nexus standard as follows: (1) a significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters; and (2) significant nexus includes consideration of hydrologic and ecologic factors.

[44]/ Glenn Lukos Associates, Jurisdictional Delineation for the Lytle Creek Ranch Property, 2,447.30-Acre Property Located in the City of Rialto and Unincorporated Portions of San Bernardino County, California, February 8, 2008, revised April 20, 2009.

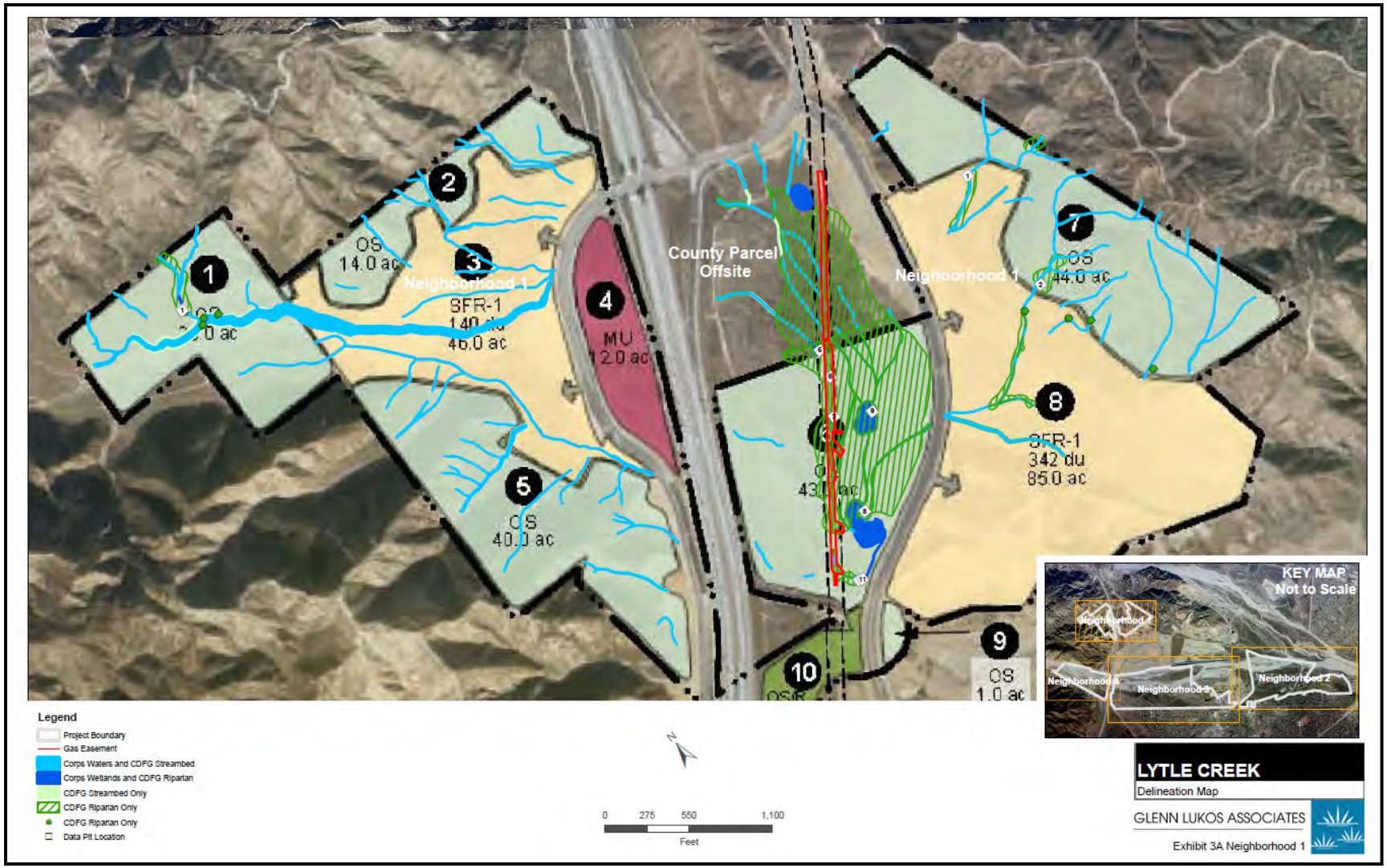

Figure 4.5-12
JURISDICTIONAL DELINEATION - NEIGHBORHOOD I
Source: Glen Lukos Associates

Figure 4.5-13
JURISDICTIONAL DELINEATION - NEIGHBORHOOD II AND ASSOCIATED OFF-SITE AREAS
Source: Glen Lukos Associates

Figure 4.5-14
JURISDICTIONAL DELINEATION - NEIGHBORHOOD III
Source: Glen Lukos Associates

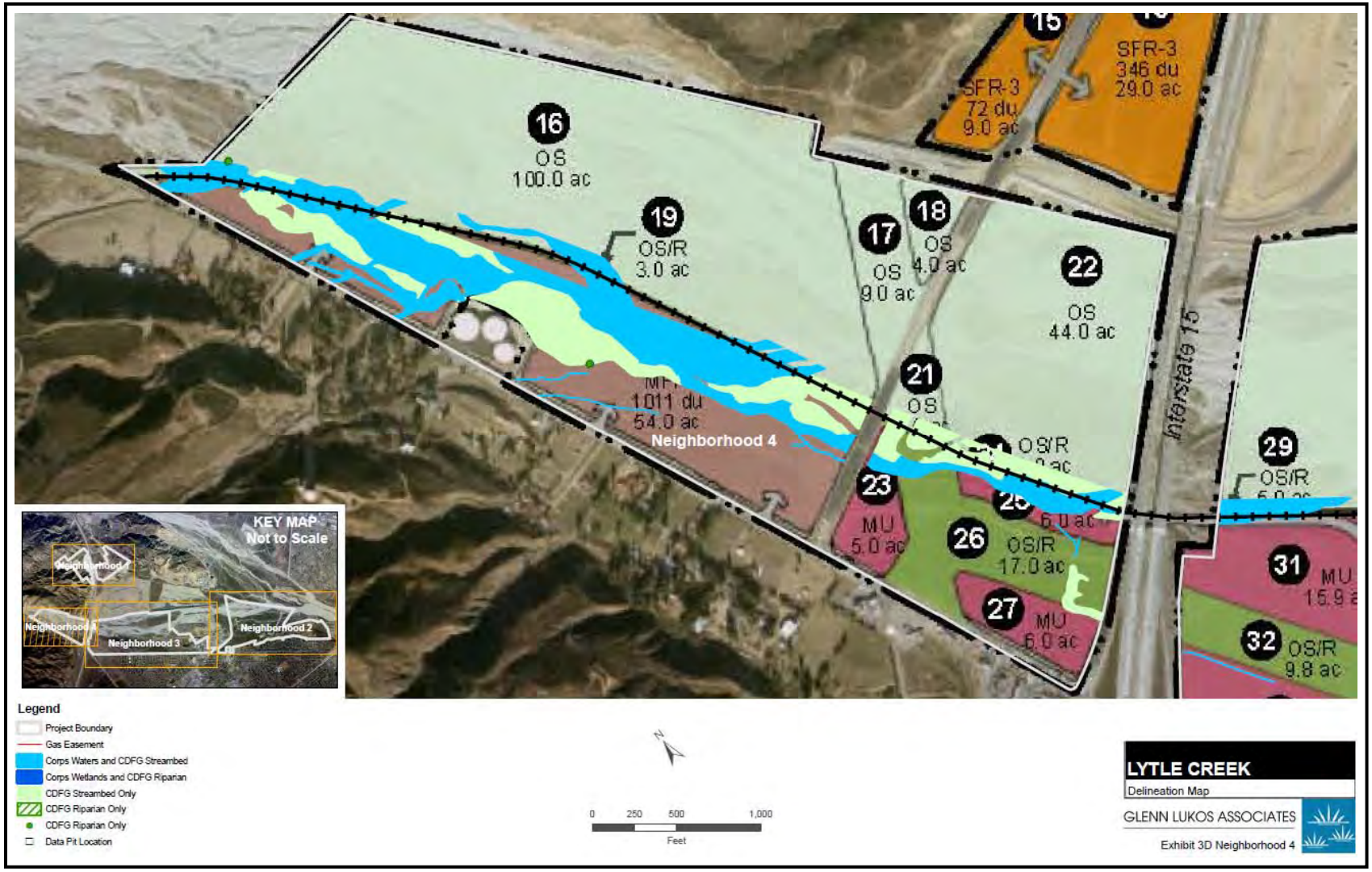

Figure 4.5-15
JURISDICTIONAL DELINEATION - NEIGHBORHOOD IV
Source: Glen Lukos Associates

Table 4.5-7
CALIFORNIA DEPARTMENT OF FISH AND GAME
ON-SITE JURISDICTIONAL TOTALS

Neighborhood (On-Site Area)	**Streambed** (acres)	**Vegetated Riparian Habitat** (acres)	**Unvegetated Infiltration Pond and/or Remnant Basin Features** (acres)	**Infiltration Pond and/or Remnant Basin Features Riparian Habitat** (acres)	**Total Jurisdiction** (acres)	**Linear Feet**
I	6.18	20.33	0.00	0.00	26.51	40,274
I (SoCalGas Easement)	0.01	2.62	0.00	0.00	2.63	2,120
II	127.10	0.00	7.19	0.32	134.61	10,757
III	233.12	0.00	3.71	0.33	237.16	23,795
IV	119.73	0.00	0.00	0.00	119.73	19,959
Total[1]	486.14	22.95	10.90	0.65	520.64	96,905

Notes:
1. The delineation and analysis recognizes that, in the area of Neighborhood I, an approximately 137.8-acre portion of the "jurisdictional delineation study area" was previously addressed as part of the fully-entitled LCNPD (Tract 15900). Approximately 46.0 of these 137.8 acres were found to contain some jurisdictional areas. Since all jurisdictional impacts to those 46.0 acres have already been completed, the required agency-imposed mitigation has already been implemented, and no additional impacts are anticipated under the proposed LCRSP, acreage of jurisdictional waters within this 137.8-acre area is not added to the acreages in this table.

Source: Glenn Lukos Associates

Table 4.5-8
CALIFORNIA DEPARTMENT OF FISH AND GAME
OFF-SITE JURISDICTIONAL TOTALS

Neighborhood (Off-Site Area)	**Streambed** (acres)	**Vegetated Riparian Habitat** (acres)	**Unvegetated Infiltration Pond and/or Remnant Basin Features** (acres)	**Infiltration Pond and/or Remnant Basin Features Riparian Habitat** (acres)	**Total Jurisdiction** (acres)	**Linear Feet**
I (SoCalGas Easement)	0.00	1.66	0.00	0.00	1.66	1,046
II (Levee Construction)	5.25	0.00	0.00	0.00	5.25	1,808
II (Utility Road)	0.00	0.00	0.00	0.00	0.00	0.00
III (Road under I-15)	0.00	0.00	0.00	0.00	0.00	0.00
IV (Temp. Impact Area)	0.35	0.00	0.00	0.00	0.35	275
Total	5.60	1.66	0.00	0.00	7.26	3,129

Source: Glenn Lukos Associates

For "isolated" waters or wetlands, the joint guidance requires a USACE and USEPA evaluation to determine whether other interstate commerce clause nexuses, not addressed in the Solid Waste Agency of Northern Cook County v. United States (SWANCC) decision, are associated with isolated features for which a jurisdictional determination is being sought from the USACE.

Because the jurisdictional delineation study area includes waters which are neither considered TNWs nor RPWs, in order to conduct a comprehensive jurisdictional delineation, an

examination as to whether those waters bear a "significant nexus" to TNWs was conducted.[45] The results of that examination are briefly described below.

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?

Neighborhood I

◊ **Blue-Line Drainage – West**. The extent of the western blue-line drainage that was evaluated for a significant nexus is a first-order[46] non-RPW that has the capability of transporting pollutants and flood waters to the Pacific Ocean because the OHWM is very wide (up to 93-feet wide) and, therefore, contributes significant volumes of flood waters to the ocean. The western blue-line drainage and adjacent wetland is tributary to Lytle Creek, which is tributary to Cajon Creek, which is tributary to the Santa Ana River, which is tributary to the ocean.

◊ **Main Drainage – East Main Drainage – East** (Off-Site). The extent of the eastern main drainage that was evaluated for a significant nexus is a first-order non-RPW that has the capability of transporting pollutants and flood waters to the Pacific Ocean because the OHWM is wide (up to 9-feet wide) and, therefore, contributes significant volumes of flood waters to the ocean. The eastern main drainage and four adjacent wetlands are tributary to Lytle Creek, which is tributary to Cajon Creek, which is tributary to the Santa Ana River, which is tributary to the ocean.

◊ **Main Drainage – East SoCalGas Easement Main Drainage – East** (Off-Site). The extent of the eastern main drainage associated with the SoCalGas easement that was evaluated for a significant nexus is a first-order non-RPW that has the capability of transporting pollutants and flood waters to the Pacific Ocean because the OHWM is wide (up to 9-feet wide) and, therefore, contributes significant volumes of flood waters to the Pacific Ocean. The eastern main drainage is tributary to Lytle Creek, which is tributary to Cajon Creek, which is tributary to the Santa Ana River, which is tributary to the ocean.

◊ **Unnamed Tributaries to Western and Eastern Drainages**. The extent of the unnamed tributaries to the western and eastern drainages that were evaluated for a significant nexus are first-order non-RPWs that have the capability of transporting pollutants and flood waters to the Pacific Ocean because the OHWM is wide (up to 20-feet wide) and, therefore, contributes significant volumes of flood waters to the ocean. The unnamed tributaries to the western and eastern drainages are tributary to Lytle Creek, which is tributary to Cajon Creek, which is tributary to the Santa Ana River, which is tributary to the ocean.

[45]/ The "significant nexus" analysis assessed the flow characteristics and functions of each tributary area and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs and include consideration of hydrologic and ecological factors.

[46]/ A “first-order” stream is an ephemeral, headwater stream located high in the watershed. A first-order stream is considered the lowest order headwater stream and is relatively small in size. A first-order stream lacks measureable tributaries and no other streams typically feed into such a stream.

Neighborhoods II-IV

◊ **Lytle Creek**. The extent of Lytle Creek that was evaluated is a "third-order"[47] non-RPW that has the capability of transporting pollutants and flood waters to the Pacific Ocean because the OHWM is very wide (up to 1,800-feet wide) and, therefore, contributes significant volumes of flood waters to the ocean. Lytle Creek is tributary to Cajon Creek, which is tributary to the Santa Ana River, which is tributary to the ocean.

- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?

Neighborhood I

◊ **Blue-line Drainage – West**. The western blue-line drainage and adjacent wetland have the potential to provide habitat for aquatic species during years with average or above-average rainfall. Biological surveys were not conducted for species in the TNW (Pacific Ocean) that could be using the drainage and adjacent wetlands within the jurisdictional delineation study area for feeding, nesting, or rearing young. However, because the connection to the TNW is so remote, there is no potential effect on the TNW.

◊ **East Main Drainage – East** (Off-Site). The eastern main drainage and adjacent wetlands have the potential to provide habitat for aquatic species during years with average or above-average rainfall. Biological surveys were not conducted for species in the TNW (Pacific Ocean) that could be using the drainage and adjacent wetlands within the jurisdictional delineation study area for feeding, nesting, or rearing young. However, because the connection to the TNW is so remote, there is no potential effect on the TNW.

◊ **Main Drainage – East SoCalGas Easement Main Drainage – East** (Off-Site). The eastern main drainage associated with the SoCalGas easement area has the potential to provide habitat for aquatic species during years with average or above-average rainfall. Biological surveys were not conducted for species in the TNW (Pacific Ocean) that could be using the drainage within the jurisdictional delineation study area for feeding, nesting, or rearing young. However, because the connection to the TNW is so remote, there is no potential effect on the TNW.

◊ **Unnamed Tributaries to Western and Eastern Drainages**. The unnamed tributaries to the western and eastern drainages have the potential to provide habitat for aquatic species during years with average or above-average rainfall. Biological surveys were not conducted for species in the TNW (Pacific Ocean) that could be using the unnamed tributaries within the jurisdictional delineation study area for feeding, nesting, or rearing young. However, because the connection to the TNW is so remote, there is no potential effect on the TNW.

[47]/ A "third-order" stream is a headwater stream formed when two second-order streams (tributaries) and/or a second and third-order stream confluence. A third-order stream is located further down the watershed than first or second-order streams and is typically ephemeral and/or intermittent in nature. Third-order streams are larger than first and "second-order" streams.

Neighborhoods II-IV

◊ **Lytle Creek**. Lytle Creek has the potential to provide habitat for aquatic species during years with average or above-average rainfall. Biological surveys were not conducted for species in the TNW (Pacific Ocean) that could be using the portion of Lytle Creek within the jurisdictional delineation study area for feeding, nesting, or rearing young. However, because the connection to the TNW is so remote, there is no potential effect on the TNW.

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream food webs?

Neighborhood I

◊ **Blue-Line Drainage – West**. The western blue-line drainage and adjacent wetland support a low-to-moderate amount of riparian vegetation that could potentially contribute a significant amount of nutrients and organic carbon to downstream food webs.

◊ **Main Drainage – East Main Drainage – East** (Off-Site). The eastern main drainage and adjacent wetlands support a moderate-to-extensive amount of riparian vegetation that could potentially contribute a significant amount of nutrients and organic carbon to downstream food webs.

◊ **Main Drainage – East SoCalGas Easement Main Drainage – East** (Off-Site). The eastern main drainage associated with the SoCalGas easement area supports a moderate-to-extensive amount of riparian vegetation that could potentially contribute a significant amount of nutrients and organic carbon to downstream food webs.

◊ **Unnamed Tributaries to Western and Eastern Drainages**. The unnamed tributaries to the western and eastern drainages support a low-to-moderate amount of riparian vegetation that could potentially contribute a significant amount of nutrients and organic carbon to downstream food webs.

Neighborhoods II-IV

◊ **Lytle Creek**. Lytle Creek is a non-NPW that supports a low-to-moderate amount of riparian vegetation that could potentially contribute a low to moderate amount of nutrients and organic carbon to downstream food webs based on its large size.

- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Neighborhood I

◊ **Blue-Line Drainage – West**. The western blue-line drainage and adjacent wetland do not have other relationships to the physical, chemical, or biological integrity of the TNW other than as described above.

◊ **Main Drainage – East Main Drainage – East** (Off-Site). The eastern main drainage and adjacent wetlands do not have other relationships to the physical, chemical, or biological integrity of the TNW other than as described above.

◊ **Main Drainage – East SoCalGas Easement Main Drainage – East** (Off-Site). The eastern main drainage associated with the SoCalGas easement area does not have other relationships to the physical, chemical, or biological integrity of the TNW other than as described above.

◊ **Unnamed Tributaries to Western and Eastern Drainages**. The unnamed tributaries to the western and eastern drainages do not have other relationships to the physical, chemical, or biological integrity of the TNW other than as described above.

Neighborhoods II-IV

◊ **Lytle Creek**. Lytle Creek does not have other relationships to the physical, chemical, or biological integrity of the TNW other than as described above.

- Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs:

Neighborhood I

◊ **Blue-Line Drainage – West**. The western blue-line drainage and adjacent wetland potentially contributes to the biological, hydrological, or chemical integrity of the Pacific Ocean and, therefore, a significant nexus has the potential to exist.

◊ **Main Drainage – East Main Drainage – East** (Off-Site). The eastern main drainage and adjacent wetlands potentially contributes to the biological, hydrological, or chemical integrity of the Pacific Ocean and, therefore, a significant nexus has the potential to exist.

◊ **Main Drainage – East SoCalGas Easement Main Drainage – East** (Off-Site). The eastern main drainage associated with the SoCalGas easement potentially contributes to the biological, hydrological, or chemical integrity of the Pacific Ocean and, therefore, a significant nexus has the potential to exist.

◊ **Unnamed Tributaries to Western and Eastern Drainages**. The unnamed tributaries to the western and eastern drainages potentially contribute to the biological, hydrological, or chemical integrity of the Pacific Ocean and, therefore, a significant nexus has the potential to exist.

Neighborhoods II-IV

◊ **Lytle Creek**. Lytle Creek is a non-RPW that potentially contributes to the biological, hydrological, or chemical integrity of the Pacific Ocean and, therefore, a significant nexus has the potential to exist.

Sensitive Biological Resources

The following discussion describes the plant and wildlife species present or potentially present within the LCRSP study area that have been afforded special recognition by the USFWS, CDFG, or California Native Plant Society (CNPS), principally due to the species' declining or limited population sizes. Also included herein is a discussion of those habitats that are considered to be unique, of relatively limited distribution, and/or of particular value to wildlife.

- **Sensitive Resource Classification**. As outlined below, a number of resource classifications have been established at the federal and State levels.

  - ◊ **Federal Protection and Classifications**. All references to federally-protected species herein includes the most current published status to which each species has been assigned by the USFWS. For purposes of this assessment, the following acronyms are used for federal status species: federally-listed endangered (FE), federally-listed threatened (FT), federally proposed for listing as endangered (FPE), federally proposed for listing as threatened (FPT), federally proposed for delisting (FPD), and federal candidate species (FC).

    Some of the USFWS field offices maintain lists of federal Species of Concern (FSC). These species receive no legal protection and the designation does not mean that the species will eventually be proposed for listing.[48] The USFWS' Carlsbad field office does not maintain such a list for their jurisdiction, which includes the Counties of Los Angeles, Orange, Riverside, San Bernardino, Imperial, and San Diego.

  - ◊ **State Protection and Classifications**. For the purposes of this assessment, the following acronyms are used for State status species: State-listed endangered (SE), State-listed threatened (ST), State-listed rare (SR), State candidate for listing as endangered (SCE), State candidate for listing as threatened (SCT), State fully protected (SFP), and (California species of special concern (CSC).

  - ◊ **California Native Plant Society**. The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered plant species of California. CNPS has developed five categories of rarity: presumed extinct in California (List 1A), rare or endangered in California and elsewhere (List 1B), rare or endangered in California, more common elsewhere (List 2), plants about which we need more information before rarity can be determined – review list (List 3), and plants of limited distribution in California (i.e., naturally rare in the wild) but whose existence does not appear to be susceptible to threat – a watch list (List 4).

    The CNPS recently updated their lists with "threat codes." There are three new threat code extensions that follow the list number as a decimal: seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat), rarely endangered in California (20-80 percent of

[48]/ United States Fish and Wildlife Service website (http://sacramento.fws.gov/es/spp_concern.htm).

occurrences threatened), and not very endangered in California (<20 percent of occurrences threatened or no current threats known).

The identification of sensitive species that occur or potentially occur within the study area is based on one or more of the following: (1) the direct observation of the species within the LCRSP study area during one of the biological surveys; (2) a record reported in the CNDDB; and (3) the LCRSP study area is within the known distribution of a species and contains appropriate habitat.

- **Sensitive Plant Communities**. Within the LCRSP study area, the approximately 1,143.7 acres of RAFSS (where RAFSS is the sole or dominant plant community), 1.2 acre of white sage scrub, 19.4 acres of southern willow scrub, 0.3 acre of California sycamore alliance, and 1.7 acres of southern cottonwood willow riparian constitute plant communities which are generally considered sensitive by CDFG. Some of these are also considered sensitive because they support several sensitive species. For example, within the LCRSP study area, RAFSS supports the SBKR and southern willow scrub supports the LBV.

- **Sensitive Plant Species**. Sensitive plants include those listed or candidates for listing by the USFWS and CDFG and species considered sensitive by the CNPS (Lists 1A, 1B, or 2). CNPS threat codes are also taken into consideration for rarity.

  Several sensitive plant species were reported in the CNDDB in the vicinity of the LCRSP study area. Based upon the results of focused surveys conducted between 2004 and 2007[49] the only sensitive plant species observed within the LCRSP study area are the Plummer's Mariposa lily (*Calochortus plummerae*) (CNPS List 1B.2 species) and the Parry's spineflower (*Chorizanthe parryi* var. *parryi*) (CNPS List 1B.1 species). The slender-horned spineflower (State and federally-listed endangered, and CNPS List 1B.1 species) was found within the LCRSP study area in 1994 but was not detected in 2004, 2005, 2006, or 2007].[50]

  Surveys conducted by MBA in 1994 identified the presence of woollystar (*Eriastrum densifolium*) within the LCRSP study area. Morphological sampling performed in 2006 confirmed the subspecies of woollystar that occurs within the LCRSP study area as being *Eriastrum densifolium* ssp. *elongatum* (not the State and federally-listed subspecies). The subspecies of woollystar within the LCRSP study area was previously and tentatively identified as the subspecies *elongatum* or a hybrid between *elongatum* and *sanctorum* (the listed subspecies). Without the benefit of the more conclusive evidence obtained from the morphological sampling in 2006, the USFWS maintained that the woollystar population found within the LCRSP study area would be considered by the USFWS to be the federally and State-listed endangered subspecies.

[49]/ Many of the various plant and wildlife surveys noted above were not conducted every year from 2004 through 2008. The average number of consecutive survey years during that period for any one species was three years. For certain species (e.g., Plummer's mariposa lily, slender-horned spineflower, woollystar, SBKR, and CAGN), PCR biologists concluded that surveys every year from 2004 through 2008 were not necessary for one or more of the following reasons: (1) previous consecutive years surveys were repeatedly negative and therefore, the target species was concluded to be absent; (2) focused surveys (i.e., plants) were completed under optimal environmental conditions where presence would have been captured, if present; (3) external sources, such as the wildlife agencies, determined the potential for the species to be present in the vicinity not likely; and (4) multiple years of wildlife trapping bouts allowed the researcher to accurately identified all occupied habitat.

[50]/ *Ibid*.

A summary of each sensitive vascular plant species observed during focused surveys and those not expected to occur within the LCRSP study area is presented in Table 4.5-9 (Sensitive and CNPS List 3 and List 4 Plant Species within the LCRSP Study Area). Due to the timing of the focused plant surveys, all sensitive and CNPS List 3 and List 4 species potentially occurring were covered by the surveys and should have been detected if present or blooming. Each of these species is separately discussed below.

◊ **Slender-horned spineflower**. The slender-horned spineflower (*Dodecahema leptoceras*) (State and federally-listed endangered, federally endangered, and CNPS 1B.1 species) is an annual herb that grows on sandy benches in AFSS. The slender-horned spineflower requires periodic flooding to maintain its habitat. It is known to occur in San Bernardino, Riverside, and Los Angeles Counties. In 1994, MBA biologists observed three populations of this species in the northwest portion of the LCRSP study area on both sides of the I-15 Freeway. The populations, from upstream to downstream, contained 366, 92, and 9 individuals, respectively (for a total of 467 slender-horned spineflower plants observed within the LCRSP study area in 1994).

Slender-horned spineflower was not observed during the 2004, 2005, 2006, and 2007[51] sensitive plant surveys despite focused surveys following normal and above normal rainfall seasons and confirmation of this species blooming at a known reference site. As a result, this species is no longer believed to occupy areas within the LCRSP study area.

◊ **Santa Ana River woollystar**.[52] The Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*) (State and federally-listed endangered, CNPS List 1B.1 species) is a perennial herb that grows in pioneer AFSS in San Bernardino County. Periodic flooding is necessary to maintain pioneer AFSS. The blooming period is July-August. In 1994, MBA biologists observed three populations of woollystar (*Eriastrum densifolium*) of unconfirmed subspecies containing about 1,300 plants on approximately 21 acres in the southeastern end of the LCRSP study area. As illustrated in Figure 4.5-16 (Woollystar Locations [2005]), in 2005, PCR biologists identified approximately 1,253 individuals within Neighborhood II, in generally the same area as observed in 1994 by MBA biologists. The 2005 survey entailed the use of global positioning system (GPS) equipment and the actual counting of individual plants. In 1994, GPS was not yet commercially available so surveying entailed mapping by defining polygons containing plants which were estimated in number. Notwithstanding natural cycles of population fluctuations, the most recent data is considered to be a more accurate representation of population size and distribution.

In 1988, Environmental Audit, Inc. concluded that the woollystar found in the Lytle Creek drainage below the LCRSP study area are of the subspecies *elongatum* (not the listed subspecies) or are a hybrid between *elongatum* and the subspecies *sanctorurn* (the listed subspecies).[53] *Eriastrum densifolium* ssp.

[51]/ *Ibid*.

[52]/ The spelling of "woollystar" varies across a number of reputable sources. For the purposes of this assessment, the spelling used herein covers all other spellings of the common name for *Eriastrum densifolium*.

[53]/ Environmental Audit, Inc., The Ecology of *Eriastrum densifolium sanctorum* (Milliken) Mason, Final Report Prepared for Department of the Army, Corps of Engineers, Los Angeles District, 1988.

elongatum is not considered sensitive by the USFWS, CDFG, and/or CNPS and is more widely distributed throughout southern and central California than the sensitive subspecies *sanctorum*.

The exact subspecies identification and status of the woollystar within the LCRSP study area has been the subject of debate over several years. Several recent scientific papers have concluded that morphological characteristics are more reliable than genetic testing in classifying subspecies, especially *sanctorum*. Brunell and Rieseberg examined genetic evidence from 15 subpopulations of the subspecies *sanctorum*, two *elongatum* populations, two *austromontanum* populations, and two Lytle Creek subpopulations and concluded that no clear genetic discontinuities exist between the populations.[54] Brunell and Whitkus examined the floral and vegetative morphology and concluded that only one clear discontinuity exists, namely "the only character that exhibits discontinuous variation among populations is corolla tube length for population SANCT"[55] ("SANCT" refers to the endangered Santa Ana River woollystar population, *sanctorum*).

As a result, PCR biologists, in consultation with Dr. Mark Brunell, collected corolla length data at the LCRSP study area in the summer of 2006 to morphologically determine the subspecies present.[56] Details of the study are provided below and presented in Appendix III-D (Biological Resource Assessment). The average corolla length measured for the sample population was 12.9 millimeters (mm) (0.51 inches) with samples ranging from 11.0 mm (0.43 inches) to 15.7 mm (0.62 inches). As indicated by Dr. Mark Brunell, a corolla tube length of at least 18 mm (0.71 inches) indicates the subspecies *sanctorum*. According to Hickman,[57] corolla tube length for *sanctorum* is greater than 30 mm (1.18 inches), while that of *elongatum* is 14-18 mm (0.55-0.71 inches). The 99 percent confidence interval for the mean is between 12.5 mm (0.49 inches) and 13.3 mm (0.52 inches), indicating that the true mean for the population of corolla lengths is well below the 18 mm threshold.

The LCRSP study area appears to support *Eriastrum densifolium* ssp. *elongatum* and not the State and federally-listed endangered subspecies *sanctorum*.

◊ **Plummer's Mariposa lily**. Plummer's mariposa lily (*Calochortus plummerae*) (CNPS List 1B.2 species) is a perennial herb that blooms from May-June. Plummer's mariposa lily grows at an elevation of less than 5000-feet above MSL in a variety of dry habitats, ranging from coastal sage scrub to yellow pine forest. It is found from the Santa Monica to the San Jacinto Mountains and has been documented in San Bernardino, Riverside, Orange, Los Angeles, and Ventura Counties. In 1994, MBA biologists located a population of 15 individuals in RSS to the northwest of the Cemex USA mining area.

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[54]/ Brunell, M. and Rieseberg, L., Genetic Variation in the Endangered Santa Ana River Woolly-Star, *Eriastrum densifolium* ssp. *sanctorum (Polemoniaceae),* Plant Species Biology, 1993, 8:1-6.

[55]/ Brunell, M. S. and Whitkus, R., Analysis of Cross-Compatibility in *Eriastrum densifolium (Polemoniaceae)*, Plant Systematics and Evolution, 1996, 215: 241-254.

[56]/ PCR Services Corporation, Subspecies Identification of the Woolly-Star at the Lytle Creek Ranch Specific Plan Project Site, San Bernardino County, California, January 18, 2007.

[57]/ Hickman, J. C, The Jepson Manual: Higher Plants of California, 1993.

Table 4.5-9
SENSITIVE AND CNPS LIST 3 AND LIST 4 PLANT SPECIES WITHIN THE LCRSP STUDY AREA

Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Occurrence Within the Study Area
Angiosperms (Dicotyledons)							
Asteraceae	Aster Family						
Deinandra mohavensis	Mohave tarplant	July-Oct.	None	SE	1B.3	Chaparral, coastal scrub, and riparian scrub/mesic	No
Berberidaceae	Barberry Family						
Berberis nevinii	Nevin's barberry	Mar.-April	FE	SE	1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub on sandy or gravelly soil	No
Brassicaceae	Mustard Family						
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	Jan.-July	None	None	1B.2	Chaparral and coastal scrub	No
Cactaceae	Cactus Family						
Opuntia basilaris var. *brachyclada*	Short-joint beavertail	April-June	None	None	1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland	No
Crassulaceae	Stonecrop Family						
Dudleya multicaulis	Many-stemmed dudleya	April-July	None	None	1B.2	Chaparral, coastal scrub, valley and foothill grassland often on clay soils	No
Grossulariaceae	Gooseberry Family						
Ribes divaricatum var. *parishii*	Parish's gooseberry	Feb.-April	None	None	1A.1	Riparian woodland	No
Juglandaceae	Walnut Family						
Juglans californica var. *californica*[1]	southern California black walnut	Mar.-May	None	None	4.2	Sage scrub, chaparral, cismontane woodland; often in association with oaks/oak woodland; frequently found on steep hillsides with northern exposures; deep alluvial soils	Observed
Nyctaginaceae	Four O'Clock Family						
Abronia villosa var. *aurita*	Chaparral sand-verbena	Jan.-Sept.	None	None	1B.1	Chaparral, coastal scrub, and desert dunes/sandy areas	No
Polygonaceae	Buckwheat Family						
Chorizanthe parryi var. *parryi*[2]	Parry's spineflower	April-June	None	None	1B.1	Openings/clearings in coastal or desert sage scrub, chaparral or interface; dry slopes or flat ground; sandy soils	Observed

Table 4.5-9 (Continued)
SENSITIVE AND CNPS LIST 3 AND LIST 4 PLANT SPECIES WITHIN THE LCRSP STUDY AREA

Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Occurrence Within the Study Area
Dodecahema leptoceras[3]	Slender-horned spineflower	April-June	FE	SE	1B.1	Scrub and chaparral in sandy soils and alluvial fans	No
Polemonaiceae	Phlox Family						
Eriastrum densifolium ssp. *sanctorum*[4]	Santa Ana River woollystar	July-Aug.	FE	SE	1B.1	Chaparral, sage scrub on alluvial fans	No
Rosaceae	Rose Family						
Horkelia cuneata ssp. *puberula*	Mesa horkelia	Feb.-Sept.	None	None	1B.1	Chaparral, cismontane woodland, coastal scrub/sandy or gravelly	No
Angiosperms (Monocotyledons)							
Liliaceae	Lily Family						
Calochortus clavatus var. *gracilis*	Slender mariposa lily	Mar.-May	None	None	1B.2	Chaparral and coastal scrub	No
Calochortus palmeri var. *palmeri*	Palmer's mariposa lily	May-July	None	None	1B.2	Chaparral, lower montane coniferous forest, meadows and seeps on mesic soil	No
Calochortus plummerae[5]	Plummer's mariposa lily	May-July	None	None	1B.2	Chaparral (openings), cismontane woodland, coastal scrub, valley and foothill grassland, granitic/rocky	Observed
Calochortus weedii var. intermedius	Intermediate mariposa lily	May-July	None	None	1B.2	Coastal scrub, chaparral, valley and foothill grassland on rocky soil	No

Notes:
1. One immature individual of this species was observed within Neighborhood IV near the southern property boundary near Glen Helen Parkway.
2. A total of 61,280 plants were estimated during the 2005-2006 survey season in addition to the 440,000 plants estimated in 1994. Of the total 501,280 plants within the study area, the largest population occurs within the approximately 162-acre terrace within the proposed on-site "habitat mitigation area."
3. Three populations of slender-horned spineflower were observed in 1994 near the eastern boundary of Neighborhood IV and along the western boundary of Neighborhood III. Focused sensitive plant surveys performed in 2004, 2005, 2006, and 2007 did not detect this species within the LCRSP study area. This species is, therefore, considered absent from the study area.
4. In 2005, 1,253 individuals of woollystar were estimated within Neighborhood II. In 2006, sampling effort of corolla lengths determined that the woollystar within the study area most closely resembles the subspecies *elongatum* (not the listed subspecies). Under the proposed rule on hybridization (Departments of Interior and Commerce, 1996), the LCRSP's population would not be considered a listed taxon. The results of 2006 analysis indicate that the study area supports *Eriastrum densifolium* ssp. *elongatum*.
5. In 2005, 103 individuals were observed scattered throughout Neighborhoods II, III, and IV and another estimated 127,200 plants were observed within the proposed on-site "habitat mitigation area."

Table 4.5-9 (Continued)
SENSITIVE AND CNPS LIST 3 AND LIST 4 PLANT SPECIES WITHIN THE LCRSP STUDY AREA

Key to Species Listing Status Codes

FE	Federally Listed as Endangered
FT	Federally Listed as Threatened
FPE	Federally Proposed as Endangered
FPT	Federally Proposed as Threatened
FPD	Federally Proposed for Delisting
SE	State Listed as Endangered
ST	State Listed as Threatened
SCE	State Candidate for Endangered
SCT	State Candidate for Threatened
SFP	State Fully Protected
SR	State Rare
CSC	California Special Concern Species

California Native Plant Society (CNPS)

List 1A	Presumed extinct in California
List 1B	Rare, threatened, or endangered throughout their range
List 2	Rare, threatened, or endangered in California, but more common in other states
List 3	Plant species for which additional information is needed before rarity can be determined
List 4	Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

New Threat Code extensions and their meanings:

1	Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
2	Fairly endangered in California (20-80% occurrences threatened)
3	Not very endangered in California (<20% of occurrences threatened or no current threats known)

Source: PCR Services Corporation

As depicted in Figure 4.5-17 (Plummer's Mariposa Lily Locations [2005]), in 2005, MBA biologists observed 103 individuals within the area of Neighborhoods II, III, and IV and another estimated 127,200 plants on approximately 45.1 acres in the eastern portion of a larger approximately 80-acre "island" adjacent to the 216.8-acre "SBKR Conservation Area," as established as part of the County-approved LCNPD, within the Lytle Creek portion of the LCRSP study area.

◊ **Parry's spineflower**. Parry's spineflower (*Chorizanthe parryi* var. *parryi*) (CNPS List 1B.1 species)[58] is an annual herb that blooms from April-June. Parry's spineflower grows in sandy openings in AFSS, coastal sage scrub, and chaparral and is known to occur in San Bernardino and Riverside Counties. In 1994, Parry's spineflower was found within the LCRSP study area in about 157 acres of CCH, RAFSS, and RSS habitats.

In 1994, thirteen populations of Parry's spineflower, containing an estimated 440,000 individuals, were documented as occurring in 13 populations were mapped within the LCRSP study area in CCH, alluvial fan sage scrub, and Riversidean sage scrub habitat. The populations varied in size, ranging from five to several hundred thousand individuals. Most of the Parry's spineflower plants were found in Lytle Creek on an approximately 162-acre terrace of CCH and alluvial fan sage scrub located to the northwest of the Cemex USA quarry area. These 162 acres lie partly within an area set aside as conservation open space under the County-approved LCNPD and partly within an area to be dedicated as conservation as part of the LCRSP. As depicted in Figure 4.5-18 (Parry's Spineflower Locations within the LCRSP Study Area), during the 2005-2006[59] survey seasons, biologists confirmed the locations of major populations within the LCRSP study area and documented several additional small populations (totaling 61,280 plants). An estimated 501,280 plants have been mapped as occurring within the LCRSP study area.

- **CNPS List 3 and List 4 Plant Species**. CNPS List 3 constitutes those categories of plants for which additional information on status is needed before rarity can be determined (i.e., a review list). CNPS List 4 constitute a category of plants for which the distribution is naturally limited but the threat appears to be low (i.e., a watch list). Plants in these categories are, therefore, not considered to have the same level of sensitivity as plants designated as CNPS Lists 1A, 1B, and 2. The CNPS inventory strongly recommends that List 3 and List 4 species be analyzed under CEQA. Species in these categories previously observed within the LCRSP study area include the southern California black walnut (*Juglans californica* var. *californica*) (CNPS List 4.2 species). The southern California black walnut is a deciduous tree that grows in southern

[58]/ PCR Services Corporation, Addendum to the Biological Resources Assessment for the Lytle Creek Ranch Specific Plan (September 2009), September 29, 2009.

[59]/ Many of the various plant and wildlife surveys noted above were not conducted every year from 2004 through 2008. The average number of consecutive survey years during that period for any one species was three years. For certain species (e.g., Plummer's mariposa lily, slender-horned spineflower, woollystar, SBKR, and CAGN), PCR biologists concluded that surveys every year from 2004 through 2008 were not necessary for one or more of the following reasons: (1) previous consecutive years surveys were repeatedly negative and therefore, the target species was concluded to be absent; (2) focused surveys (i.e., plants) were completed under optimal environmental conditions where presence would have been captured, if present; (3) external sources, such as the wildlife agencies, determined the potential for the species to be present in the vicinity not likely; and (4) multiple years of wildlife trapping bouts allowed the researcher to accurately identified all occupied habitat.

California at elevations below 4,500-feet above MSL. It grows in several habitats, including AFSS, chaparral, and cismontane woodlands. One California black walnut tree is located within the LCRSP study area near the corner of Sierra Highway and Glen Helen Parkway.

- **Sensitive Wildlife Species**. Sensitive wildlife species include those species listed as endangered or threatened under the FESA or CESA, candidates for listing by USFWS or CDFG, and species of special concern to CDFG. A number of sensitive wildlife species were reported in the CNDDB and are known to occur within the region. Habitat assessments and focused surveys were completed for several species during the 2004, 2005, 2006, 2007, and 2008 survey seasons. A number of sensitive wildlife species were observed within the LCRSP study area, including golden eagle, northern harrier, American peregrine falcon, white-tailed kite, loggerhead shrike (*Lanius ludovicianus*), Vaux's swift (*Chaetura vauxi*), burrowing owl (*Athene cunicularia*), willow flycatcher, least Bell's vireo, yellow warbler (*Dendroica petechia brewsteri*), yellow-breasted chat (*Icteria virens*), San Diego black-tailed jack rabbit (*Lepus californicus bennettii*), western mastiff bat (*Eumops perotis*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), LAPM, and SBKR.

  A summary of the sensitive wildlife species observed, as well as those potentially present within the LCRSP study area, is presented in Table 4.5-4 (Sensitive Wildlife Species within the LCRSP Study Area). The results of focused surveys for the coastal California gnatcatcher (CAGN), San Bernardino kangaroo rat (SBKR), southwest willow flycatcher (SWWF), and least Bell's vireo (LBV), as well as intrinsic sampling for Los Angeles pocket mouse (LAPM) and the habitat assessment for burrowing owl (BUOW), as well as species accounts, segregated by taxonomic group, are summarized below.

  - ◊ **Sensitive Fish**. No sensitive fish were observed within the LCRSP study area and none are expected to occur due to the lack of perennial water flow through the on-site reach of Lytle Creek. Three sensitive fish species are known from the vicinity, the arroyo chub, Santa Ana sucker, and the Santa Ana speckled dace. The arroyo chub and Santa Ana speckled dace are both CSC. The arroyo chub is not expected to occur due to the lack of slow water stream sections with mud or sand bottoms within the LCRSP study area.

    The Santa Ana speckled dace is not expected to occur with the LCRSP study area due to the lack of perennial water flow in the on-site reach of Lytle Creek. Furthermore, the nearest known location for the Santa Ana speckled dace, as reported in the CNDDB (observed in 1996), is about 3.5 miles northwest from the LCRSP study area within the upper reaches of Lytle Creek. Similarly, the Santa Ana sucker is not expected to occur on-site due to the lack of perennial water flow in the on-site reach of Lytle Creek. Furthermore, the nearest known location for the Santa Ana sucker, as reported in the CNDDB (observed in 1998), is about six miles southeast from the LCRSP study area in the Santa Ana River.

    Similarly, trout is known to occur or be stocked by CDFG in the upper reaches of Lytle Creek. Due to the lack of perennial water flow through the on-site reaches on Lytle Creek, trout is not expected to occur within the LCRSP study area.

◊ **Sensitive Amphibians**. No sensitive amphibians were observed within the LCRSP study area and only one species (western spadefoot) has a low potential to occur. This species occurs within open grassland areas or near quiet washes with loose soil for burrowing and where temporary pools are available for reproduction. This species is a CSC species and is neither State nor federally-listed as threatened or endangered.

◊ **Sensitive Reptiles**. Due to the presence of suitable habitat, several sensitive reptile species have the potential to occur within the LCRSP study area. The silvery legless lizard (*Anniella pulchra pulchra*) and coast patch-nosed snake (*Salvadora hexalepis virgultea*) utilize chaparral habitat while the Belding's orange-throated whiptail (*Cnemidophorus hyperythra beldingi*) utilizes scrub, chaparral, and grassland. These species are all CSC species and are neither State nor federally-listed as threatened or endangered.

The CDFG recognizes two sensitive populations of coast (San Diego) horned lizards: *blainvillii* and *frontale*. The coast (San Diego) horned lizard which occurs throughout the LCRSP study area is presumed to be of the *blainvillii* subspecies, a CSC species. The *blainvillii* or San Diego population may occur in cismontane southern California up to northern Los Angeles County. Detailed range maps for coast (San Diego) horned lizard subspecies are lacking and visual identification of subspecies is very difficult. Based on the current general understanding of the distribution for the subspecies *blainvillii*, the coast (San Diego) horned lizards found within the LCRSP study area are considered sensitive by the CDFG.

The coast (San Diego) horned lizard is found in a variety of habitats including sage scrub, chaparral, grassland, riparian, and woodland but prefers sage scrub habitats with loose, sandy soils for burrowing, native ants for foraging, open areas for basking, and shrubs for cover. Historically, this species was most prevalent in coastal sage scrub and riparian habitats occurring on alluvial fans. Although not all portions of the LCRSP study area are occupied by sage scrub plant communities, the majority supports suitable habitat for this species due to its location within the Lytle Creek alluvial fan. Observations of this species within the LCRSP study area have not been restricted to the alluvial fan. Open scrub areas within the LCRSP study area likely support the highest concentrations of this species due to the presence of nearly all key habitat requirement elements.

◊ **Sensitive Bird Species**. Eleven sensitive bird species were observed within the LCRSP study area. Two other sensitive bird species were not observed but have the potential to occur; these are the long-eared owl and the tri-colored blackbird. The CAGN, willow flycatcher, LBV, and BUOW are discussed below. Of the remaining species, only the State-endangered and State fully protected American peregrine falcon is listed under either the CESA or FESA. With the exception of the white-tailed kite (SFP), the other sensitive birds are all CSC species. These species are known or expected to utilize a wide variety habitats and plant associations within the LCRSP study area for various life stages or functions.

♦ **Coastal California gnatcatcher**. No CAGN (*Polioptila californica californica*) were observed within the LCRSP study area during the 2005,

2006, and 2007[60] focused surveys. Previous focused surveys in 1994 and 1995, following USFWS protocol, did not detect the CAGN within the LCRSP study area. Although the LCRSP study area supports a variety of scrub habitats, it exists within the northern limits of the species' inland distribution. A few occurrences have, however, been documented in the vicinity of the LCRSP study area. In 1990, a single individual was observed one-quarter mile north of the LCRSP study area (on a single occasion).[61] In 1993, a single individual was observed within the area of the LCNPD (on a single occasion).[62] Based on these occurrence data, the LCRSP study area is not considered to be occupied by the CAGN.

As acknowledged by the removal of USFWS-designated critical habitat in 2007 from the entire LCRSP study area and vicinity, the LCRSP study area is not considered to be essential to the conservation of the species. As indicated in the USFWS revised final designation, critical habitat from Unit 11 was removed for the following reasons: "[L]ands in this unit contained the features essential to the conservation of the species because the vegetation mosaic of the Etiwanda fan represents a unique habitat type that may be important to the species as environmental conditions change through time. However, documented use of these areas by the coastal California gnatcatcher is sparse. We also acknowledged in the revised proposed rule that linkages between populations in Unit 11 and populations in more southerly portions of the range are unconfirmed. We have not received any additional occurrence information in this area and have, upon reevaluation of the limited occurrence data in our files, determined that since this area does not support a core population or provide an important linkage area. Further, the features in this area are not of sufficient quantity and spatial configuration to be considered essential to the conservation of the species. Therefore, it is not included in this final designation of critical habitat for the coastal California gnatcatcher."[63]

- **Burrowing owl**. The Phase I habitat assessment[64] concluded that the LCRSP study area and a 150-meter (492-foot) buffer zone exhibited various patches of potentially suitable BUOW habitat consisting of disturbed, low growing vegetation, bare ground, and small fossorial mammal burrows. The majority of the project area supports relatively dense vegetation and is not generally conducive to support this species. The results of 2007 Phase I and II surveys indicate the species does not currently occur within the project's proposed development footprint.

[60]/ *Ibid*.
[61]/ California Department of Fish and Game, Natural Diversity Data Base, RareFind, Database Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species and Communities, 2008.
[62]/ *Ibid*.
[63]/ Federal Register, Volume 72, Number 243 (December 19, 2007), Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (Polioptila californica californica), Final Rule.
[64]/ PCR Services Corporation, Results of Phase I, and II Burrowing Owl Surveys for the Lytle Creek East, South, and West Project Sites, Lytle Creek Wash, San Bernardino County, California, December 1, 2005.

In September 2006, February 2007, and January 2009, PCR biologists incidentally observed BUOW (*Athene cunicularia*) on the SBKR Conservation Area. Two BUOW were observed outside the proposed development area in 2006 (one along the southern and one along the northern edge of the roughly 80-acre "island" within the SBKR Conservation Area). The 2007 and 2009 observations were along the southern edge of that "island."

- **Willow flycatcher**. Two individual willow flycatchers (*Empidonax traillii*) were observed on May 23, 2006 during a CAGN survey along the southern boundary of Neighborhood II (within the ornamental trees adjacent to the El Rancho Verde Royal Vista Golf Course). Based on willow flycatcher migration patterns and periods, the birds are considered transient, as they were not observed on any previous or subsequent surveys, including focused surveys for the SWWF. No suitable habitat is present in the location where these birds were observed. Focused surveys for this species conducted in 2007 detected one migrant willow flycatcher in the Sycamore Flat East riparian corridor in Neighborhood I[65]. This individual is also believed to be a migratory transient as it was not seen on the subsequent four focused surveys. Similarly, in 2008, focused surveys detected one individual in the Sycamore Flat East riparian corridor in Neighborhood I. This individual is also believed to be a migratory transient as it was not seen on the subsequent four focused surveys. The federally-listed and State-listed endangered SWWF was not observed and is not expected to occur within the LCRSP study area.

- **Least Bell's vireo**. Focused surveys for the LBV (*Vireo bellii pusillus*) were conducted within the LCRSP study area in 2006, 2007, and 2008. The LBV was observed on several portions of the LCRSP study area in 2006 and 2007 but no LBV were detected in 2008. In addition, one individual was detected on several occasions during CAGN surveys in 2006. In 2006, a pair of LBVs was observed during the LBV survey period within the eastern portion of Neighborhood I and at least one LBV was observed numerous times in a narrow riparian corridor along the western portion of Neighborhood II.[66]

  The individuals detected outside of the Sycamore Flat East riparian area (Neighborhood I) are believed to have been transient birds as they were not observed during surveys after May 30 and were found in marginally-suitable breeding habitat. Table 4.5-10 (Least Bell's Vireo Observations within the LCRSP Study Area [2006-2008]) and Figure 4.5-19 (Least Bell's Vireo Locations within the LCRSP Study Area) displays and presents the various dates and locations where LBV were observed within the LCRSP study area.

[65]/ PCR Services Corporation, Results of Focused Southwestern Willow Flycatcher Surveys for the Lytle Creek Ranch, San Bernardino County, California, December 14, 2007.

[66]/ Although this riparian corridor supports mule fat scrub and southern cottonwood willow riparian vegetation, it is relatively narrow and is artificially supported by overflow from a pump station near the southern LCRSP study area boundary.

Two pairs of LBV are believed to have established breeding territories in the eastern portion of Neighborhood I in 2006. One nest was found, however, it is uncertain whether either pair was successful in breeding. The transient bird within Neighborhood II could not be confirmed as having attempted to breed. In 2007, one pair of LBV was observed on three consecutive survey dates just off the LCRSP study area to the north of the eastern portion of Neighborhood I, on a County-owned parcel located immediately north of Neighborhood I within the Sycamore Flat East riparian corridor extending off of the LCRSP study area to the north.

Surveys were subsequently repeated in 2008. In 2008, no LBV were observed or otherwise detected during the survey period within the LCRSP study area, including the Sycamore Flat East riparian corridor just off-site and north of the eastern portion of Neighborhood I and the off-site SoCalGas easement located therein.

◊ **Sensitive Mammals**. Six sensitive mammals were observed or otherwise detected: the San Diego black-tailed jackrabbit, western mastiff bat, pocketed free-tailed bat, northwestern San Diego pocket mouse, Los Angeles pocket mouse, and SBKR. In addition, the following additional sensitive mammals have the potential to occur: California leaf-nosed bat, Townsend's big-eared bat, pallid bat, San Diego desert woodrat, and southern grasshopper mouse. With the exception of the SBKR, these species are all CSC species and are neither State nor federally-listed as threatened or endangered.

♦ **San Bernardino kangaroo rat**. The SBKR (*Dipodomys merriami parvus*), one of 19 recognized subspecies of the Merriam's kangaroo rat (*Dipodomys merriami*), is a federal endangered species. Critical habitat for this species was designated in 2002 and subsequently revised in 2008. SBKR is a species with relatively narrow habitat requirements in that it is found in alluvial scrub habitats that are characterized by gravelly and sandy soils adjoining river and stream terraces, washes, and alluvial fans. SBKR rarely occurs in dense, mature vegetation.

In a regional context, the species is believed to currently occupy about 7,530 acres[67] of suitable habitat, divided among seven locations in San Bernardino and Riverside Counties, including the Lytle Creek and Cajon Creek complexes. High densities of SBKR have been documented in pioneer and intermediate RAFSS which generally correlate to areas that have been more recently (past 40-70 years) disturbed by floods. This species appears to reach its highest densities in areas with low-to-moderate (30-50 percent) perennial vegetative cover and greater than 40 percent bare ground where soils appropriate for burrowing and open alluvial scrub vegetation provide habitat conditions most suitable for occupancy. The main threat to SBKR is habitat loss and fragmentation.

As outlined in Figure 4.5-20 (Existing San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Occupied Habitat within LCRSP Study Area),

[67]/ Based on PCR's independent regional analysis, this number represents an approximation derived by assuming SBKR occupation for all areas of P-RAFSS and I-RAFSS within designated critical habitat.

an extensive trapping program was carried out in all potentially suitable habitat within the LCRSP study area in 2005, 2006, and 2007.[68]

Consistent with the general absence of suitable habitat conditions and the lack of surface sign throughout this area, trapping within Neighborhood I in 2006 did not detect SBKR. The species was, however, captured in 2005, 2006, and 2007 at various locations within Neighborhoods II and III within Lytle Creek. Although captured in Neighborhood IV in 2005, no individuals were captured in that neighborhood in 2006 or 2007.[69]

A summary of the trapping results is provided in Table 4.5-11 (Summary of SBKR Trapping Results within the LCRSP Study Area). In total, within the LCRSP study area, the SBKR is considered to occupy about 702.7 (696.8 on-site and 5.9 off-site) acres, including about 217.6 acres within Neighborhood II, about 402.7 acres within Neighborhood III, 76.5 acres within Neighborhood IV, 5.8 off-site acres within the area of the proposed levee improvements, and 0.1 off-site acre within the area of the proposed roadway under the I-15 Freeway. These 702.7 acres include about 51.0 on-site acres that are occupied on only an ephemeral basis.

In recognition of the trapping results and the fluvial processes potentially influencing habitat suitability, it is appropriate to define habitat for this species in terms of areas that have been found to support populations within the LCRSP study area over the course of the three-year on-site trapping program (2005-2007), regardless of whether the occupancy was continuous from year to year. For purposes of this impact analysis, SBKR-occupied habitat is defined as consisting of RAFSS that has been occupied at some point between 2005 and 2007, hereinafter referred to as "occupied habitat."

The USFWS published a final rule designating revised critical habitat for the SBKR on October 17, 2008 (73 FR 61936-62002).[70]

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[68]/ Many of the various plant and wildlife surveys noted above were not conducted every year from 2004 through 2008. The average number of consecutive survey years during that period for any one species was three years. For certain species (e.g., Plummer's mariposa lily, slender-horned spineflower, woollystar, SBKR, and CAGN), PCR biologists concluded that surveys every year from 2004 through 2008 were not necessary for one or more of the following reasons: (1) previous consecutive years surveys were repeatedly negative and therefore, the target species was concluded to be absent; (2) focused surveys (i.e., plants) were completed under optimal environmental conditions where presence would have been captured, if present; (3) external sources, such as the wildlife agencies, determined the potential for the species to be present in the vicinity not likely; and (4) multiple years of wildlife trapping bouts allowed the researcher to accurately identified all occupied habitat.

[69]/ Many of the various plant and wildlife surveys noted above were not conducted every year from 2004 through 2008. The average number of consecutive survey years during that period for any one species was three years. For certain species (e.g., Plummer's mariposa lily, slender-horned spineflower, woollystar, SBKR, and CAGN), PCR biologists concluded that surveys every year from 2004 through 2008 were not necessary for one or more of the following reasons: (1) previous consecutive years surveys were repeatedly negative and therefore, the target species was concluded to be absent; (2) focused surveys (i.e., plants) were completed under optimal environmental conditions where presence would have been captured, if present; (3) external sources, such as the wildlife agencies, determined the potential for the species to be present in the vicinity not likely; and (4) multiple years of wildlife trapping bouts allowed the researcher to accurately identified all occupied habitat.

[70]/ The October 17, 2008 critical habitat designation was a revision of previously-designated critical habitat for the SBKR, which among other changes, removed approximately 9,284 acres within Unit 2 "largely because these areas do not contain the physical and biological features that are essential to the conservation of this subspecies."

Table 4.5-10
LEAST BELL'S VIREO OBSERVATIONS WITHIN THE LCRSP STUDY AREA (2006-2008)

No.[1]	Date	LBV Results	Location	Habitat Quality (Breeding)	Comments
1	05/01/06	Male	RAFSS Eastern portion of Neighborhood II	Not Suitable	Migrant individual observed during CAGN survey
2	05/11/06	Male	In wash and CCH Northwest portion of Neighborhood III	Not Suitable	Migrant individual observed during CAGN survey
3	05/16/06	Male	MFS Neighborhood II near basins	Marginally Suitable	Observed during CAGN survey
4	05/23/06	Male	East Neighborhood I	Suitable	Observed during LBV survey
5	05/23/06	Male	Neighborhood II near basins	Marginally Suitable	Observed during LBV survey
6	05/30/06	Male	MFS Off site and west of Neighborhood II	Marginally Suitable	Observed during CAGN survey
7	06/12/06 06/22/06	Pair	East portion of Neighborhood I	Suitable	Observed during LBV survey
8	06/22/06 06/12/06	Pair	East portion of Neighborhood I	Suitable	Observed during LBV survey
1	4/10/07	Two Individuals	Off site and north of east Neighborhood I	Suitable	Observed during LBV survey
2	6/25/07 7/05/07 7/17/07	Pair	Off site and north of east Neighborhood I	Suitable	Observed during LBV survey

Notes:
1. As illustrated in Figure 4.5-12 (Least Bell's Vireo Locations within the LCRSP Study Area).

Source: PCR Services Corporation

Table 4.5-11
SUMMARY OF SBKR TRAPPING RESULTS WITHIN THE LCRSP STUDY AREA (acres)

RAFSS Habitat Structure	Habitat in LCRSP Study Area	Occupied Within LCRSP Study Area		Occupied Within Critical Habitat within LCRSP Study Area		Not Occupied Within LCRSP Study Area		Not Occupied within Critical Habitat within LCRSP Study Area	
		On-Site	Off-Site	On-Site	Off-Site	On-Site	Off-Site	On-Site	Off-Site
Pioneer	484.6	378.3	5.8	352.2	5.8	105.8	0.0	29.4	0.0
Intermediate	357.0	220.2	0.1	163.7	0.1	136.7	1.5	50.6	1.0
Mature	207.9	52.1	0.0	52.1	0.0	155.8	0.1	101.4	0.1
Intermediate/NNG	32.0	13.4	0.0	8.2	0.0	18.5	0.0	0.8	0.0
NNG/Intermediate	21.0	14.0	0.0	14.0	0.0	6.9	0.0	0.0	0.0
Other[1]	1,364.0	18.8	0.0	18.0	0.0	1,316.9	11.9	337.7	5.4
Total	2,466.5	696.8	5.9	608.2	5.9	1,740.6	13.5	519.9	6.5

Notes:
1. "Other" represents all other plant communities represented in the LCRSP study area. Occupancy in "other" plant community categories is believed to be a result of occupancy spillover.

Source: PCR Services Corporation

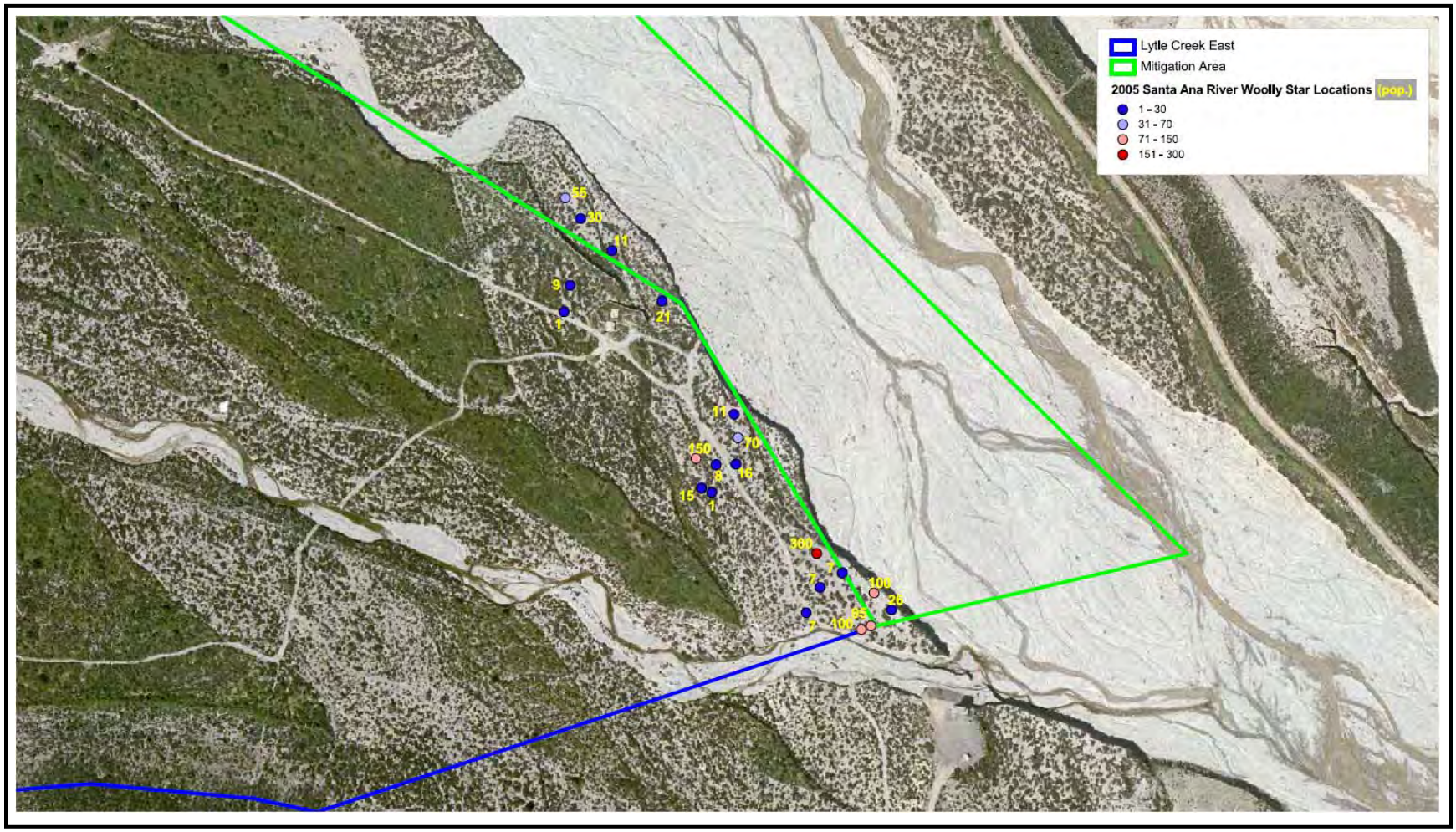


Figure 4.5-16
WOOLLYSTAR LOCATIONS (2005)
Source: PCR Services Corporation

Figure 4.5-17
PLUMMER'S MARIPOSA LILY LOCATIONS (2005)
Source: PCR Services Corporation

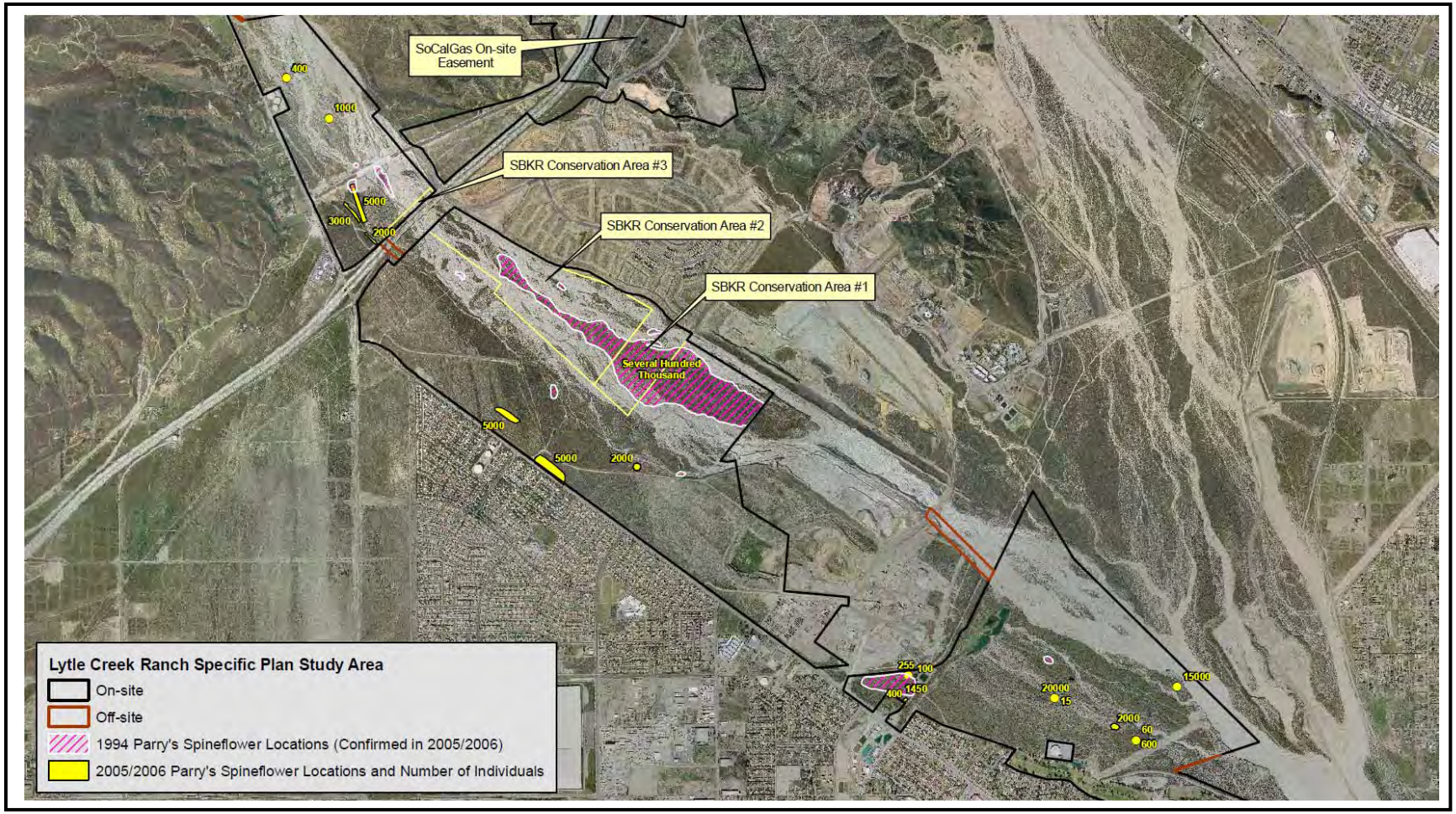
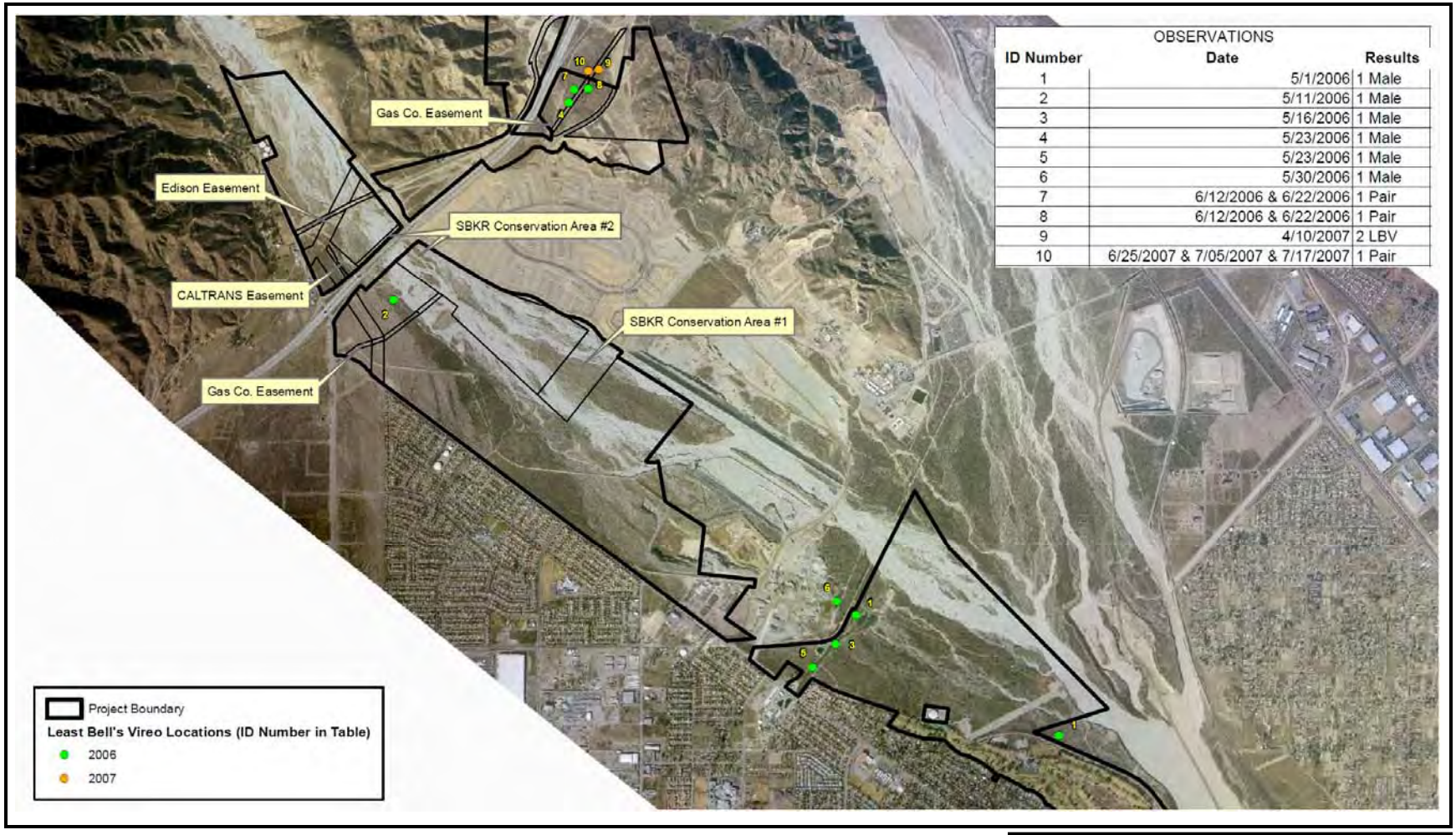


Figure 4.5-18
PARRY'S SPINEFLOWER LOCATIONS
Source: PCR Services Corporation



OBSERVATIONS

ID Number	Date	Results
1	5/1/2006	1 Male
2	5/11/2006	1 Male
3	5/16/2006	1 Male
4	5/23/2006	1 Male
5	5/23/2006	1 Male
6	5/30/2006	1 Male
7	6/12/2006 & 6/22/2006	1 Pair
8	6/12/2006 & 6/22/2006	1 Pair
9	4/10/2007	2 LBV
10	6/25/2007 & 7/05/2007 & 7/17/2007	1 Pair

Figure 4.5-19
LEAST BELL'S VIREO LOCATIONS
Source: PCR Services Corporation

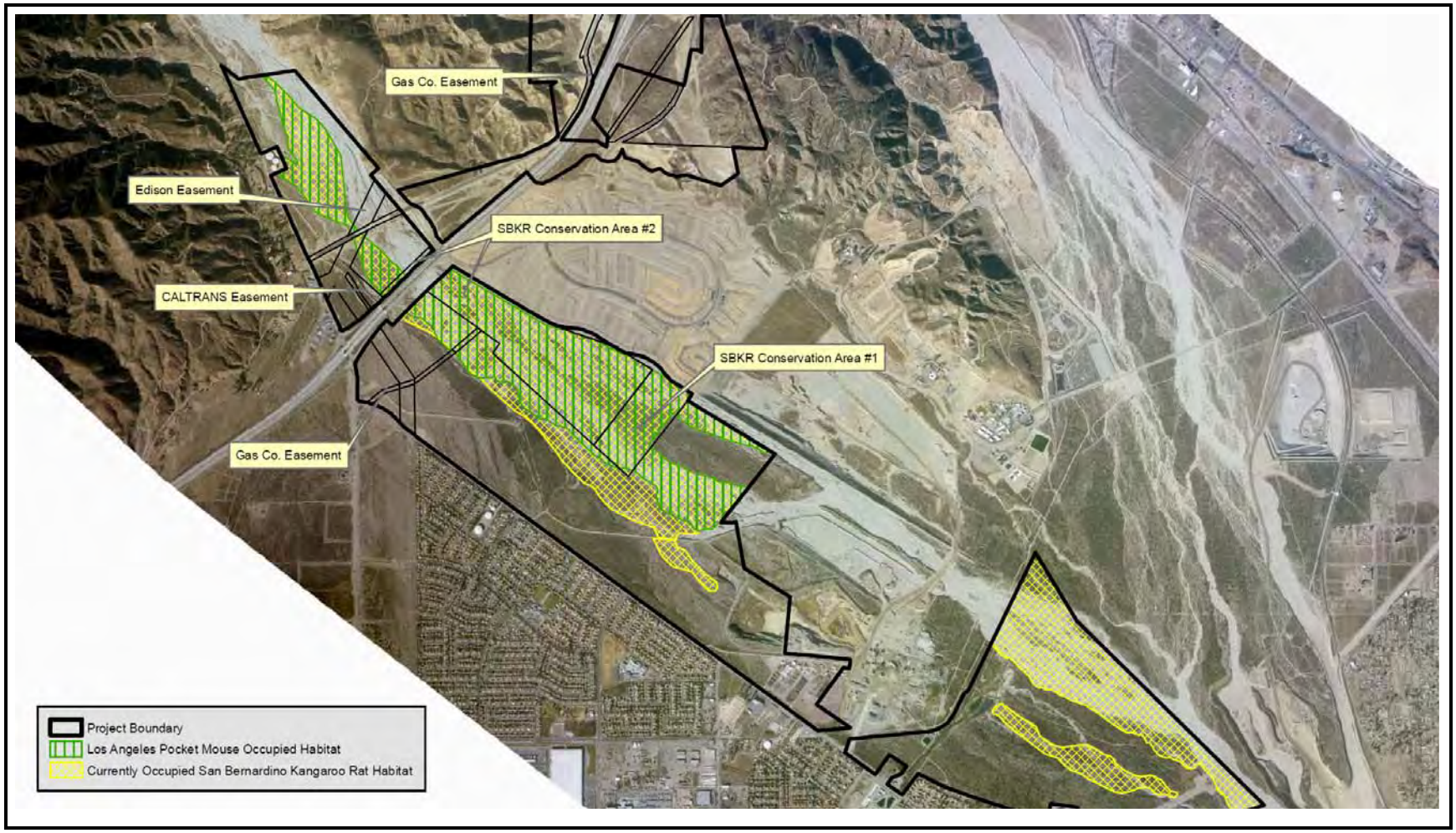


Figure 4.5-20
EXISTING SAN BERNARDINO KANGAROO RAT AND LOS ANGELES POCKET MOUSE OCCUPIED HABITAT WITHIN LCRSP STUDY AREA
Source: PCR Services Corporation

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As illustrated in Figure 4.5-1 (San Bernardino Kangaroo Rat Critical Habitat Designation within the LCRSP Study Area), about 1,171.2 on-site and 12.4 off-site acres within the LCRSP study area are located within Unit 2 (Lytle/Cajon Creek Wash) of that critical habitat designation (CHD). Portions of the LCRSP study area outside of the CHD include Neighborhoods I and IV and the southwestern portions of Neighborhoods II and III.

The areas considered by the USFWS to be critical habitat are those areas within the designated unit boundaries that contain the "primary constituent elements" (PCEs) of critical habitat. PCEs are defined the USFWS as "the physical and biological features within the geographical area occupied by the San Bernardino kangaroo rat at the time of listing that are essential to the conservation of the species and which may require special management considerations or protection" (73 FR 61947).

The USFWS has defined PCEs for SBKR as the following: "(1) Alluvial fans, washes, and associated floodplain areas containing soils consisting predominately of sand, loamy sand, sandy loam, and loam, which provide burrowing habitat necessary for sheltering and rearing offspring, storing food in surface caches, and movement between occupied patches; (2) Upland areas adjacent to alluvial fans, washes, and associated floodplain areas containing alluvial sage scrub habitat and associated vegetation, such as coastal sage scrub and chamise chaparral, with up to approximately 50 percent canopy cover providing protection from predators, while leaving bare ground and open areas necessary for foraging and movement of this subspecies; and (3) Upland areas adjacent to alluvial fans, washes, and associated floodplain areas, which may include marginal habitat such as alluvial sage scrub with greater than 50 percent canopy cover with patches of suitable soils (PCE 1) that support individuals for re-population of wash areas following flood events. These areas may include agricultural lands, areas of inactive aggregate mining activities, and urban/wildland interfaces" (73 FR 61962).

As indicated in the USFWS' revised final designation,[71] critical habitat from Unit 11 was removed for the following reasons: "[A]pproximately 9,284 acre within Unit 2 (Lytle and Cajon Creeks) have been removed in our revision to critical habitat, largely because these areas do not contain the physical and biological features that are essential to the conservation of this subspecies."

The USFWS-designated critical habitat represents a broad-brushed, landscape-based designation which is typically not based on more detailed, site-specific biological data. Critical habitat designation is a component in and the by-product of a federal regulatory review process and it is intended to guide the review and analysis, by federal agencies, of federal actions within designated areas.

[71]/ United States Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the San Bernardino Kangaroo Rat (Dipodomys merriami parvus), Final Revised Designation, Federal Register, Vol. 73, No. 202, October 17, 2008.

As illustrated in Figure 4.5-1 (San Bernardino Kangaroo Rat Critical Habitat Designation within the LCRSP Study Area), about 1,171.2 on-site and 12.4 off-site acres within the LCRSP study area are located within Unit 2 (Lytle/Cajon Creek Wash) of that critical habitat designation (CHD). Portions of the LCRSP study area outside of the CHD include Neighborhoods I and IV and the southwestern portions of Neighborhoods II and III.

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[72]/ United States Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the San Bernardino Kangaroo Rat (Dipodomys merriami parvus), Final Revised Designation, Federal Register, Vol. 73, No. 202, October 17, 2008.

- **Los Angeles pocket mouse**. The LAPM (*Perognathus longmembris brevinasus*) was captured in relatively high numbers within Neighborhood IV in 2005, 2006, and 2007.[73] This species was also captured in small numbers within the SBKR Conservation Area of Neighborhood III, as established for the SBKR as part of the County-approved LCNPD. The results of the trapping program are shown in Figure 4.5-20 (Existing San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Occupied Habitat within LCRSP Study Area). As illustrated, the area of occupation within Neighborhood III includes Lytle Creek and the associated vegetated "islands" within the floodplain but does not extend into the adjacent upland terrace south of the wash. A total of approximately 397.8 on-site acres of LAPM-occupied habitat have been mapped within Neighborhoods III and IV. This species was not, however, found within Neighborhoods I or II during trapping in 2005, 2006, and 2007.

- **Climate Change and Sensitive Biological Resources**.[74] The LCRSP study area is located in an ecological transition zone between the Mediterranean climate of more coastal southern California and the arid Mojave Desert just north and east of the San Bernardino and San Gabriel Mountains. The study area has an elevation that ranges from 1450 to 2270-feet AMSL as it lies within a topographical transitional area between the lowlands to the west and the higher elevation mountains and desert to the north and east. The area may best be characterized as a semi-arid environment with between 17 inches of precipitation per year on average near the City of San Bernardino and 27 inches of precipitation per year on average near the headwaters of Lytle Creek and average high and low temperatures of 80 degrees (˚) and 49˚ Fahrenheit (F). Plant and animal species occurring within the vicinity of the study area are adapted to semi-arid conditions.[75]

  The global, regional, and localized consequence of climate change remains subject to continuing debate. For the purposed of this analysis, three possible localized (i.e., increased flood event, increased drought, and increased wildfire) scenarios are introduced below. The discussion is qualitative in light of the lack of information regarding the magnitude and certainty of the potential future impacts associated with climate change and the difficulty in predicting the potential effects of climate change.

[73]/ Many of the various plant and wildlife surveys noted above were not conducted every year from 2004 through 2008. The average number of consecutive survey years during that period for any one species was three years. For certain species (e.g., Plummer's mariposa lily, slender-horned spineflower, woollystar, SBKR, and CAGN), PCR biologists concluded that surveys every year from 2004 through 2008 were not necessary for one or more of the following reasons: (1) previous consecutive years surveys were repeatedly negative and therefore, the target species was concluded to be absent; (2) focused surveys (i.e., plants) were completed under optimal environmental conditions where presence would have been captured, if present; (3) external sources, such as the wildlife agencies, determined the potential for the species to be present in the vicinity not likely; and (4) multiple years of wildlife trapping bouts allowed the researcher to accurately identified all occupied habitat.

[74]/ The discussion of the potential impacts that global climate change may have on the proposed project is presented in the context of potential impacts to sensitive biological resources. Potential effects resulting from climate change include increased intensity of various climatic events (such as floods, drought, and wildfire) which, in turn, may affect plant and wildlife species in the general project area.

[75]/ For example, juniper is a plant species that generally occurs in desert habitats or the lower slopes of arid mountainous areas. This species is found in various locations in the study site within the RAFSS community and reflects the influence of nearby desert areas. Similarly, the common zebra-tailed lizard (*Callisaurus draconoides draconoides*) occurs throughout the study area as well as in the desert. This particular species is adapted to desert and semi-arid environments that have more sparse vegetation with open areas.

The potential impacts described are generalizations as more detailed predictions cannot be made due to the speculative nature of potential future changes and impacts.

◊ **Increased Flood Events Scenario**. The potential for increased GHG emissions to increase the frequency and scale of flood events is examined due to the location of the study area within and adjacent to the 100-year floodplain of Lytle Creek. Lytle Creek is an ephemeral to intermittent alluvial fan drainage system that originates in the eastern San Gabriel Mountains upstream and flows downstream into the Santa Ana River after converging with Cajon Creek. Under the scenario that floods may become more frequent and more intense in the future, sensitive biological resources (both plant and animal species) within the LCRSP study area are already adapted to a dynamic flood regime due to the inherent nature of the alluvial fan system. The dominant plant community (RAFSS) depends upon floods to maintain the pioneer, intermediate, and mature phases. Without scouring flood events, this community would not support the diverse vegetative stature and species composition it currently does.

An additional consideration is the possibility that this scenario could result in floods that exceed the current 100-year floodplain limits or an expansion of the 100-year floodplain. Given the highly restricted distribution of RAFSS and the associated and largely endemic sensitive species occurring within it (e.g., SBKR and slender-horned spineflower), this could result in an unexpected benefit to these species. The expansion of the amount of RAFSS within the Lytle Creek system may occur if areas currently above the 100-year floodplain were exposed to more frequent flooding.

Although increased flood events could result in a reduction in the refugia habitat above the 100-year floodplain that is used by the SBKR, it is not likely that a flood large enough to destroy all refugia within the Lytle Creek and Cajon Creek system would occur. On the contrary, catastrophic floods may increase the availability of suitable habitat for this species along the outer limits of the currently existing floodplain.

Common plant and wildlife species occurring in, and adapted to, the upland habitat conditions (which are less restricted in distribution than the RAFSS), would not be expected to be significantly affected to the extent that regional populations of these species would be threatened. Sensitive species are far less common in the upland habitats within the LCRSP study area than within the 100-year floodplain and RAFSS and, therefore, would be negligibly affected by an expansion of the 100-year floodplain of Lytle Creek.

For strictly riparian communities (such as that which exists in the Sycamore Flat East riparian corridor), the community would be expected to expand away from the active channel into the floodplain with increasing rainfall and flood events. This would result in a higher water table and an expansion of saturated soils. Willow scrub is tolerant of sustained inundation and frequent flooding.

◊ **Increased Drought Scenario**. Increased GHG emissions have the potential to result in more frequent and severe droughts. This would have the effect of reduced annual precipitation as well as lower flood levels throughout the Lytle

Creek watershed. Lower water levels and fewer flooding events may be detrimental to RAFSS if these conditions persist for too long since this community depends upon episodic flooding to create new phases.

Mature phases of RAFSS may be as old as 35 to 50 years. Lack of flood events within this mature phase of vegetation may slow regeneration of certain evergreen shrub species. Flooding of the mature phase within the uppermost terraces of RAFSS habitat one or twice a century may, however, be sufficient to allow regeneration and persistence of climax evergreen species characteristic of this phase. It is, therefore, unlikely that increased drought conditions would significantly affect this sensitive community unless there were a significant decrease in the frequency and magnitude of floods events. With respect to riparian communities (such as the Sycamore Flat East riparian corridor), drought conditions are tolerated to some extent due to the relatively shallow groundwater table. Extended drought may reduce the width of the floodplain vegetation, thereby, restricting it to the main channel.

With respect to individual species, plant species occurring within the LCRSP study site are drought-tolerant and are generally adapted to fluctuations in environmental conditions. Some plant species adjust to drought conditions by remaining dormant in the seed bank. This adaptation may affect the size of certain plant populations if droughts were to become more frequent and/or severe. This would not be expected to significantly affect populations of sensitive plants, including the Plummer's mariposa lily and parry's spineflower known to occur within the LCRSP study site, due to the relatively widespread occurrences of these species throughout the LCRSP study area.

For sensitive wildlife species, drought would likely have a domino effect up the food chain. Herbivores may have a more limited food sources which may in turn affect carnivores. As many of the species are adapted to semi-arid conditions and share characteristics with similar species occurring in the desert region, impacts as a result of drought are not expected to be significant.

◊ **Increased Wildfire Scenario**. Another potential result of increased GHG emissions is an increase in the frequency and intensity of wildfires in the vicinity of the LCRSP study area. This may be an indirect result of increased drought conditions. In addition to the obvious direct mortality of species caused by fire, indirect impacts may also occur. Certain plant communities within the LCRSP study area (such as chaparral and scrub) are adapted to a certain frequency of wildfires. The natural fire cycle for these communities within southern California is difficult to determine due to fire suppression and abatement practices over the years. Fire cycles for scrub and chaparral in inland southern California may be between 30 and 35 years. According to the California Chaparral Institute, chaparral communities are sensitive to fire intervals that are shorter than 15-20 years due to the time required to recover and produce new seed.

With respect to sensitive plant and wildlife species occurring within the study area, the Scrub-type native habitats they depend upon are generally adapted to fire and would be expected to persist with increased frequency and intensity of wildfires. In addition, the Plummer's mariposa lily is also somewhat adapted to

disturbances (such as fire) as it generally prefers openings in scrub and chaparral. Fire tends to favor disturbance-followers (such as non-native grasses). If fires occur too frequently, invasive species may eventually dominate, resulting in a type-conversion from a native plant community (such as chaparral) to one dominated by non-native grasses. This would indirectly affect both common and sensitive plant and wildlife populations by displacing those that cannot adapt to non-native plant communities.

4.5.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. These thresholds were used for all impact analyses including direct effects, indirect effect, and cumulative effects. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant biological resource impact if the project or if project-related activities were to:

- Have a substantial adverse effect,[76] either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
- Have a substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially[77] with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Conflict[78] with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted HCP, natural community conservation plan (NCCP), or other approved local, regional, or State HCP.[79]

The FESA provides legal protection for threatened and endangered species nationwide. California has similar mandates, including the CESA, the California Species Preservation Act of 1980, and the California Native Plant Protection Act of 1977. Certain species listed as threatened or endangered by the USFWS and/or by the California Fish and Game Commission are also protected by the California Native Plant Protection Act. Certain plant and animal taxa are considered sensitive as a result of their declining populations, vulnerability to habitat

[76]/ As defined herein, "substantial adverse effect" shall mean a significant loss or harm of a magnitude that, based on current scientific data and knowledge: (1) would cause a species or a native plant or animal community to drop below self-perpetuating levels on a Statewide or regional basis; (2) would cause a species to become threatened or endangered; (3) substantially reduce population numbers of a listed, candidate, sensitive, rare, or other special status species; or (4) eliminate or substantially impair the functions and values of a biological resource in a geographic area defined by interrelated biological components and systems.

[77]/ Certain terms, such as "substantially," are neither defined in CEQA nor in the State CEQA Guidelines and require a local determination whether a proposed action would meet or exceed the stated standard.

[78]/ As defined herein, "conflict" means contradiction of a magnitude which, based on foreseeable circumstances, would preclude or prevent substantial compliance.

[79]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section IV (Biological Resources).

change, and restricted distributions and some habitats are considered sensitive biological resources. The California Native Plant Society (CNPS) compiles and maintains an inventory of sensitive plant species, including State and federally recognized rare plant species and those plants determined to be rare by that organization and other experts.

In accordance with these requirements, the proposed project would normally be deemed to produce a significant or potentially significant biological resource impact if the project or if project-related activities were to:

- Result in a violation of any applicable regulations promulgated by a State or federal resource agency for the protection of rare, threatened, endangered, or otherwise protected species and their habitats, including wetlands.
- Result in a violation of any applicable State or federal laws prohibiting the elimination or net reduction in a site's or an area's biological value through either direct removal of sensitive or protected on-site or near-site biological resources or through the direct or indirect disruption or interference with those resources whose impact is not substantially offset through the avoidance of such impacts or through the provision of substitute resources or environs or other measures providing reasonable and relatively equivalent compensation for such impacts.

Section 5650 of the CFGC stipulates that "[i]t is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this State any of the following: (a) Any petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or residuary product of petroleum, or carbonaceous material or substance. (b) Any refuse, liquid or solid, from any refinery, gas house, tannery, distillery, chemical works, mill or factory of any kind. (c) Any sawdust, shavings, slabs, edgings. (d) Any factory refuse, lime, or slag. (e) Any *Cocculus indicus*. (f) Any substance or material deleterious to fish, plant life, or bird life." In accordance therewith, the proposed project would normally be deemed to create a significant or potentially significant biological resource impact if the project of if project-related activities were to:

- Discharge (other than de minimus quantities of non-storm water) into waters of the State any substance or material deemed to be deleterious to fish, plant life, or bird life.

As further indicated in Section 1603 of the CFGC, "[i]t is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designed by the department [CDFG], or use any material from the streambeds, without first notifying the department of such activities, except when the department has been notified pursuant to Section 1601." In accordance therewith, the proposed project would normally be deemed to create a significant or potentially significant biological resource impact if the project or if project-related activities were to:

- Substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake subject to the jurisdiction of the CDFG except through prior notification and authorization of that agency.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative biological resource impacts.

4.5.5 Impact Analysis

The following discussion analyzes the potential impacts to plant and wildlife resources that may occur as a result of implementation of the proposed project. The State CEQA Guidelines recognize three forms of potential impacts, all of which are addressed herein: direct, indirect, and cumulative. As defined, direct impacts or physical changes in the environment are those which are caused by and are immediately related to a project. For purposes of this analysis, direct impacts are considered to be those that involve the physical loss, modification, or disturbance of natural habitats (i.e., vegetation or plant communities), which in turn, directly affect plant and wildlife species dependent on those habitats. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of low mobility (e.g., plants, amphibians, reptiles, and small mammals).

Indirect impacts include those impacts or physical changes which are not immediately related to a project, but which are caused indirectly by a project. For purposes of this analysis, indirect impacts are considered to be those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise and light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants and non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation and operation of a project. These impacts, which may be short-term or long-term in duration, are commonly referred to as "edge effects" and may change the behavioral patterns of wildlife and reduce wildlife diversity and abundance in habitats within and adjacent to project site. Cumulative impacts are those impacts which, when considered in addition to the impacts of related projects, would be considered "cumulatively considerable" and significant.

The determination of impacts in this analysis is based on both the features of the proposed project and the biological values of the habitat and/or sensitivity of plant and wildlife species. Relevant project features (e.g., limits of grading, proposed levee limits, and limits of temporary construction zones) were supplied by the Applicant. Those portions of the proposed development area that abut Lytle Creek will be stabilized with a levee. For purposes of this analysis, direct impact calculations are based upon the assumption that construction impacts will be contained within an 80-foot construction area extending from the toe of the levee where it is buried underground. In addition, the limits of grading included direct impacts associated with any fuel modification zones.

Impacts were calculated using geographic information system (GIS) technology in order to maximize the accuracy and consistency of the assessment. In assessing the impacts of the proposed project, the Lead Agency considered those Applicant-identified "project design features" identified in the BRA,[80] including: (1) avoidance features[81]; (2) the protection of nesting birds[82]; (3) the protection of burrowing owls[83]; and (4) landscape design features.[84]

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[80]/ *Op. Cit.* ,Biological Resources Assessment, Lytle Creek Specific Plan, City of Rialto, San Bernardino County, California, p. 104.

[81]/ The proposed project includes the avoidance and long-term preservation of Lytle Creek and its associated RAFSS, as well as a large portion of the Sycamore Flats riparian corridor and hillsides within Neighborhood I. In total, 829.2 acres (33.9 percent) of open space within the LCRSP study area, including 216.8 acres previously established as the SBKR Conservation Area, will be set-aside in perpetuity. This action will have the positive effect of avoiding and preserving an estimated 466,000 Parry's spineflower plants within the largest population mapped within the LCRSP study area; and a contiguous corridor for wildlife movement will be maintained along Lytle Creek where it courses through the LCRSP study area. Additionally, the proposed project includes temporary construction impacts (totaling approximately 40.8 acres) extending 80 feet beyond the toe of the levee, which will be disturbed during levee construction. With the exception of flood control facilities, no permanent

4.5.5.1 Construction Impacts

***Environmental Impact 5-1**. Grading and grubbing activities will result in direct impacts to approximately 1,374.7 (1,368.0 on-site and 6.7 off-site) acres, resulting in the direct removal of existing vegetation within those areas. Temporary impacts include approximately 49.7 (40.8 on-site and 8.9 off-site) acres which will occur within temporary construction zones associated with the levee construction and the construction of a road under the I-15 Freeway. With regards to non-sensitive plant species, project implementation will result in direct impacts to approximately 894.8 (889.9 on-site and 4.9 off-site) acres of non-sensitive plant communities. Temporary impacts to approximately 8.1 (5.1 on-site and 3.0 off-site) acres of non-sensitive plant communities will occur within temporary construction zones associated with the levee construction. With regards to sensitive plant species, project implementation will result in direct impacts to approximately 478.0 (476.2 on-site and 1.8 off-site) acres of RAFSS (where RAFSS is the only or the primary community). Temporary impacts to approximately 41.6 (35.7 on-site and 5.9 off-site) acres of RAFSS which will occur within temporary construction zones associated with the levee construction. Permanent impacts to sensitive plant communities include approximately 1.7 on-site acres of southern cottonwood willow riparian and 0.2 on-site acre of California sycamore alliance.*

***Preliminary Determination 5-1**. Potentially significant unless mitigation incorporated.*[85]

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structures are planned within this area and the area will be left as open space once construction is completed. Although identified as temporary in nature, the exact extent, intensity, and longevity of these disturbances and their effects on the existing biological resources cannot be determined at this time; therefore, for the purpose of assessing a worst-case scenario, these impacts are considered permanent in nature with regards to biological resources. As the project proceeds, these areas may be assessed for restoration.

[82]/ To protect nesting birds regulated by the federal Migratory Bird Treaty Act, efforts will be made to schedule vegetation removal between September 1 and February 14 to avoid the nesting bird season. If clearing and/or grading activities cannot be avoided during the nesting season, all suitable habitat will be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to removal. If any active nests are detected, the area will be flagged, along with a minimum 100-foot buffer (buffer may range between 100 and 300 feet as determined by the monitoring biologist) and will be avoided until the nesting cycle is complete or it is determined by the monitoring biologist that the nest has failed. A biologist will be present on the site to monitor any vegetation removal to ensure that nests not detected during the initial survey are not disturbed.

[83]/ In order to avoid impacts to any burrowing owls that may colonize the development impact footprint prior to commencement of construction activities, a Phase III protocol survey shall be conducted within 30 days prior to commencement of ground disturbance activities (California Burrowing Owl Consortium, 1993).[83] This pre-construction survey would entail four separate days between two hours before sunset to one hour after or one hour before sunrise to two hours after. This survey applies during both the breeding season (February 1 through August 31) as well as the non-breeding season when wintering owls are most likely detected if present (December 1 through January 31). If burrowing owls are detected within the development impact footprint or within approximately 150 feet of the impact area, on-site passive relocation would be conducted during the non-breeding season in accordance with the established protocol (California Burrowing Owl Consortium, 1993).

[84]/ In general, landscaping will be designed to reflect the area's historic agrarian theme as well as the native vegetation and habitat of Lytle Creek. The proposed project will restrict landscape plantings to non-invasive plant species for common areas adjacent to open space in order to minimize potential indirect affects to vegetation within these open space areas. Where appropriate, landscaping will consist of drought-tolerant, native species.

[85]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS; (2) have a substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS; (3) result in a violation of any applicable regulations promulgated by a State or federal resource agency for the protection of rare, threatened, endangered, or otherwise protected species and their habitats, including wetlands; and (4) result in a violation of any applicable State or federal laws prohibiting the elimination or net reduction in a site's or an area's biological value through either direct removal

Direct disturbance of existing vegetation is the likely consequence of nearly all development activities. The geographic extend of proposed site clearing, grubbing, and grading limits, as required to create residential and non-residential development areas and for the construction of project-serving roadways and infrastructure systems, are illustrated in Figure 2-20 (Lytle Creek Ranch Specific Plan – Conceptual Grading Plans). A total of approximately 1,539.3 acres will be directly impacted under the conceptual grading plan.

Areas of direct disturbance are generally limited to a project's grading and grubbing limits. However, if vegetative removal activities were to extend beyond specified grading limits, such as might occur through compliance with Rialto Fire Department and/or San Bernardino County Fire Department fuel modification zone requirements and/or the creation of temporary construction staging and equipment marshaling areas, additional impacts to on-site and off-site plant communities could potentially occur.

As indicated in Table 4.5-12 (Impacts to Plant Communities within the LCRSP Study Area) and as illustrated in Figure 4.5-21 (Impacts to Plant Communities/Habitats within the LCRSP Study Area [Neighborhood I]), Figure 4.5-22 (Impacts to Plant Communities/Habitats within the LCRSP Study Area [Neighborhood II]), Figure 4.5-23 (Impacts to Plant Communities/Habitats within the LCRSP Study Area [Neighborhood III]), and Figure 4.5-24 (Impacts to Plant Communities/Habitats within the LCRSP Study Area [Neighborhood IV]), the total impacts to plant communities is identified as approximately 1,374.7 (1,368.0 on-site and 6.7 off-site) acres. This figure differs from the 1,539.3 total acres which will be graded, as identified in the conceptual grading plan. The difference between the two acreage figures is approximately 171.3 acres. That 171.3-acre area is comprised of lands that have been previously disturbed and, therefore, not included in the total area of disturbance herein. Of that, 137.8 acres was previously analyzed and the impacts attributable to the area's disturbance previously addressed and mitigated as part of the County-approved LCNPD. Of the remaining areas, the rest was previously disturbed during construction of roads and the SCE easement work within Neighborhoods III and IV. Because these areas were previously grubbed and/or graded, they have not been included in the tabulation of total areas of disturbance for the purpose of this biological resource assessment; however, because these areas will most likely require "remedial grading,"[86] the acreage was included within the conceptual grading plan.

As indicated by the Applicant: "These 171.3 acres should also be distinguished form the other acreage" presented in Table 4.5-12 (Impacts to Plant Communities within the LCRSP Study Area), "and designated as 'Disturbed.' Those acres consist of land that has been disturbed due to constant edge effects from human activities along Glen Helen Parkway; operations at Cemex and Vulcan Materials; and areas that were previously burned along Riverside Avenue during the fires in 2006 and 2007, and were included in the Biological Resource Assessment's total of 'Total Areas of Disturbance,' because none of these lands had been previously analyzed as part of another development project nor had impacts to these areas been previously permitted or mitigated."[87] Although an approximately 171.3-acre component of the LCRSP study area is not specifically addressed in Table 4.5-12, based on the disturbed nature of that area, no significant biological resource impacts would be anticipated therein.

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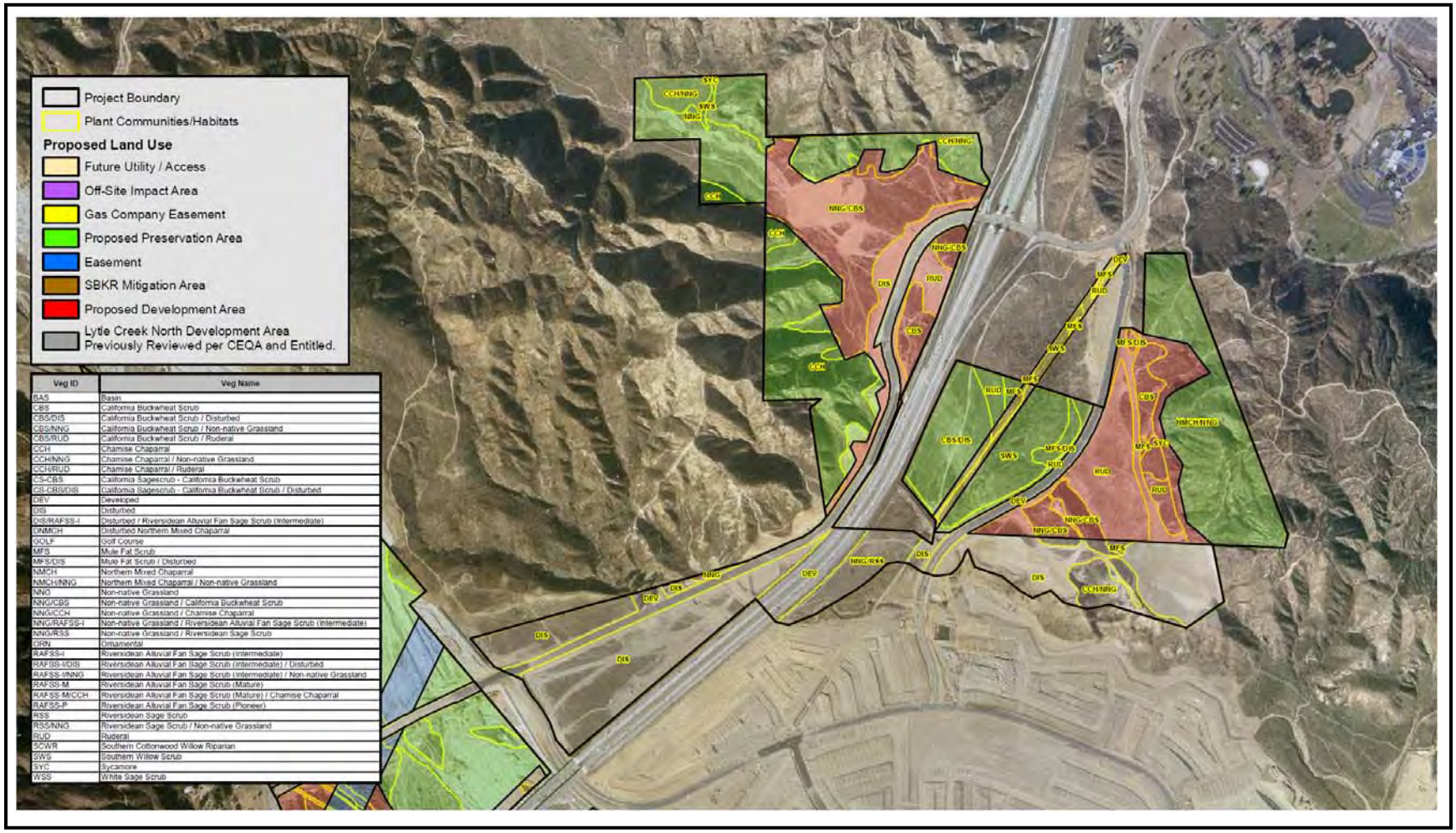
of sensitive or protected on-site or near-site biological resources or through the direct or indirect disruption or interference with those resources whose impact is not substantially offset through the avoidance of such impacts or through the provision of substitute resources or environs or other measures providing reasonable and relatively equivalent compensation for such impacts.

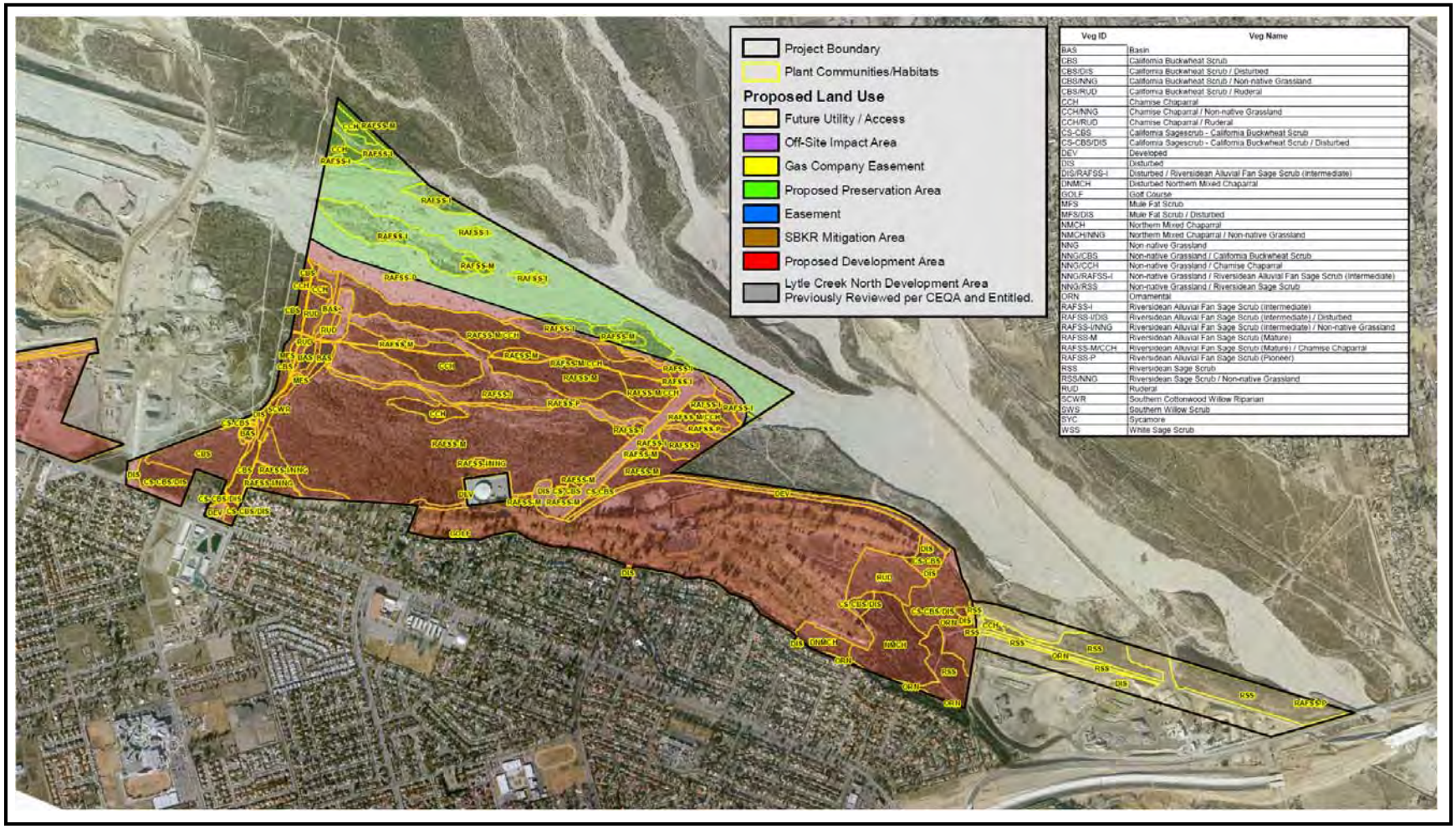
[86]/ *Op. Cit*., Biological Resources Assessment, Lytle Creek Specific Plan, City of Rialto, San Bernardino County, California, p. 97.

[87]/ *Ibid*., p. 133.



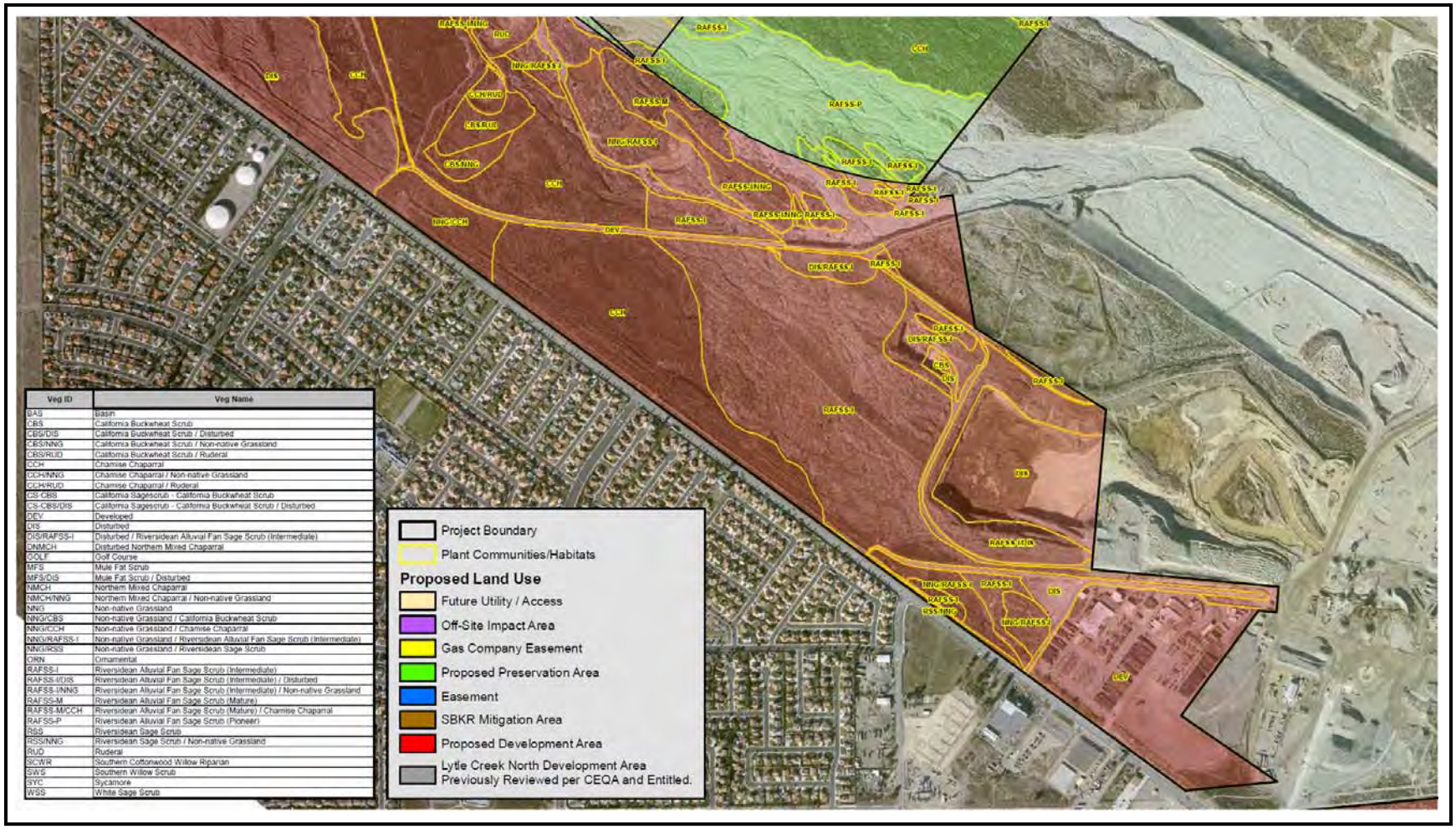
Veg ID	Veg Name
BAS	Basin
CBS	California Buckwheat Scrub
CBS/DIS	California Buckwheat Scrub / Disturbed
CBS/NNG	California Buckwheat Scrub / Non-native Grassland
CBS/RUD	California Buckwheat Scrub / Ruderal
CCH	Chamise Chaparral
CCH/NNG	Chamise Chaparral / Non-native Grassland
CCH/RUD	Chamise Chaparral / Ruderal
CS-CBS	California Sagescrub - California Buckwheat Scrub
CS-CBS/DIS	California Sagescrub - California Buckwheat Scrub / Disturbed
DEV	Developed
DIS	Disturbed
DIS/RAFSS-I	Disturbed / Riversidean Alluvial Fan Sage Scrub (Intermediate)
DNMCH	Disturbed Northern Mixed Chaparral
GOLF	Golf Course
MFS	Mule Fat Scrub
MFS/DIS	Mule Fat Scrub / Disturbed
NMCH	Northern Mixed Chaparral
NMCH/NNG	Northern Mixed Chaparral / Non-native Grassland
NNG	Non-native Grassland
NNG/CBS	Non-native Grassland / California Buckwheat Scrub
NNG/CCH	Non-native Grassland / Chamise Chaparral
NNG/RAFSS-I	Non-native Grassland / Riversidean Alluvial Fan Sage Scrub (Intermediate)
NNG/RSS	Non-native Grassland / Riversidean Sage Scrub
ORN	Ornamental
RAFSS-I	Riversidean Alluvial Fan Sage Scrub (Intermediate)
RAFSS-I/DIS	Riversidean Alluvial Fan Sage Scrub (Intermediate) / Disturbed
RAFSS-I/NNG	Riversidean Alluvial Fan Sage Scrub (Intermediate) / Non-native Grassland
RAFSS-M	Riversidean Alluvial Fan Sage Scrub (Mature)
RAFSS-M/CCH	Riversidean Alluvial Fan Sage Scrub (Mature) / Chamise Chaparral
RAFSS-P	Riversidean Alluvial Fan Sage Scrub (Pioneer)
RSS	Riversidean Sage Scrub
RSS/NNG	Riversidean Sage Scrub / Non-native Grassland
RUD	Ruderal
SCWR	Southern Cottonwood Willow Riparian
SWS	Southern Willow Scrub
SYC	Sycamore
WSS	White Sage Scrub

Figure 4.5-21
IMPACTS TO PLANT COMMUNITIES/HABITATS WITHIN THE LCRSP STUDY AREA (Neighborhood I)
Source: PCR Services Corporation



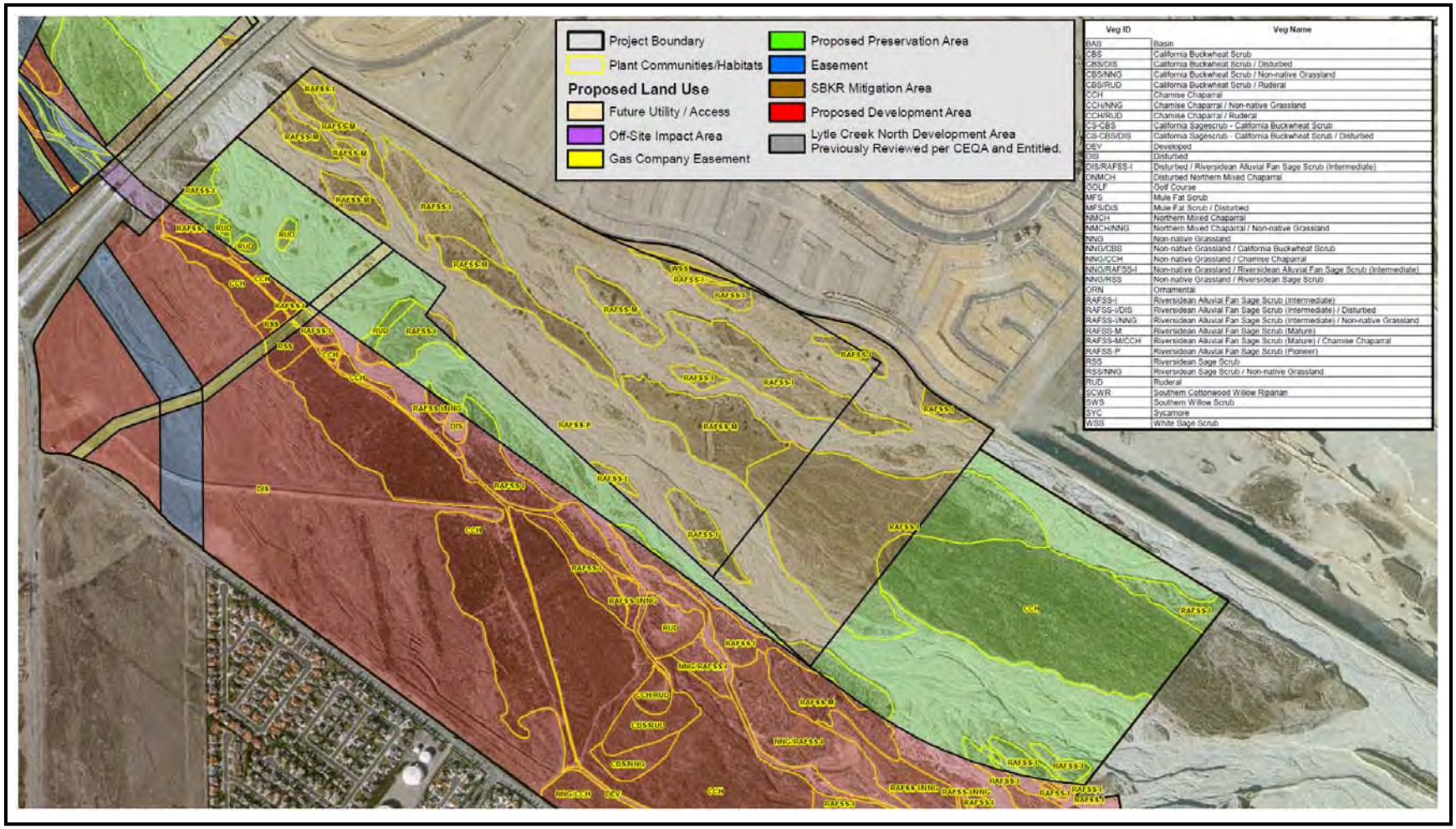
Veg ID	Veg Name
BAS	Basin
CBS	California Buckwheat Scrub
CBS/DIS	California Buckwheat Scrub / Disturbed
CBS/NNG	California Buckwheat Scrub / Non-native Grassland
CBS/RUD	California Buckwheat Scrub / Ruderal
CCH	Chamise Chaparral
CCH/NNG	Chamise Chaparral / Non-native Grassland
CCH/RUD	Chamise Chaparral / Ruderal
CS-CBS	California Sagescrub - California Buckwheat Scrub
CS-CBS/DIS	California Sagescrub - California Buckwheat Scrub / Disturbed
DEV	Developed
DIS	Disturbed
DIS/RAFSS-I	Disturbed / Riversidean Alluvial Fan Sage Scrub (intermediate)
DNMCH	Disturbed Northern Mixed Chaparral
GOLF	Golf Course
MFS	Mule Fat Scrub
MFS/DIS	Mule Fat Scrub / Disturbed
NMCH	Northern Mixed Chaparral
NMCH/NNG	Northern Mixed Chaparral / Non-native Grassland
NNG	Non-native Grassland
NNG/CBS	Non-native Grassland / California Buckwheat Scrub
NNG/CCH	Non-native Grassland / Chamise Chaparral
NNG/RAFSS-I	Non-native Grassland / Riversidean Alluvial Fan Sage Scrub (intermediate)
NNG/RSS	Non-native Grassland / Riversidean Sage Scrub
ORN	Ornamental
RAFSS-I	Riversidean Alluvial Fan Sage Scrub (intermediate)
RAFSS-I/DIS	Riversidean Alluvial Fan Sage Scrub (intermediate) / Disturbed
RAFSS-I/NNG	Riversidean Alluvial Fan Sage Scrub (intermediate) / Non-native Grassland
RAFSS-M	Riversidean Alluvial Fan Sage Scrub (Mature)
RAFSS-M/CCH	Riversidean Alluvial Fan Sage Scrub (Mature) / Chamise Chaparral
RAFSS-P	Riversidean Alluvial Fan Sage Scrub (Pioneer)
RSS	Riversidean Sage Scrub
RSS/NNG	Riversidean Sage Scrub / Non-native Grassland
RUD	Ruderal
SCWR	Southern Cottonwood Willow Riparian
SWS	Southern Willow Scrub
SYC	Sycamore
WSS	White Sage Scrub

Figure 4.5-22
IMPACTS TO PLANT COMMUNITIES/HABITATS WITHIN THE LCRSP STUDY AREA (Neighborhood II)
Source: PCR Services Corporation



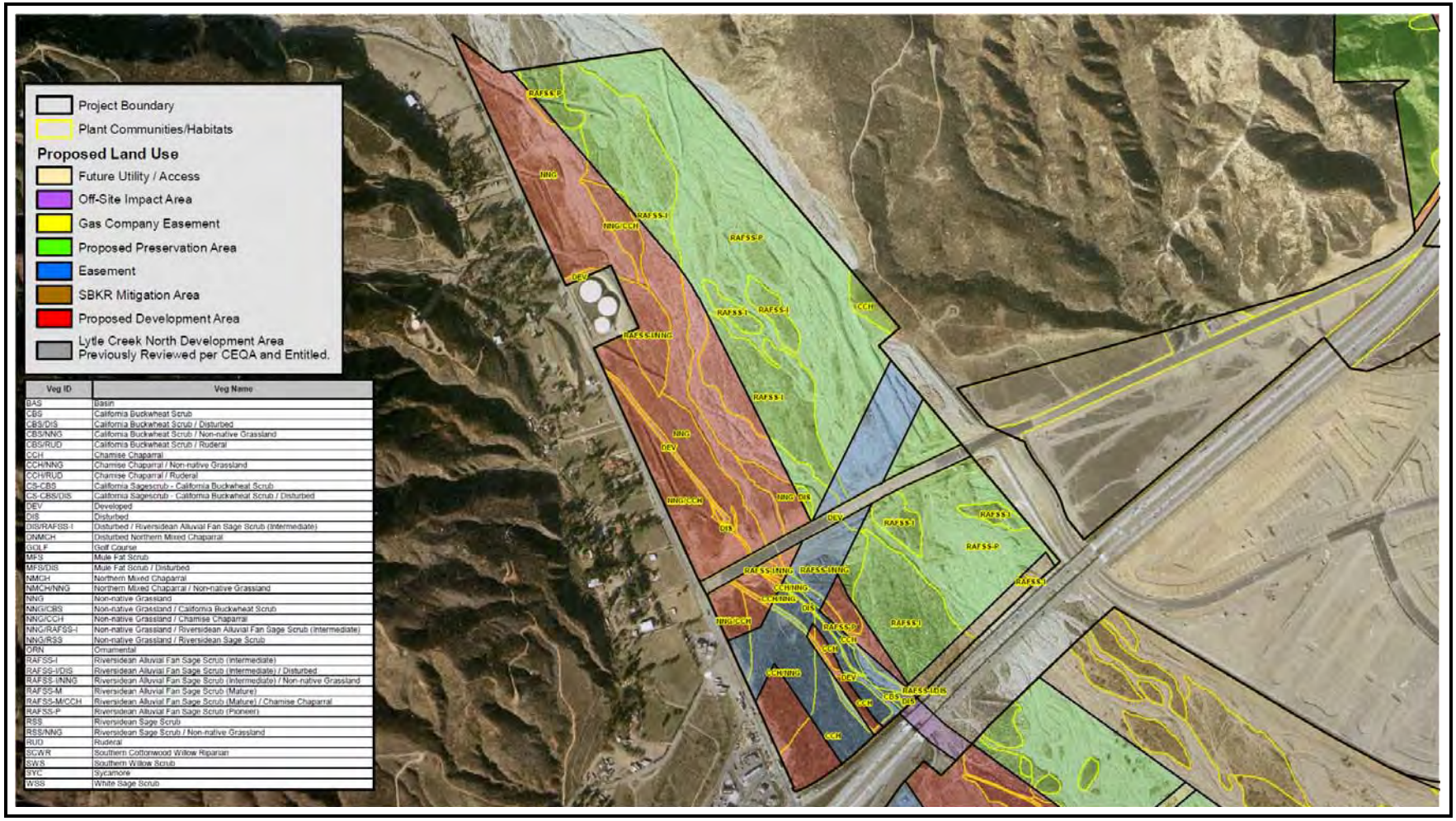
Veg ID	Veg Name
BAS	Basin
CBS	California Buckwheat Scrub
CBS/DIS	California Buckwheat Scrub / Disturbed
CBS/NNG	California Buckwheat Scrub / Non-native Grassland
CBS/RUD	California Buckwheat Scrub / Ruderal
CCH	Chamise Chaparral
CCH/NNG	Chamise Chaparral / Non-native Grassland
CCH/RUD	Chamise Chaparral / Ruderal
CS-CBS	California Sagescrub - California Buckwheat Scrub
CS-CBS/DIS	California Sagescrub - California Buckwheat Scrub / Disturbed
DEV	Developed
DIS	Disturbed
DIS/RAFSS-I	Disturbed / Riversidean Alluvial Fan Sage Scrub (Intermediate)
DNMCH	Disturbed Northern Mixed Chaparral
GOLF	Golf Course
MFS	Mule Fat Scrub
MFS/DIS	Mule Fat Scrub / Disturbed
NMCH	Northern Mixed Chaparral
NMCH/NNG	Northern Mixed Chaparral / Non-native Grassland
NNG	Non-native Grassland
NNG/CBS	Non-native Grassland / California Buckwheat Scrub
NNG/CCH	Non-native Grassland / Chamise Chaparral
NNG/RAFSS-I	Non-native Grassland / Riversidean Alluvial Fan Sage Scrub (Intermediate)
NNG/RSS	Non-native Grassland / Riversidean Sage Scrub
ORN	Ornamental
RAFSS-I	Riversidean Alluvial Fan Sage Scrub (Intermediate)
RAFSS-I/DIS	Riversidean Alluvial Fan Sage Scrub (Intermediate) / Disturbed
RAFSS-I/NNG	Riversidean Alluvial Fan Sage Scrub (Intermediate) / Non-native Grassland
RAFSS-M	Riversidean Alluvial Fan Sage Scrub (Mature)
RAFSS-M/CCH	Riversidean Alluvial Fan Sage Scrub (Mature) / Chamise Chaparral
RAFSS-P	Riversidean Alluvial Fan Sage Scrub (Pioneer)
RSS	Riversidean Sage Scrub
RSS/NNG	Riversidean Sage Scrub / Non-native Grassland
RUD	Ruderal
SCWR	Southern Cottonwood Willow Riparian
SWS	Southern Willow Scrub
SYC	Sycamore
WSS	White Sage Scrub

Figure 4.5-23 (1 of 2)
IMPACTS TO PLANT COMMUNITIES/HABITATS WITHIN THE LCRSP STUDY AREA (Neighborhood III - East)
Source: PCR Services Corporation



Veg ID	Veg Name
BAS	Basin
CBS	California Buckwheat Scrub
CBS/DIS	California Buckwheat Scrub / Disturbed
CBS/NNG	California Buckwheat Scrub / Non-native Grassland
CBS/RUD	California Buckwheat Scrub / Ruderal
CCH	Chamise Chaparral
CCH/NNG	Chamise Chaparral / Non-native Grassland
CCH/RUD	Chamise Chaparral / Ruderal
CS-CBS	California Sagescrub - California Buckwheat Scrub
CS-CBS/DIS	California Sagescrub - California Buckwheat Scrub / Disturbed
DEV	Developed
DIS	Disturbed
DIS/RAFSS-I	Disturbed / Riversidean Alluvial Fan Sage Scrub (Intermediate)
DNMCH	Disturbed Northern Mixed Chaparral
GOLF	Golf Course
MFS	Mule Fat Scrub
MFS/DIS	Mule Fat Scrub / Disturbed
NMCH	Northern Mixed Chaparral
NMCH/NNG	Northern Mixed Chaparral / Non-native Grassland
NNG	Non-native Grassland
NNG/CBS	Non-native Grassland / California Buckwheat Scrub
NNG/CCH	Non-native Grassland / Chamise Chaparral
NNG/RAFSS-I	Non-native Grassland / Riversidean Alluvial Fan Sage Scrub (Intermediate)
NNG/RSS	Non-native Grassland / Riversidean Sage Scrub
ORN	Ornamental
RAFSS-I	Riversidean Alluvial Fan Sage Scrub (Intermediate)
RAFSS-I/DIS	Riversidean Alluvial Fan Sage Scrub (Intermediate) / Disturbed
RAFSS-I/NNG	Riversidean Alluvial Fan Sage Scrub (Intermediate) / Non-native Grassland
RAFSS-M	Riversidean Alluvial Fan Sage Scrub (Mature)
RAFSS-M/CCH	Riversidean Alluvial Fan Sage Scrub (Mature) / Chamise Chaparral
RAFSS-P	Riversidean Alluvial Fan Sage Scrub (Pioneer)
RSS	Riversidean Sage Scrub
RSS/NNG	Riversidean Sage Scrub / Non-native Grassland
RUD	Ruderal
SCWR	Southern Cottonwood Willow Riparian
SWS	Southern Willow Scrub
SYC	Sycamore
WSS	White Sage Scrub

Figure 4.5-23 (2 of 2)
IMPACTS TO PLANT COMMUNITIES/HABITATS WITHIN THE LCRSP STUDY AREA (Neighborhood III - West)
Source: PCR Services Corporation



Veg ID	Veg Name
BAS	Basin
CBS	California Buckwheat Scrub
CBS/DIS	California Buckwheat Scrub / Disturbed
CBS/NNG	California Buckwheat Scrub / Non-native Grassland
CBS/RUD	California Buckwheat Scrub / Ruderal
CCH	Chamise Chaparral
CCH/NNG	Chamise Chaparral / Non-native Grassland
CCH/RUD	Chamise Chaparral / Ruderal
CS-CBS	California Sagescrub - California Buckwheat Scrub
CS-CBS/DIS	California Sagescrub - California Buckwheat Scrub / Disturbed
DEV	Developed
DIS	Disturbed
DIS/RAFSS-I	Disturbed / Riversidean Alluvial Fan Sage Scrub (Intermediate)
DNMCH	Disturbed Northern Mixed Chaparral
GOLF	Golf Course
MFS	Mule Fat Scrub
MFS/DIS	Mule Fat Scrub / Disturbed
NMCH	Northern Mixed Chaparral
NMCH/NNG	Northern Mixed Chaparral / Non-native Grassland
NNG	Non-native Grassland
NNG/CBS	Non-native Grassland / California Buckwheat Scrub
NNG/CCH	Non-native Grassland / Chamise Chaparral
NNG/RAFSS-I	Non-native Grassland / Riversidean Alluvial Fan Sage Scrub (Intermediate)
NNG/RSS	Non-native Grassland / Riversidean Sage Scrub
ORN	Ornamental
RAFSS-I	Riversidean Alluvial Fan Sage Scrub (Intermediate)
RAFSS-I/DIS	Riversidean Alluvial Fan Sage Scrub (Intermediate) / Disturbed
RAFSS-I/NNG	Riversidean Alluvial Fan Sage Scrub (Intermediate) / Non-native Grassland
RAFSS-M	Riversidean Alluvial Fan Sage Scrub (Mature)
RAFSS-M/CCH	Riversidean Alluvial Fan Sage Scrub (Mature) / Chamise Chaparral
RAFSS-P	Riversidean Alluvial Fan Sage Scrub (Pioneer)
RSS	Riversidean Sage Scrub
RSS/NNG	Riversidean Sage Scrub / Non-native Grassland
RUD	Ruderal
SCWR	Southern Cottonwood Willow Riparian
SWS	Southern Willow Scrub
SYC	Sycamore
WSS	White Sage Scrub

Figure 4.5-24
IMPACTS TO PLANT COMMUNITIES/HABITATS WITHIN THE LCRSP STUDY AREA (Neighborhood IV)
Source: PCR Services Corporation

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Table 4.5-12
IMPACTS TO PLANT COMMUNITIES WITHIN THE LCRSP STUDY AREA (acres)

Plant Community[1]	Existing within LCRSP Study Area	On-Site Areas					Off-Site Areas							Impacts within the LCRSP Study Area[6,7]	
		LCRSP Project Site	SoCalGas Easement[3]		LCNPD[4]	80-foot Temporary Levee Construct. Zone	Existing Utility Road Easement	SoCalGas Easement[3]		Road Under I-15 Freeway[5]		Off-Site Levee[5]			
		Perm.	Perm.	Temp.	Perm.	Temp.	Perm.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.
Scrub Communities															
Riversidean Sage Scrub	13.7	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	13.0	0.7
Riversidean Sage Scrub/ Non-Native Grassland	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0
Riversidean Alluvial Fan Sage Scrub (Pioneer)[2]	490.0	54.6	0.0	0.0	0.0	17.2	0.0	0.0	0.0	0.0	0.0	1.6	4.2	56.2	21.4
Riversidean Alluvial Fan Sage Scrub (Intermediate)[2]	358.4	171.8	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.0	0.1	0.2	1.3	172.0	15.9
Riversidean Alluvial Fan Sage Scrub (Intermediate)/ Non-Native Grassland[2]	31.9	25.4	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.4	1.9
Riversidean Alluvial Fan Sage Scrub (Intermediate)/Disturbed[2]	16.1	15.8	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	15.8	0.3
Riversidean Alluvial Fan Sage Scrub (Mature)[2]	208.0	169.3	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	169.3	2.1
Riversidean Alluvial Fan Sage Scrub (Mature)/Chamise Chaparral[2]	39.3	39.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.3	0.0
White Sage Scrub[2]	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California Buckwheat Scrub	34.0	33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	33.8	0.0
California Buckwheat Scrub/Non-Native Grassland	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0
California Buckwheat Scrub/Disturbed	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California Buckwheat Scrub/ Ruderal	4.4	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0
California Sagebrush-California Buckwheat Scrub	5.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0
California Sagebrush-California Buckwheat Scrub/Disturbed	30.1	29.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.6	0.0
Subtotal	1,252.8	565.2	0.0	0.0	0.0	35.7	0.0	0.0	0.0	0.3	0.3	2.2	6.3	567.7	42.3

Table 4.5-12 (Continued)
IMPACTS TO PLANT COMMUNITIES WITHIN THE LCRSP STUDY AREA (acres)

Plant Community[1]	Existing within LCRSP Study Area	Impacts to On-Site Portion					Impacts to Off-Site Portion							Impacted within the LCRSP Study Area[6,7]	
		LCRSP Project Site	SoCalGas Easement[3]		LCNPD[4]	80-foot Temporary Levee Construct. Zone	Existing Utility Road Easement	SoCalGas Easement[3]		Road Under I-15 Freeway[5]		Off-Site Levee[5]			
		Perm.	Perm.	Temp.	Perm.	Temp.	Perm.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.
Chaparral Communities															
Northern Mixed Chaparral	20.6	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	0.0
Northern Mixed Chaparral/ Non-Native Grassland	52.6	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0
Chamise Chaparral	240.9	148.8	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	148.8	0.7
Chamise Chaparral/ Non-Native Grassland	47.5	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0
Chamise Chaparral/Ruderal	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0
Subtotal	363.3	187.2	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	187.2	0.7
Grassland Communities															
Non-Native Grassland	32.8	28.8	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.8	2.5
Non-Native Grassland/ Riversidean Sage Scrub	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-Native Grassland/ Riversidean Alluvial Fan Sage Scrub (Intermediate)	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	0.0
Non-Native Grassland/ California Buckwheat Scrub	69.2	47.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.7	0.0
Non-Native Grassland/ Chamise Chaparral	24.1	22.4	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4	0.7
Subtotal	156.9	119.9	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.9	3.2
Riparian Communities															
Southern Cottonwood Willow Riparian[2]	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0
Southern Willow Scrub[2]	19.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California Sycamore Alliance[2]	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Mule Fat Scrub	4.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Mule Fat Scrub/Disturbed	2.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Subtotal	28.5	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0

Table 4.5-12 (Continued)
IMPACTS TO PLANT COMMUNITIES WITHIN THE LCRSP STUDY AREA (acres)

Plant Community[1]	Existing within LCRSP Study Area	Impacts to On-Site Portion					Impacts to Off-Site Portion							Impacted within the LCRSP Study Area[6,7]	
		LCRSP Project Site	SoCalGas Easement[3]		LCNPD[4]	80-foot Temporary Levee Construct. Zone	Existing Utility Road Easement	SoCalGas Easement[3]		Road Under I-15 Freeway[5]		Off-Site Levee[5]			
		Perm.	Perm.	Temp.	Perm.	Temp.	Perm.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.
Disturbed Communities															
Basin	9.9	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0
Ruderal	56.2	47.8	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.8	0.4
Disturbed	328.1	211.3	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.5	0.7	2.6	0.0	214.4	1.5
Disturbed/Riversidean Alluvial Fan Sage Scrub (Intermediate)	9.5	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	0.0
Disturbed/Northern Mixed Chaparral	4.9	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0
Golf Course	158.6	158.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	158.6	0.0
Ornamental	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
Subtotal	568.7	443.5	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.5	0.7	2.6	0.0	446.6	1.9
Developed Communities															
Developed	96.3	48.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.6	1.6	49.7	1.6
Subtotal	96.3	48.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.6	1.6	49.7	1.6
Total[8]	2,466.5[6]	1,368.0	0.0	0.0	0.0	40.8	0.0	0.0	0.0	1.3	1.0	5.4	7.9	1,374.7	49.7

Notes:
1. The plant communities are composed of numerous plant species. General plant species observations were completed during the 2004-2008 surveys of the LCRSP study area.
2. Plant communities considered rare or warranting consideration by the CNDDB.
3. SoCalGas holds a 7.5-acre, 100-foot-wide easement for a natural gas line which traverses a portion of Neighborhood I and continues off the project site. The land use planning for the LCRSP study area takes into account this existing easement (which includes a 3.9-acre segment through Neighborhood I and a 3.6-acre segment which extends off the site to the north). There is currently a 16-foot wide maintenance road that runs within and through the easement area. The project proposes no improvements within the utility easement area; however, it is anticipated that SoCalGas, at a future date and independent of the LCRSP project, may undertake improvements to the existing maintenance road, including installing rip-rap and constructing a V-ditch in this easement area to address drainage and erosion issues. Those improvements will be addressed independent of the LCRSP project.
4. Acreage in this column represents the portion of this community that falls within the area previously entitled for development as part of the County-approved LCNPD.
5. Off-site areas include 2.6-acre existing utility road at the downstream end of Neighborhood II, 2.3-acre road under the I-15 Freeway, 3.6-acre segment of the SoCalGas easement (that is connected to the 3.9-acre on-site segment), 10.1-acre area associated with the off-site levee north of Neighborhood II; and 0.6-acre area south of Neighborhood II and north of Neighborhood IV that will be impacted by the construction of the proposed levee.
6. Not included herein is the 0.7 off-site acre area associated with the existing Lytle Creek Road right-of-way which will be impacted as a result of the removal and replacement of storm drain facilities south of Neighborhood IV. Because these improvements will be made within an existing developed area, no biological resource impacts are anticipated.
7. The total impacts to plant communities is identified as 1,374.7 (1,368.0 on-site and 6.7 off-site) acres. This figure differs from the 1,539.3 total acres graded, as identified in the conceptual grading plan. The difference between the two acreage figures is 171.3 acres. That 171.3-acre area is comprised of lands that have been previously disturbed and, therefore, not included in the total area of disturbance herein. Of that, 137.8 acres was previously analyzed and its impacts addressed and mitigated as part of the County-approved LCNPD. Of the remaining areas, the rest was previously disturbed during construction of roads and the SCE easement work within Neighborhoods III and IV.
8. Individual numbers may not add precisely to total number based on rounding.

Source: PCR Services Corporation

Within the approximately 1,374.7-acre area examined herein,[88] direct impacts on non-sensitive and sensitive plant communities are described below.

- **Non-Sensitive Plant Communities**. Project implementation will result in direct impacts to approximately 894.8 (889.9 on-site and 4.9 off-site) acres of non-sensitive plant communities. Temporary impacts to non-sensitive plant communities includes about 8.1 (5.1 on-site and 3.0 off-site) acres which will occur as a result of grading and grubbing activities within the 80-foot temporary construction zones associated with the levee construction. These include the direct removal of: (1) 13.9 (13.5 on-site and 0.4 off-site) acres of permanent and 0.7 off-site acre of temporary impacts to monotypic and mixed RSS; (2) 40.9 (40.6 on-site and 0.3 off-site) acres of permanent impacts to monotypic and mixed California buckwheat scrub; (3) 34.9 on-site acres of permanent impacts to monotypic and mixed California sagebrush-California buckwheat scrub; (4) 187.2 on-site acres of permanent and 0.7 on-site acre of temporary impacts to monotypic and mixed chaparral communities; (5) 1.7 on-site acres of permanent impacts to monotypic and mixed MFS; (6) 119.9 on-site acres of permanent and 3.2 on-site acres of temporary impacts to monotypic and mixed non-native grassland; (7) 9.9 on-site acres of permanent impacts to basin; (8) 47.8 on-site acres of permanent and 0.4 on-site acre of temporary impacts to ruderal associations; (9) 228.8 (225.7 on-site and 3.1 off-site) acres of permanent and 1.5 (0.8 on-site and 0.7 off-site) acres of temporary impacts to disturbed and mixed disturbed communities; (10) 158.6 on-site acres of permanent impacts to golf course; (11) 1.5 on-site acres of permanent impacts to ornamental; and (12) 49.7 (48.6 on-site and 1.1 off-site) acres of permanent and 1.6 off-site acres of temporary impacts to developed land. Included is the removal of about 30.5 acres of habitat where elements of RAFSS are present (9.5 on-site acres of permanent impacts to disturbed/I-RAFSS and 21.0 on-site acres of NNG/I-RAFSS) but where RAFSS is not the dominant community type due to high levels of disturbance (e.g., trash dumping, off-road vehicle use, and invasion by non-native grasses). Further, a portion of these disturbed communities are hydrologically disconnected from the wash by existing levees.

  Project-related losses of non-sensitive plant communities represent: about 0.4 percent of scrub communities, 0.7 percent of chaparral communities, 0.2 percent of riparian communities (including the on-site basins), and 2.0 percent of grassland communities represented in the regional study area. This calculation could not be made for disturbed or ruderal communities due to the difficulty in mapping these communities within the defined regional study area. None of these represent sensitive plant communities and none of these plant communities are considered rare or warranting consideration by the CNDDB. As a result, impacts upon these non-sensitive plant communities would be less than significant and no mitigation is required or recommended.

[88]/ Because the project site is located within an area designated as a VHFHSZ, fuel modification zone activities will likely need to be conducted in proximity to the proposed residential and non-residential development sites located along the urban-wildland interface. If fuel modification zone requirements were to extend beyond the limits of grading, in addition to the direct loss of habitat areas through grading and grubbing operations, the establishment and maintenance of fuel modification zones could result in additional direct impacts attributable to the removal, reduction, and replacement of the existing vegetational types. Biologically, in any additional areas where the fuel modification zone were to extend beyond the limits of grading, the effect of Rialto Fire Department and/or San Bernardino County Fire Department-mandated brush clearance requirements is to expand the area of habitat lost or degradation beyond the boundaries of the grading footprint and into area of on-site and/or off-site open space retention. As proposed, the project's identified fuel modification zone is limited to the grading footprint.

- **Sensitive Plant Communities**. Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the CNDDB's list of California terrestrial natural communities serves as a guide to each community's status.[89] The primary purpose of the CNDDB classification is to assist in the location and determination of significance and rarity of vegetation types. Ranking of natural communities by their rarity and threat is an important facet of their classification. CDFG's "List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database"[90] served as the basis for the identification of rare natural communities within the LCRSP study area.

  Each of the sensitive plant communities identified within the LCRSP study area which will be directly impacted by the proposed project are individually addressed below. As an introductory note, with regards to alluvial fan sage scrub communities, the terminology used in this assessment (pioneer, intermediate, and mature stages of alluvial fan sage scrub) is reflective of the relative habitat diversities, values, and functions present within this natural community. Others (e.g., Smith[91] and Barbour and Wirka[92]) have described more complex and widely distributed systems. The three-stage "paradigm" used herein may, therefore, oversimplify alluvial scrub succession and may differ in successional dynamics depending on the specific drainage under consideration.

  Barbour and Wirka analyzed 106 samples of alluvial scrub in Los Angeles and San Bernardino Counties and differentiated seven "groups" of alluvial scrub with differences among those groups being most highly correlated with geographical location within coastal southern California. As a natural community composed of both plant and animal populations, there is considerable overlap of species among these different groups throughout this region. Some listed endangered, threatened, or otherwise sensitive species of plants and animals are, however, endemic or restricted to only a few of the drainages supporting alluvial scrub in the region (e.g., slender-horned spineflower and SBKR). As addressed herein, those species merit their own independent assessment separate and apart from the broader discussion of RAFSS. Although other approaches may exist, an assessment focusing on habitat values, following a pioneer-intermediate-mature stage or "growth form" was selected as a reasonable method of assessing project-related impacts under CEQA.

  While the "RAFSS" terminology has been consistently used to represent the subject plant community within the LCRSP study area, recent studies[93,94] have commonly applied broader terminology (i.e., alluvial fan sage scrub) in southern California within which specific groups may be designated. It is noted that "Terrestrial Vegetation of

[89]/ California Department of Fish and Game, Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities, December 9, 1983, Revised May 8, 2000, p. vii.

[90]/ *Op. Cit*., List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database, September 2003 Edition, p. 4.

[91]/ *Op. Cit*., Floristic Composition and Diversity of Diegan Alluvial Sage Scrub Vegetation.

[92]/ *Op. Cit*., Classification of Alluvial Scrub in Los Angeles, Riverside, and San Bernardino Counties, Final Contract Report FG5638-R5.

[93]/ *Ibid*.

[94]/ Safford, Joan M. and Quinn, Ronald, Ph.D, Conservation Plan for the Etiwanda-Day Canyon Drainage System Supporting the Rare Natural Community of Alluvial Dan Sage Scrub, March 1, 1988.

California, Third Edition"[95] acknowledges the previous RAFSS classification but describes the difficulty in assigning series (now termed alliances) to communities that experience successional transitions, defining alluvial scrub as a specific type of interior sage scrub or RSS that occurs on alluvial fans and floodplains. In the broader context, it is, therefore, appropriate to shift to the use of alluvial fan sage scrub with the understanding that RAFSS is a subset or type of alluvial fan sage scrub.[96]

◊ **Riversidean alluvial fan scrub communities**. Construction impacts will result in permanent impacts to about 478.0 (476.2 on-site and 1.8 off-site) acres and temporary impacts to about 41.6 (35.7 on-site and 5.9 off-site) acres of RAFSS (where RAFSS is the only or primary community), including: (1) 56.2 (54.6 on-site and 1.6 off-site) acres or permanent and 21.4 (17.2 on-site and 4.2 off-site) acres of temporary impacts to P-RAFSS; (2) 213.2 (213.0 on-site and 0.2 off-site) acres of permanent and 18.1 (16.5 on-site and 1.6 off-site) acres of temporary impacts to I-RAFSS; and (3) 208.6 on-site acres of permanent and 2.1 (2.0 on-site and 0.1 off-site) acres of temporary impacts to M-RAFSS.

Due to the amount of acreage which would be removed, RAFSS' status as a sensitive plant community (considered rare by the CNDDB), riparian nature, and capacity to support suitable habitat for a number of sensitive species, impact on this sensitive natural community would be deemed potentially significant.

In recognition of the designated status of this sensitive plant community, direct permanent impacts to approximately 478.0 (476.2 on-site and 1.8 off-site) acres of direct temporary impacts to about 41.6 (35.7 on-site and 5.9 off-site) acres of RAFSS would be deemed significant and, if avoidance where not possible, compensatory resources would be required to compensate for the loss of not only this plant community but the sensitive wildlife species that this habitat supports. To the extent that avoidance is determined infeasible, in recognition of direct project-related impacts to RAFSS communities, a mitigation measure (Mitigation Measure 5-1) has been formulated to reduce impacts to this sensitive plant community to a less-than-significant level. As indicated therein, impacts to 519.6 acres (478.0 acres of permanent impacts and 41.6 acres of temporary impacts) of RAFSS may be mitigated at a minimum mitigation ratio of 2:1 through the enhancement, restoration, and preservation of 1,039.2 acres of alluvial fan sage scrub vegetation both on and off the project site.[97]

As proposed under the recommended mitigation measure, the provision of these compensatory resources shall be accomplished, in part, through the preservation of 395.4 acres of RAFSS on the project site and the preservation of existing and/or the enhancement, restoration, or creation of AFSS off the project site, on private and/or public lands. A total of 275.0 acres of P-RAFSS, 112.0 acres of I-RAFSS, and 8.4 acres of M-RAFSS (totaling 395.4 acres) would be preserved within the LCRSP study area. As shown in Table 4.5-13 (Proposed Mitigation

[95]/ *Op. Cit.*, Terrestrial Vegetation of California, Third Edition.

[96]/ For purposes of this analysis, the broadest range of AFSS is incorporated because mitigation considering only RAFSS may not be feasible. This is reflected later in the analysis of AFSS potentially available for mitigation throughout the southern California coastal floristic province.

[97]/ This mitigation for RAFSS includes, but is not limited to, 316.2 acres of SBKR habitat to be preserved on the project site and 75 acres of SBKR habitat to be created upstream and downstream of the Cemex USA quarry.

Ratios - Riversidean Alluvial Fan Sage Scrub Mitigation Ratios), the average on-site preservation ratio for all phases of RAFSS combined is 0.8:1.0.[98]

Table 4.5-13
PROPOSED MITIGATION RATIOS
RIVERSIDEAN ALLUVIAL FAN SAGE SCRUB

RAFSS Communities[1]	**Existing Acres within LCRSP Study Area**	**Impacts** (acres)	**Preservation**[2] (acres)	**Mitigation Ratio** (acres)
P-RAFSS	490.0	77.6	275.0	3.50:1
I-RAFSS	406.4	231.3	112.0	0.50:1
M-RAFSS	247.3	210.7	8.4	0.04:1
Total	1,144.7	519.6	395.4	0.80:1

Notes:
1. RAFSS acreages include all plant communities in which this is the only or primary component.
2. Acreage of RAFSS preservation does not include areas within the "SBKR Conservation Area."

Source: PCR Services Corporation

As further proposed, an additional 34.5 on-site acres of chamise chaparral within Neighborhood III will be restored to RAFSS as mitigation for impacts to the SBKR. In addition, the project proposes to restore and manage in perpetuity another 40.0 acres of upland areas to RAFSS within publicly or privately owned conservation areas in close proximity to the LCRSP study area for SBKR refugia. This acreage would apply toward the recommended RAFSS mitigation.

The identified mitigation ratio for impacts to RAFSS reflects recent approaches in the mitigation of impacts to AFSS in the region. For plant communities and habitats that have historically been diminished in the region (e.g., riparian and wetlands) mitigation ratios are typically increased to a minimum of 2:1 due to the elevated importance these restricted resources represent in maintaining biological diversity and sustaining stable biological systems.

As part of this mitigation analysis, a review of available environmental documents that address mitigation for impacts to alluvial fan sage scrub was conducted. In particular, as summarized below in Table 4.5-14 (Alluvial Fan Sage Scrub Mitigation Ratio Research), nine documents provided information important to establishing the context for this assessment. In general, mitigation ratios were lowest in the cases where the documents were prepared ten or more years ago or in the case where impacts were relatively minor in comparison to alluvial fan sage scrub avoided. As shown, the resulting ratios found to be adequate to mitigate impacts to a less-than-significant level ranged from 1:1 to 1.76:1.0. In one case, a recently proposed project with relatively minor impacts to alluvial fan sage scrub suggests mitigation is not necessary due to the small size of impacts, the isolated nature of the habitat, and the lack of hydrology affecting this remnant stand of mature alluvial fan sage scrub.

[98]/ RAFSS can be mitigated on-site at a ratio of 0.8:1.0. Although this preservation is an important and beneficial feature of the proposed project, it represents only partial mitigation and would not reduce impacts to a less than significant level. In order to attempt to fully mitigate impacts to RAFSS, off-site opportunities were examined through a regional inventory of such habitats, their ownerships, and acres of potential off-site acquisition and preservation by the Applicant.

Table 4.5-14
ALLUVIAL FAN SAGE SCRUB MITIGATION RATIO RESEARCH

No.	Project or Document Title (Year)	Author	AFSS Impact (acres)	AFSS Mitigation (acres)	Mitigation Ratio	Significance Determination
1	Final Environmental Impact Report for Glen Helen Regional Park Master Plan Amend. & Sheriff's Training Facility Site Approval, SCH No. 88032102 (1988)	Tom Dodson & Associates	85 acres	150 acres	1.76:1	Less than significant with mitigation
2	CalMat San Bernardino & Cajon Creek properties Consultation Reinitiating and Biological Opinion (1-6-94-F 51R1) (1998)	USFWS	1,126 acres, including 432 acres within 100-year floodplain, 575 acres M-RAFSS outside floodplain, and 119 acres disturbed AFSS outside floodplain	1,575 acres, including 768-acres conservation area, 610-acres Conservation Bank, and 197-acres leased land managed for AFSS	1.4:1	No jeopardy
3	State Route 210 (formerly 30) Improvements Biological Opinion (2004)	USFWS	29.2 acres, including 18.6 acres SBKR-occupied AFSS	112 acres in Cajon Creek Conservation Bank	3.8:1 plus 3:1 beyond 29.2 acres	No jeopardy
4	Glen Helen Specific Plan and Resource Management Plan (2005)	MBA	Not quantifiable; need site-specific data	2,340 acres	Minimum 2:1	-
5	Draft Environmental Impact Report for San Antonio Spreading Grounds Conjunctive Use Project, SCH No. 2005021134 (2005)	EIP Associates	3.7 acres	-	Minimum 1:1 and approved by CDFG	Less than significant with mitigation
6	Tentative Tract Map SUB TT 17651, Planning Commission Resolution No. 06-75, Mitigated Negative Declaration and Mitigation Monitoring Plan (2006)	City of Rancho Cucamonga	-	2.6 acres	1:1	Less than significant with mitigation
7	Final Environmental Impact Statement/Report for the Proposed BNSF Cajon Third Main Track Summit to Keenbrook (2007)	URS	11.1 acres	26.1 acres	2.35:1	-
8	BNSF Cajon Third Main Track Summit to Keenbrook (Final Environmental Impact Report Appendix E) (2007)	URS	-	-	3:1	-
9	Draft Environmental Impact Report for Baseline Road Master Plan, SCH No. 2006011124 (2007)	Lilburn Corp	10 acres of M-RAFSS	None	N/A	Less than significant without mitigation

Source: PCR Services Corporation

In the case of projects where the acreages of impacted alluvial fan sage scrub were somewhat larger, minimum ratios of 2.1:1.0 to 2.35:1.0 were established. In the single case known to impact 100 percent of the alluvial fan sage scrub occupied by the SBKR, the ratio was 3.8:1.0, with a ratio of 3:1 established for any unanticipated impacts. In another case, a ratio of 3:1 was established.

The draft "Economic Analysis of Critical Habitat Designation for San Bernardino Kangaroo Rat"[99] includes numerous references to a 2:1 mitigation ratio as the USFWS-recommended compensation for development impacts to SBKR lowland habitat. Lowland habitat is defined as areas occupied year-round with high densities of individuals but can be considered synonymous with occupied alluvial fan sage scrub within the floodplain.

As proposed, the configuration of the alluvial fan sage scrub habitat to be preserved on the project site will be such that mitigation lands are adjacent to areas, containing this habitat, already under public ownership and/or set aside for conservation in perpetuity. The addition of mitigation lands from the proposed LCRSP to already established conservation areas adjacent to the project's proposed mitigation lands would enhance habitat functions and values to the benefit of the species they support to a greater degree than these lands could provide alone (i.e., if they were not connected biologically to other preserved areas containing similar habitat). A mitigation ratio of 2:1 is, therefore, considered adequate to conserve the contribution RAFSS makes to the biological diversity found in the regional study area and reduce the project's impacts to RAFSS below a level of significance.

As indicated in Mitigation Measure 5-1, an alternative mitigation approach has also been identified, based on a "habitat equivalency analysis" (HEA) which would likewise reduce the project's impacts to RAFSS below a level of significance. Mitigation based on a HEA approach would quantify the habitat functions and values of the RAFSS habitat to be impacted by the proposed project using an objective set of biological metrics calibrated to recognize RAFSS habitat that provides a benchmark of high functions and values. This approach would then require the project to compensate for the losses of those RAFSS habitat functions and values by providing a sufficient quantity of RAFSS habitat as permanent open space and/or producing net gains in the functions and values of preserved RAFSS habitat (i.e., producing an increase in the quality and/or quantity of the ecological services that the RAFSS habitat provides), such that, by applying the same biological metrics, the project can show that it has produced an increase in RAFSS habitat functions and values on a permanent basis equivalent to the functions and values lost as a result of the project.

The Applicant-nominated "project design features" concerning "avoidance features," as identified in the BRA and presented above, is adequately addressed in the above referenced recommended mitigation measure, such that the replication of that or the incorporation of similar language is not specifically required to accomplish that feature's intended purpose with regards to the

[99]/ Berkeley Economic Consulting, Economic Analysis of Critical Habitat Designation for San Bernardino Kangaroo Rat, San Bernardino and Riverside Counties, California, United States Fish and Wildlife Service, February 6, 2008, pp. 2-11 and 3-4.

avoidance or minimization of the project's biological resource impacts on Lytle Creek and its associated RAFSS habitat.

◊ **Southern cottonwood willow riparian communities**. Construction impacts will result in a direct loss of approximately 1.7 on-site acres of southern cottonwood willow riparian communities. This plant community is considered sensitive by the CDFG because it can be classified as a wetland.

One LBV was documented within this community during focused surveys; however, this individual was not observed during consecutive year surveys and is believed to be a transient individual. Further, this plant community is patchy in distribution on the site and is not connected to larger continuous southern willow scrub habitat areas extending beyond the project boundaries. The likelihood of this community supporting breeding habitat for sensitive species is, therefore, considered to be minimal.

Direct impacts to approximately 1.7 on-site acres of southern cottonwood willow riparian communities would be deemed significant and, if avoidance where not possible, compensatory resources would be required to compensate for the loss of not only this plant community but the sensitive wildlife species that this habitat supports. To the extent that avoidance is determined to be infeasible, in recognition of direct project-related impacts to approximately 1.7 acres of southern cottonwood willow riparian communities, a mitigation measure (Mitigation Measure 5-2) has been formulated to reduce impacts to this sensitive plant community to a less-than-significant level.

◊ **California sycamore alliance**. Construction impacts will result in a direct loss of about 0.2 on-site acre of California sycamore alliance within the eastern portion of Neighborhood I. This small patch of sycamore trees is relatively isolated and is not part of a larger riparian community. Within the LCRSP study area, this vegetation association does not function as a true riparian community and is not likely to support sensitive species. The project's impact on California sycamore alliance is, therefore, not deemed significant and mitigation is not warranted.

Environmental Impact 5-2*. Common Plant Species. Project implementation would result in the direct removal of numerous native and non-native common plant species.*

Preliminary Determination 5-2*. Less-than-significant impact.*

Population losses for common plants are proportional to the losses of those plant communities in which they occur within the region. Because these plant species are common and have no local, State, or federal protected status, reductions in the number of non-sensitive communities and the common species found therein would constitute a less-than-significant impact.

Environmental Impact 5-3*. Common Wildlife Species. In the short-term, project implementation would result in direct removal of wildlife habitat and the potential mortality of common wildlife species existing within the area of disturbance. Long-term indirect impacts include increased human-related disruption (such as an increase in nighttime lighting, noise, road kills, and the presence of domestic pets) which may result in additional mortality of native wildlife species.*

Preliminary Determination 5-3*. Less-than-significant impact.*

The removal of existing undisturbed habitat areas will result in the loss of small mammals, reptiles, and other animals, especially those inhabiting subterranean burrows and of slow mobility that live within the impacted areas. Surviving mobile wildlife species now using those areas would be forced to move into remaining on-site and off-site open space habitat areas, thus increasing competition for available resources. This situation could result in the further loss of those individuals that cannot successfully compete.

The potential mortality of small animals has several consequences, including: (1) reduced prey base for larger predators; (2) increased pressure on surviving populations in the adjacent open space areas to absorb individuals that seek to escape mortality; (3) decline in genetic diversity; and (4) reduced number of individuals available to recolonize affected areas following site disturbance. Since these impacts would not reduce general wildlife populations below self-sustaining levels, impacts to common wildlife species are deemed less than significant and no mitigation measures are required or recommenced.

Environmental Impact 5-4*. The proposed project will permanently impact approximately 43,741 (42,709 on-site and 1,032 off-site) linear feet and 58.02 (57.42 on-site and 0.60 off-site) acres of USACE non-wetland waters. In addition, the proposed project will permanently impact 60,894 (59,086 on-site and 1,808 off-site) linear feet and 93.98 (92.76 on-site and 1.22 off-site) acres of CDFG streambed (2.38 on-site acres consists of vegetated riparian habitat). The proposed project will temporarily impact approximately 8,852 (8,577 on-site and 275 off-site) linear feet and 26.73 (24.33 on-site and 2.40 off-site) acres of USACE non-wetland waters. In addition, the proposed project will temporarily impact 9,981 (9,706 on-site and 275 off-site) linear feet and 32.00 (27.73 on-site and 4.27 off-site) acres of CDFG streambed. Impacts may result in substantial changes to the bed, channel, and/or bank of jurisdictional waters.*

Preliminary Determination 5-4*. Potentially significant unless mitigation incorporated.*[100]

Project implementation will result in direct impacts to federally and State-administered jurisdictional waters. Some of those impacts will be temporary[101] and limited to the construction term, while others constitute the proposed conversion of WoUS and WoS from a natural to an urban function. As a result, the proposed project will require one or more Section 404 (CWA) permits from the USACE, Section 401 (CWA) water quality certifications or waivers from SARWQCB, one or more Section 1602 (CFGC) streambed alteration agreements from the

[100]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) have a substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS; (2) have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means; (3) result in a violation of any applicable State or federal laws prohibiting the elimination or net reduction in a site's or an area's biological value through either direct removal of sensitive or protected on-site or near-site biological resources or through the direct or indirect disruption or interference with those resources whose impact is not substantially offset through the avoidance of such impacts or through the provision of substitute resources or environs or other measures providing reasonable and relatively equivalent compensation for such impacts; and (4) substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake subject to the jurisdiction of the CDFG except through prior notification and authorization of that agency.

[101]/ According to the USACE definition, "temporary impacts" are waters that can be restored to pre-project contours and elevations after the completion of construction.

CDFG, and will likely include a requirement to submit a "biological assessment"[102] (50 CFR 402.12) and to process a "conference opinion" (50 CFR 402.10) with the USFWS.

Permanent impacts to USACE jurisdiction within the jurisdictional delineation study area[103] totals about 58.02 acres (none of which consist of jurisdictional wetlands)[104]. Of these 58.02 acres, 57.42 acres are within the LCRSP boundaries, including approximately 0.99 acre within Neighborhood I, 10.30 acres within Neighborhood II, 25.12 acres (3.71 acres of which are within remnant basin feature) within Neighborhood III, and 21.01 acres within Neighborhood IV. Of these 58.02 acres, approximately 0.60 acres (none of which consists of jurisdictional wetlands) are within the off-site levee improvement area north of Neighborhood II.

None of the approximately 26.73 acres of temporary impacts to USACE jurisdiction within the jurisdictional delineation study area consist of jurisdictional wetlands. Of these 26.73 acres, approximately 24.33 acres are within the LCRSP boundaries, including 1.97 acres within Neighborhood I, 8.80 acres within Neighborhood II, 10.02 acres within Neighborhood III, and 3.54 acres within Neighborhood IV. Of these 26.73 acres, 2.05 acres are within the off-site levee improvement area north of Neighborhood II and 0.35 acres are within the levee improvement area northwest of Neighborhood IV.

Permanent impacts to USACE jurisdiction within the jurisdictional delineation study area total approximately 43,741 feet. Of these 43,741 linear feet, approximately 42,709 linear feet are within the LCRSP boundaries and the remaining 1,032 linear feet are located off the site. Temporary impacts to USACE jurisdiction total approximately 8,852 feet. Of these 8,852 linear feet, approximately 8,577 linear feet are within the LCRSP boundaries and the remaining 275 linear feet are located off the site.

Project-related permanent and temporary impacts to USACE jurisdiction are summarized in Table 4.5-15 (Permanent Impacts to On-Site United States Army Corps of Engineers Jurisdiction), Table 4.5-16 (Permanent Impacts to Off-Site United States Army Corps of Engineers Jurisdiction), Table 4.5-17 (Temporary Impacts to On-Site United States Army Corps

[102]/ The USFWS defines a "biological assessment" (BA) as "the information prepared by or under the direction of the federal agency concerning listed and proposed species and designated and proposed critical habitat that may be present in the action area and the evaluation of the potential effects of the action on such species and habitat." The BA is prepared in accordance with Section 7(a)(2) of the FESA (16 U.S.C 1536[c]). In addition, each federal agency shall confer with the USFWS on any action which is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat. The conference is designed to assist the federal agency and any applicant in identifying and resolving potential conflicts at an early stage in the planning process (50 CFR 402.10[a]).

[103]/ The "jurisdictional delineation study area" (2,467.2 acres) includes both the 2,447.3-acre project site and the additional off-site acreage (totaling 19.9 acres). For purposes of the delineation, however, the jurisdictional delineation study area recognizes that a 137.8-acre portion was previously addressed as part of the LCNPD (Tract 15900). Approximately 46.0 of those 137.8 acres were found to contain some jurisdictional areas. All jurisdictional impacts to those 46.0 acres have already been completed, the required mitigation implemented, and no additional impacts are proposed under the LCRSP. As for the remaining 91.8 acres, they were found not to contain either State of federal jurisdictional waters.

[104]/ USACE jurisdiction has been determined to be present within Lytle Creek, along with its associated tributaries and remnant basin features, ephemeral drainages and tributaries east of the I-15 Freeway, and blue-line ephemeral drainages and tributaries to the west of the I-15 Freeway. These features are USACE jurisdictional waters because they exhibit an OHWM with one or more of the following indicators of stream flow: destruction of terrestrial vegetation, shelving, change in soil characteristics, debris racks, and/or visible water marks. However, there were also several areas which are not subject to USACE jurisdiction because these areas lack the presence of an OHWM under normal circumstances. These non-jurisdictional areas consist of high terraces, elevated islands, and/or elevated berms located within and adjacent to Lytle Creek.

of Engineers Jurisdiction), and Table 4.5-18 (Temporary Impacts to Off-Site United States Army Corps of Engineers Jurisdiction).

Table 4.5-15
PERMANENT IMPACT TO ON-SITE
UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

Neighborhood (On-Site Area)	Jurisdictional Waters (acres)	Jurisdictional Wetlands (acres)	Remnant Basin Features (acres)	Total Impacts (acres)	Total Linear Feet
I	0.99	0.00	0.00	0.99	13,630
I (SoCalGas Easement)[1]	0.00	0.00	0.00	0.00	0
II	10.30	0.00	0.00	10.30	4,490
III	21.41	0.00	3.71	25.12	13,363
IV	21.01	0.00	0.00	21.01	11,226
Total	53.71	0.00	3.71	57.42	42,709

Notes:
1. The proposed LCRSP does not propose any disturbance to this area.

Source: Glenn Lukos Associates

Table 4.5-16
PERMANENT IMPACT TO OFF-SITE
UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTIONAL

Neighborhood (Off-Site Area)	Jurisdictional Water (acres)	Jurisdictional Wetlands (acres)	Total Impacts (acres)	Total Linear Feet
I (SoCalGas Easement)[1]	0.00	0.00	0.00	0.00
II (Levee Construction)	0.60	0.00	0.60	1,032
II (Utility Road)	0.00	0.00	0.00	0.00
III (Road under I-15)	0.00	0.00	0.00	0.00
IV (Temporary Impact Area)	0.60	0.00	0.00	0.00
Total	0.60	0.00	0.60	1,032

Notes:
1. The proposed LCRSP does not propose any disturbance to this area.

Source: Glenn Lukos Associates

Lytle Creek, the ephemeral drainages and tributaries to the east of the I-15 Freeway, and the blue-line ephemeral drainages and tributaries to the west of the I-15 Freeway would be considered non-RPWs that exhibit a "significant nexus" to a TNW (the Pacific Ocean). As such, all on-site areas exhibiting an OHWM would be subject to USACE jurisdiction in accordance with the guidance provided by the USACE relative to Rapanos.[105]

[105]/ In the guidance, the agencies offer three categories: (1) certain types of waters over which they "will assert jurisdiction" (traditional navigable waters, wetlands adjacent to such waters, relatively permanent non-navigable tributaries of such waters, and wetlands directly abutting such tributaries); (2) other types of waters for which they will consider on a case-by-case bases whether they have a "significant nexus" with a traditional navigable water; and (3) isolated waters, which may have an interstate commerce connection other than migratory birds. The USACE also noted that other "features" over which they "generally will not assert jurisdiction" include areas such as gullies, erosional features, and ditches excavated in and draining uplands.

Table 4.5-17
TEMPORARY IMPACTS TO ON-SITE
UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

Neighborhood (On-Site Area)	Jurisdictional Waters (acres)	Jurisdictional Wetlands (acres)	Remnant Basin Features (acres)	Total Impacts (acres)	Total Linear Feet
I	1.97	0.00	0.00	1.97	1,755
I (SoCalGas Easement)[1]	0.00	0.00	0.00	0.00	0
II	8.80	0.00	0.00	8.80	1,360
III	10.02	0.00	0.00	10.02	3,890
IV	3.54	0.00	0.00	3.54	1,572
Total	24.33	0.00	0.00	24.33	8,577

Notes:
1. The proposed LCRSP does not propose any disturbance to this area.

Source: Glenn Lukos Associates

Table 4.5-18
TEMPORARY IMPACTS TO OFF-SITE
UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

Neighborhood (Off-Site Area)	Jurisdictional Waters (acres)	Jurisdictional Wetlands (acres)	Remnant Basin Features (acres)	Total Impacts (acres)	Total Linear Feet
I (SoCalGas Easement)[1]	0.00	0.00	0.00	0.00	0
II (Levee Construction)	2.05	0.00	0.00	2.05	-[2]
II (Utility Road)	0.00	0.00	0.00	0.00	0
III (Road under I-15)	0.00	0.00	0.00	0.00	0
IV (Temporary Impact Area)	0.35	0.00	0.00	0.35	275
Total	2.40	0.00	0.00	2.40	275

Notes:
1. The proposed LCRSP does not propose any disturbance to this area].
2. The temporary impacts to USACE streambed for the off-site levee improvement area adjacent to Neighborhood II are included in the permanent total for the off-site portion of Neighborhood II.

Source: Glenn Lukos Associates

Permanent impacts to CDFG jurisdiction within the jurisdictional delineation study area total about 93.98 acres (2.38 acres consist of vegetated riparian habitat). Of these 93.98 acres, approximately 92.76 acres (2.38 acres consist of vegetated riparian habitat) are within the LCRSP boundaries, including 2.63 acres (1.73 acres consist of riparian habitat) within Neighborhood I, 20.90 acres (7.19 acres within unvegetated infiltration pond/remnant basin and 0.32 acre within vegetated riparian habitat of the infiltration pond/remnant basin) within Neighborhood II, 32.93 acres (3.71 acres within unvegetated infiltration pond/remnant basin and 0.33 acre within vegetated riparian habitat of the infiltration pond/remnant basin) within Neighborhood III, and 36.30 acres within Neighborhood IV. Of these 93.98 acres, about 1.22 acres (none of which consist of vegetated riparian habitat) are within the off-site levee improvement area north of Neighborhood II.

Temporary impacts to CDFG jurisdiction within the jurisdictional delineation study area total approximately 32.0 acres, none of which consist of vegetated riparian habitat. Of these 32.0 acres, approximately 27.73 acres are within the LCRSP boundaries, including 1.97 acre within Neighborhood I, 9.13 acres within Neighborhood II, 10.78 acres within Neighborhood III, and 5.85 acres within Neighborhood IV. Of these 32.0 acres, about 4.27 acres are located off the site, including 3.92 acres within the levee improvement north of Neighborhood II and 0.35 acre within the levee improvement northwest of Neighborhood IV.

Permanent impacts to CDFG streambed within the jurisdictional delineation study area total approximately 60,894 linear feet. Of these 60,894 linear feet, approximately 59,086 linear feet are within the LCRSP boundaries and the remaining 1,808 linear feet are located off the site. Temporary impacts to CDFG streambed total approximately 9,981 linear feet. Of these 9,981 linear feet, approximately 9,706 linear feet are within the LCRSP boundaries and the remaining 275 linear feet are located off the site.

Project-related permanent and temporary impacts to CDFG jurisdiction are summarized in Table 4.5-19 (Permanent Impacts to On-Site California Department of Fish and Game Jurisdiction), Table 4.5-20 (Permanent Impacts to Off-Site California Department of Fish and Game Jurisdiction), Table 4.5-21 (Temporary Impacts to On-Site California Department of Fish and Game Jurisdiction), and Table 4.5-22 (Temporary Impacts to Off-Site California Department of Fish and Game Jurisdiction).

Table 4.5-19
PERMANENT IMPACT TO ON-SITE
CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTION

Neighborhood (On-Site Area)	**Unvegetated Streambed** (acres)	**Vegetated Riparian Habitat** (acres)	**Unvegetated Infiltration Pond and/or Remnant Basin Features** (acres)	**Infiltration Pond and/or Remnant Basin Features Riparian Habitat** (acres)	**Total Impacts** (acres)	**Total Linear Feet**
I	0.90	1.73	0.00	0.00	2.63	13,630
I (SoCalGas Easement)[1]	0.00	0.00	0.00	0.00	0.00	0
II	13.39	0.00	7.19	0.32	20.90	9,390
III	28.89	0.00	3.71	0.33	32.93	19,161
IV	36.30	0.00	0.00	0.00	36.30	16,905
Total	79.48	1.73	10.90	0.65	92.76	59,086

Notes:
1. The proposed LCRSP does not propose any disturbance to this area.

Source: Glenn Lukos Associates

RWQCB jurisdiction within the jurisdictional delineation study area includes all areas within USACE jurisdiction as described above. Additionally, an infiltration pond system and one small drainage feature associated with the infiltration pond system, totaling approximately 7.19 acres adjacent to Lytle Creek in Neighborhood II, are isolated and are not, therefore, subject to regulation pursuant to Section 401 or 404 of the CWA. The SARWQCB may, however, elect to exert jurisdiction, pursuant to Section 13260 of the California Water Code (Porter-Cologne Act), over isolated waters and specify WDRs for the proposed project.

Table 4.5-20
PERMANENT IMPACT TO OFF-SITE
CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTION

Neighborhood (Off-Site Area)	Unvegetated Streambed (acres)	Vegetated Riparian Habitat (acres)	Unvegetated Infiltration Pond and/or Remnant Basin Features (acres)	Infiltration Pond and/or Remnant Basin Features Riparian Habitat (acres)	Total Impacts (acres)	Total Linear Feet
I (SoCalGas Easement)[1]	0.00	0.00	0.00	0.00	0.00	0
II (Levee Construction)	1.22	0.00	0.00	0.00	1.22	1,808
II (Utility Road)	0.00	0.00	0.00	0.00	0.00	0
III (Road under I-15)	0.00	0.00	0.00	0.00	0.00	0
IV (Temp. Impact Area)	1.22	0.00	0.00	0.00	1.22	1,808
Total	0.00	0.00	0.00	0.00	0.00	0

Notes:
1. The proposed LCRSP does not propose any disturbance to this area.

Source: Glenn Lukos Associates

Table 4.5-21
TEMPORARY IMPACT TO ON-SITE
CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTION

Neighborhood (On-Site Area)	Unvegetated Streambed (acres)	Vegetated Riparian Habitat (acres)	Unvegetated Infiltration Pond and/or Remnant Basin Features (acres)	Infiltration Pond and/or Remnant Basin Features Riparian Habitat (acres)	Total Impacts (acres)	Total Linear Feet
I	1.97	0.00	0.00	0.00	1.97	1,755
I (SoCalGas Easement)[1]	0.00	0.00	0.00	0.00	0.00	0
II	9.13	0.00	0.00	0.00	9.13	1,360
III	10.78	0.00	0.00	0.00	10.78	4,018
IV	5.85	0.00	0.00	0.00	5.85	2,573
Total	27.73	0.00	0.00	0.00	27.73	9,706

Notes:
1. The proposed LCRSP does not propose any disturbance to this area.

Source: Glenn Lukos Associates

Figure 4.5-12 (Jurisdictional Delineation Map - Neighborhood I), Figure 4.5-13 (Jurisdictional Delineation Map - Neighborhood II and Associated Off-Site Areas), Figure 4.5-14 (Jurisdictional Delineation Map - Neighborhood III), and Figure 4.5-15 (Jurisdictional Delineation Map - Neighborhood IV) illustrate the impacts to USACE and CDFG jurisdictions within the jurisdictional delineation study area.

A mitigation measure (Mitigation Measure 5-3) has been formulated to ensure both compliance with the provisions of Sections 401-404 of the CWA and Sections 1600-1616 of the CFGC and the provision of compensatory habitat areas. Implementation of the recommended mitigation measure would reduce potentially significant impacts to a less-than-significant level.

Table 4.5-22
TEMPORARY IMPACT TO OFF-SITE
CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTION

Neighborhood (Off-Site Area)	Unvegetated Streambed (acres)	Vegetated Riparian Habitat (acres)	Unvegetated Infiltration Pond and/or Remnant Basin Features (acres)	Infiltration Pond and/or Remnant Basin Features Riparian Habitat (acres)	Total Impacts (acres)	Total Linear Feet
I (SoCalGas Easement)[1]	0.00	0.00	0.00	0.00	0.00	0
II (Levee Construction)	3.92	0.00	0.00	0.00	3.92	-[2]
II (Utility Road)	0.00	0.00	0.00	0.00	0.00	0
III (Road under I-15)	0.00	0.00	0.00	0.00	0.00	0
IV (Temp. Impact Area)	0.35	0.00	0.00	0.00	0.35	275
Total	4.27	0.00	0.00	0.00	4.27	275

Notes:
1. The proposed LCRSP does not propose any disturbance to this area.
2. Temporary impacts to CDFG streambed for the off-site levee improvement area adjacent to Neighborhood II are included in the permanent total for the off-site portion of Neighborhood II.

Source: Glenn Lukos Associates

***Environmental Impact 5-5**. Project implementation has the potential to impede existing wildlife movement patterns across the project site, resulting in a potential fragmentation of habitat areas upon and surrounding the project site.*

***Preliminary Determination 5-5**. Less-than-significant impact.*

The largest existing proximal off-site open space reserves that involve wildlife movement and exchanges are those associated with connectivity between the San Gabriel and San Bernardino Mountains (generally through the SBNF) and between the San Gabriel and San Bernardino Mountains and the Santa Ana River system (generally through Lytle and Cajon Creeks).

From a regional perspective, significant regional movement throughout Lytle Creek is already impeded by the presence of the I-15 Freeway, the recently completed improvement to Glen Helen Parkway, and downstream channelization and urbanization. However, based on the presence of the I-15 Freeway bridge and underpass on the western end of the LCRSP study area, wildlife movement is likely to occur regularly between the SBNF and open space areas near the confluence of Lytle and Cajon Creeks via those portions of Lytle Creek that are located in the LCRSP study area. The proposed project would preserve a substantial portion of this existing wildlife movement corridor within the LCRSP study area as open space.

The majority of the project's construction-related impacts would occur within the upland benches adjacent to but outside of the Lytle Creek floodway. Wildlife movement through and along Lytle Creek may, to a limited degree, be constricted by the presence of active mining operations within the Cemex USA quarry. Although levee improvements and the construction of abutting residential and non-residential uses may further constrict this existing corridor, development of the upland terraces would not be expected to significantly affect movement through the retained open wash. The elimination of wildlife habitat in the adjacent terraces would, however, reduce habitat areas now used for cover, particularly by larger species (such as mule deer). The

resulting reduction in native habitats would be an adverse impact on wildlife movement patterns and would result in the displacement of wildlife to nearby open space areas.

As proposed and as illustrated in Figure 4.5-25 (Areawide Proposed and Dedicated Open Space), the preservation of the natural functions of Lytle Creek, the retention of islands of habitat scattered throughout Lytle Creek (such as the "SBKR Conservation Area") that provide opportunities for cover for wildlife, the presence of Vulcan Materials Company's Cajon Creek HCMA, and the existing mitigation areas located to the north of Neighborhood II will contribute to the retention of a viable wildlife movement corridor and refuge through the LCRSP study area. With these adjacent mitigation areas, the proposed conservation area within Lytle Creek Wash is approximately 1,200-feet wide at its narrowest point (I-15 Freeway underpass). As a result, existing physical linkages will generally be retained. The proposed project, therefore, will not substantially impede opportunities for wildlife movement. Direct impacts to wildlife movement are deemed adverse but less than significant.

In addition to direct effects, other indirect impacts to wildlife movement associated with proximity to human habitat may result from the proposed project. Edge effects (such as increased lighting, noise, and domestic pets) are not, however, anticipated to substantially reduce the functions and values of the existing wildlife movement corridor through the open wash. Due to the width of the proposed conservation area within Lytle Creek Wash, indirect effects associated with the site's development are likely to dissipate over this distance (i.e., would be greatest in proximal to the edge of the interface between the retained open space and the proposed development and would diminish as the separation distance increases). Indirect impacts to wildlife movement are, therefore, deemed adverse but less that significant.

> ***Environmental Impact 5-6****. Sensitive Plant Species and CNPS List 3 and List 4 Plant Species. Construction will result in the loss of an unknown number of Plummer's Mariposa lily (CNPS List 1B.1 species) and an unknown number of Parry's spineflower (CNPS List 1B.1 species). In addition, construction will result in the loss of one southern California black walnut (CNPS List 4.2 species).*
>
> ***Preliminary Determination 5-6****. Less-than-significant impact.*

Sensitive plant species observed within the LCRSP study area consist of Plummer's Mariposa lily (CNPS List 1B.2 species) and Parry's spineflower (CNS List 1B.1 species). Although slender-horned spineflower was documented in the LCRSP study area in 1994, the species was not observed during surveys conducted between 2004 and 2008.[106] CNPS List 3 and List 4 plant species observed within the LCRSP study area consist of southern California black walnut (CNPS List 4.2 species). In addition, three populations of woollystar (*Eriastrum densifolium*), containing about 1,300 plants, were documented in the southeastern end of the LCRSP study area in 1994. Project-specific focused surveys for the woollystar concluded that the woollystar present within the LCRSP study area most closely resembles the subspecies *elongatum* and

[106]/ Many of the various plant and wildlife surveys noted above were not conducted every year from 2004 through 2008. The average number of consecutive survey years during that period for any one species was three years. For certain species (e.g., Plummer's mariposa lily, slender-horned spineflower, woollystar, SBKR, and CAGN), PCR biologists concluded that surveys every year from 2004 through 2008 were not necessary for one or more of the following reasons: (1) previous consecutive years surveys were repeatedly negative and therefore, the target species was concluded to be absent; (2) focused surveys (i.e., plants) were completed under optimal environmental conditions where presence would have been captured, if present; (3) external sources, such as the wildlife agencies, determined the potential for the species to be present in the vicinity not likely; and (4) multiple years of wildlife trapping bouts allowed the researcher to accurately identified all occupied habitat.

not the State and federally-listed endangered subspecies (*Eriastrum densifolium* ssp. *sanctorum*). Each of these plant species are separately discussed below.

- **Woollystar**. In 2006, PCR biologists conducted a sampling effort of corolla lengths which determined that the woollystar within the LCRSP study area most closely resembles the subspecies *elongatum*. PCR's 2006 analysis, which included peer-review by Dr. Mark Brunell, indicated that the LCRSP study area does not support the endangered subspecies (*Eriastrum densifolium* ssp. *sanctorum*). Additionally, under the USFWS' and National Oceanic and Atmospheric Administration's (NOAA) proposed rule on hybridization (61 FR 4709 [February 7, 1996]), the LCRSP study area's population would not be considered part of the listed taxon.

  Although the endangered subspecies is known to occur within the Santa Ana River, as reported by the CNDDB, its nearest known occurrence is at least five miles downstream of its confluence with Lytle Creek. Because seed dispersal is such that seeds fall within the immediate vicinity of the parent plant, thus limiting the dispersal, it would be highly unlikely that this subspecies could disperse several miles upstream to colonize the LCRSP study area in the future. Since the State and federally-listed subspecies (Santa Ana woollystar) is not known to be present within the LCRSP study area, impacts to the LCRSP study area populations of woollystar would be less than significant and no mitigation is required or recommended.

- **Slender-horned spineflower**. The slender-horned spineflower was observed within the LCRSP study area in 1994; however, it was not found during survey efforts in 2004, 2005, 2006, and 2007.[107] Recent survey years received varying amounts of rainfall that captured a range of precipitation conditions for this species while confirmation of blooming was made at a known reference site. As a result, this species is no longer believed to occur within the LCRSP study area. In the absence of any observed species, despite diligent multi-year efforts, impacts to slender-horned spineflower would be less than significant and no mitigation is required or recommended.

- **Plummer's Mariposa lily**. As illustrated in Figure 4.5-26 (Impacts to Plummer's Mariposa Lily Locations), assuming current population levels remain generally consistent with those observed in 2005 and verified in 2006, the proposed project would directly impact about 88 out of 127,295 individual Plummer's Mariposa lilies. This impact represents a project-induced loss of less than one percent of the estimated number of Plummer's Mariposa lily anticipated to occur within the LCRSP study area. The loss of 88 Plummer's mariposa lily within the LCRSP study area is not expected to cause the population to drop below self-perpetuating levels. Impacts to this species are deemed adverse but less than significant and no mitigation is required or recommended.

- **Parry's spinefloweR**. As illustrated in Figure 4.5-27 (Impacts to Parry's Spineflower Locations), about 35,280 of the 501,280 individual plants documented in the LCRSP study area will be directly impacted by the proposed project, representing about seven percent of the population mapped within the LCRSP study area. In 1994, a total of 440,000 plants were documented as occurring in 13 populations covering about 162 acres within the LCRSP study area. These 162 acres lie partly within an area set aside as conservation open space fro the LCNPD and partly within the proposed habitat mitigation area proposed for conservation open space under the proposed LCRSP.

[107] / *Ibid*.

The loss of about seven percent of Parry's spineflower within the LCRSP study area is not expected to cause the population to drop below self-perpetuating levels. Impacts to this species are deemed adverse but less than significant and no mitigation is required or recommended.

- **Southern California black walnut**. One individual southern California black walnut tree will be impacted by the proposed project. The loss of one individual of this CNPS List 4.2 species will not threaten regional populations and would not result in a substantial adverse effect on a sensitive species. Impacts to this species are, therefore, deemed adverse but less than significant and no mitigation is required or recommended.

Except in the context of sensitive plant communities in which they reside, project-related impacts to sensitive plant species will not elevate to a level of significant and no mitigation is required or recommended.

Environmental Impact 5-7*. Sensitive Wildlife Species. Numerous sensitive wildlife species have been observed within the LCRSP study area or have the potential to occur therein. Project development, through direct loss or fragmentation of existing habitat and through the introduction of indirect exogenous effects, will reduce existing sensitive species populations and impact the existing biodiversity of the LCRSP study area.*

Preliminary Determination 5-7*. Potentially significant unless mitigation incorporated.*[108]

In order to determine the significance of direct impacts to observed or potentially occurring sensitive wildlife species from loss of habitat as a result of the proposed project, an analysis was conducted to estimate the amount of potentially suitable habitat that currently occurs within the southwestern San Bernardino County region and the amount of habitat that would be lost as a result of the proposed project. As illustrated in Figure 4.5-6 (Regional Impact Analysis Study Area), the region used in this analysis is bordered by Haven Avenue on the west, the lower elevation slopes of the mountains leading into the Angeles National Forest and SBNF on the north, and south and east to and including the Jurupa Mountains and the Santa Ana River.

The criteria used to determine the suitable available habitat for the sensitive wildlife species observed or potentially occurring within the LCRSP study area included: (1) historic locations; (2) presence of habitat known to support the species using current locations and range; and (3) interpretation of vegetation types in aerial photographs to determine suitable habitat. As summarized in Table 4.5-1 (Regional Inventory of General Habitat Types), suitable habitat was divided into four general habitat types including scrub, chaparral, grassland, and riparian.

Although not offered as the sole determinant of the assessment of the proposed project's potential impacts on those sensitive wildlife species examined herein, knowledge of the proposed project's potential impacts on regionally available suitable habitat for those species

[108]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS; (2) result in a violation of any applicable regulations promulgated by a State or federal resource agency for the protection of rare, threatened, endangered, or otherwise protected species and their habitats, including wetlands; and (3) have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal species or eliminate important examples of the major periods of California history or prehistory.

allows localized effects to be examined from a wider perspective to provide a more accurate analysis under CEQA. The percent loss of regionally suitable habitat for sensitive wildlife species resulting from the proposed project was addressed through mapping of both historic and current occurrences and mapped areas of habitat for these species on aerial photographs. Habitat (scrub, chaparral, grassland, and riparian) mapping was hand-drawn and subsequently converted to GIS to determine acreage. Plant communities mapped within the LCRSP study area were grouped into the four habitat types consistent with the regional analysis to determine impacts to each habitat type within the project's study area. Table 4.5-23 (Regional Analysis of Impacts to Suitable Habitat for Sensitive Wildlife Species Observed or Expected within Biological Cumulative Impact Study Area) categories habitat dependency for each sensitive species, identifies the availability of each suitable habitat type within the region, identifies the number of acres of each habitat type directly impacted by the proposed project, and determines the proposed project's percent impact of each available suitable habitat.

The SBKR and LAPM have not been included in Table 4.5-23 (Regional Analysis of Impacts to Suitable Habitat for Sensitive Wildlife Species Observed or Expected within Biological Cumulative Impact Study Area). With regards to those species, based upon trapping results, the actual area of occupied habitat within the LCRSP study area has been mapped and this site-specific information used in the assessments for those species.

A listing of sensitive wildlife species occurring or potentially occurring within the LCRSP study area are presented in Table 4.5-4 (Sensitive Wildlife Species within the LCRSP Study Area). Presented below are separate assessments of potential project-related impacts on fish, amphibians, reptiles, birds, and mammals.[109]

- **Fish**. The potential presence of the Santa Ana sucker, Santa Ana speckled dace, and arroyo chub within the LCRSP study area was assessed. The Santa Ana speckled dace and the Santa Ana sucker are not expected to occur within the LCRSP study area due to the lack of perennial water flow in this reach of Lytle Creek.[110] With regards to the arroyo chub, the CDFG reports that this species is "absent from much of their native range and are abundant only in the upper Santa Margarita River and its tributary De Luz Creek, Trabuco Creek below O'Neill Park and San Juan Creek (San Juan Creek drainage), Malibu Creek and the West Fork of the upper San Gabriel River below Cogswell Reservoir as of 1991. They also occur, but are scarce in Big Tujunga Canyon, Pacoima Creek above Pacoima Reservoir, and in the Sepulveda Flood Control Basin, Los Angeles River drainage, and middle Santa Ana River tributaries between Riverside and the Orange County line."[111]

  Although no sensitive fish species are expected to occur within the LCRSP study area due to the lack of suitable habitat, indirect impacts to the Santa Ana sucker, Santa Ana speckled dace, and arroyo chub potentially occurring off the site within Lytle Creek and the Santa Ana River were assessed.

[109]/ The acreages of habitats, both existing and impacted, for sensitive species includes all plant associations having components of the preferred habitat of the subject species (e.g., RSS/NNG would be included in the scrub calculations).

[110]/ With regards to the Santa Ana speckled dace, the nearest location in the CNDDB is 3.5 miles northwest from the LCRSR study area within the upper reaches of Lytle Creek and was last observed in 1996. With regards to the Santa Ana sucker, the nearest location in the CNDDB is 6 miles southeast from the LCRSP study area in the Santa Ana River and was last observed in 1998.

[111]/ Moyle, Peter B., Yoshiyama, Ronald M., Williams, Jack E., and Wikramanayake, Eric D., Fish Species of Special Concern in California, Second Edition, California Department of Fish and Game, June 1995, p. 151.

The proposed project will not impact perennial water flow within the main channel of Lytle Creek and no hydro-geomorphic effects on the main channel are anticipated that would effect the potential movement of these species through the area. As a result, the proposed project is not anticipated to have a significant impact on fish species and/or their habitats and no mitigation is required or recommended.

- **Amphibians**. Although no sensitive amphibian species were observed, there is a low potential for the western spadefoot (CSC species) to utilize suitable habitat (grassland) within the LCRSP study area. Suitable habitat (grassland) for this species is limited in the LCRSP study area (354.7 acres) and, should this species occur, would support a relatively small population.

  The proposed project will permanently impact about 218.9 acres and will temporarily impact about 5.5 acres of suitable habitat within the LCRSP study area or about four percent of suitable habitat with the regional study area. The potential for the western spadefoot to occur within the LCRSP study area is low and, as reflected regionally, would not be expected to occur throughout the LCRSP study area's existing grassland habitat. The loss of individuals of the western spadefoot species would not threaten the survival of regional populations of this species. Project-related impacts to this species and to the species' potentially suitable habitat would be adverse but less than significant and no mitigation is required or recommended.

- **Reptiles**. One sensitive reptile, the coast (San Diego) horned lizard, was observed within the LCRSP study area. Other sensitive reptile species with the potential to occur within the LCRSP study area include orange-throated whiptail, silvery legless lizard, and coast patch-nosed snake. Each of these species is separately discussed below.

  - ◊ **Coast (San Diego) horned lizard**. Suitable habitat (scrub) for the coast (San Diego) horned lizard in the LCRSP study area comprises about 1,362.3 acres The proposed project will permanently impact approximately 645.9 acres and temporarily impact 42.3 acres (totaling 688.0 acres) of suitable habitat within the LCRSP study area, representing about two percent of the suitable habitat within the regional study area.

  - ◊ **Orange-throated whiptail**. Suitable habitat (scrub, chaparral, and grassland) for the orange-throated whiptail in the LCRSP study area comprises about 1,843.6 acres. The proposed project will permanently impact approximately 937.0 acres and temporarily impact 46.6 acres (totaling 983.6 acres) of suitable habitat within the LCRSP study area, representing about two percent of the suitable habitat within the regional study area.

  - ◊ **Silvery legless lizard and coast patch-nosed snake**. Suitable habitat (chaparral) for the silvery legless lizard and coast patch-nosed snake in the LCRSP study area comprises about 392.3 acres The proposed project will permanently impact approximately 214.5 acres and temporarily impact about 1.4 acres (totaling 215.9 acres) of suitable habitat within the LCRSP study area, representing about one percent of the suitable habitat within the regional study area.

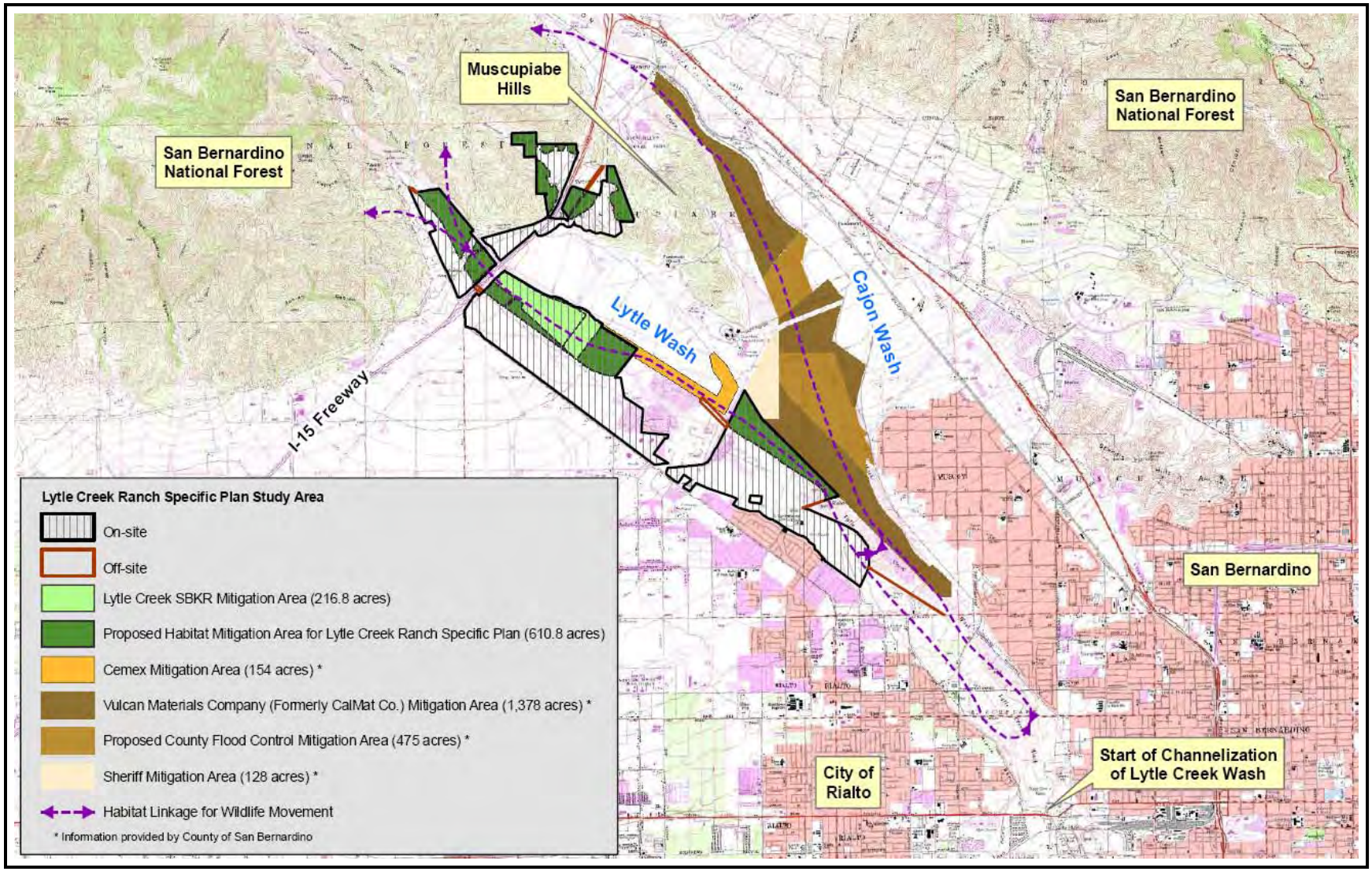

Figure 4.5-25
AREAWIDE PROPOSED AND DEDICATED OPEN SPACE
Source: PCR Services Corporation

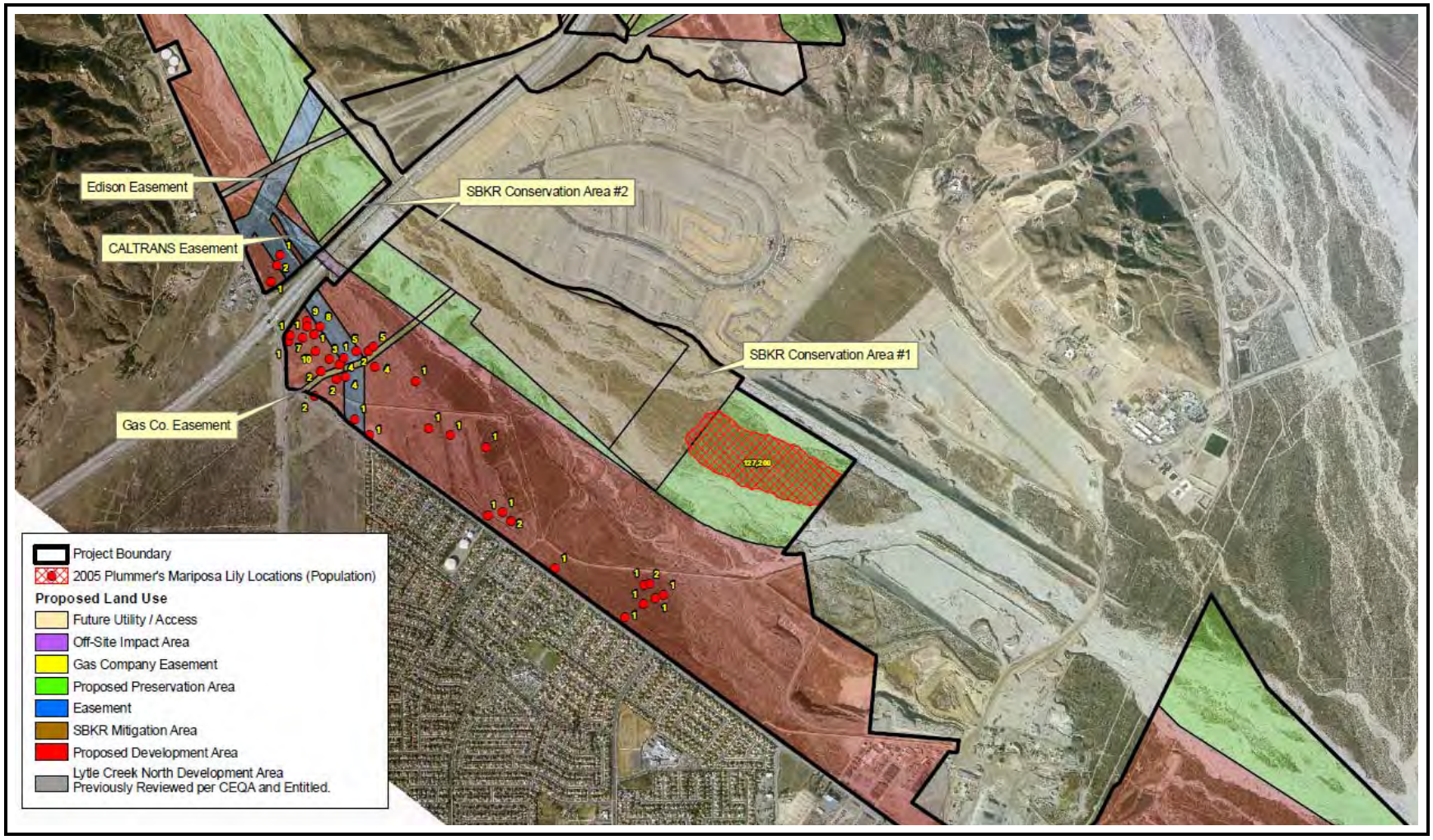

Figure 4.5-26
IMPACTS TO PLUMMER'S MARIPOSA LILY LOCATIONS
Source: PCR Services Corporation

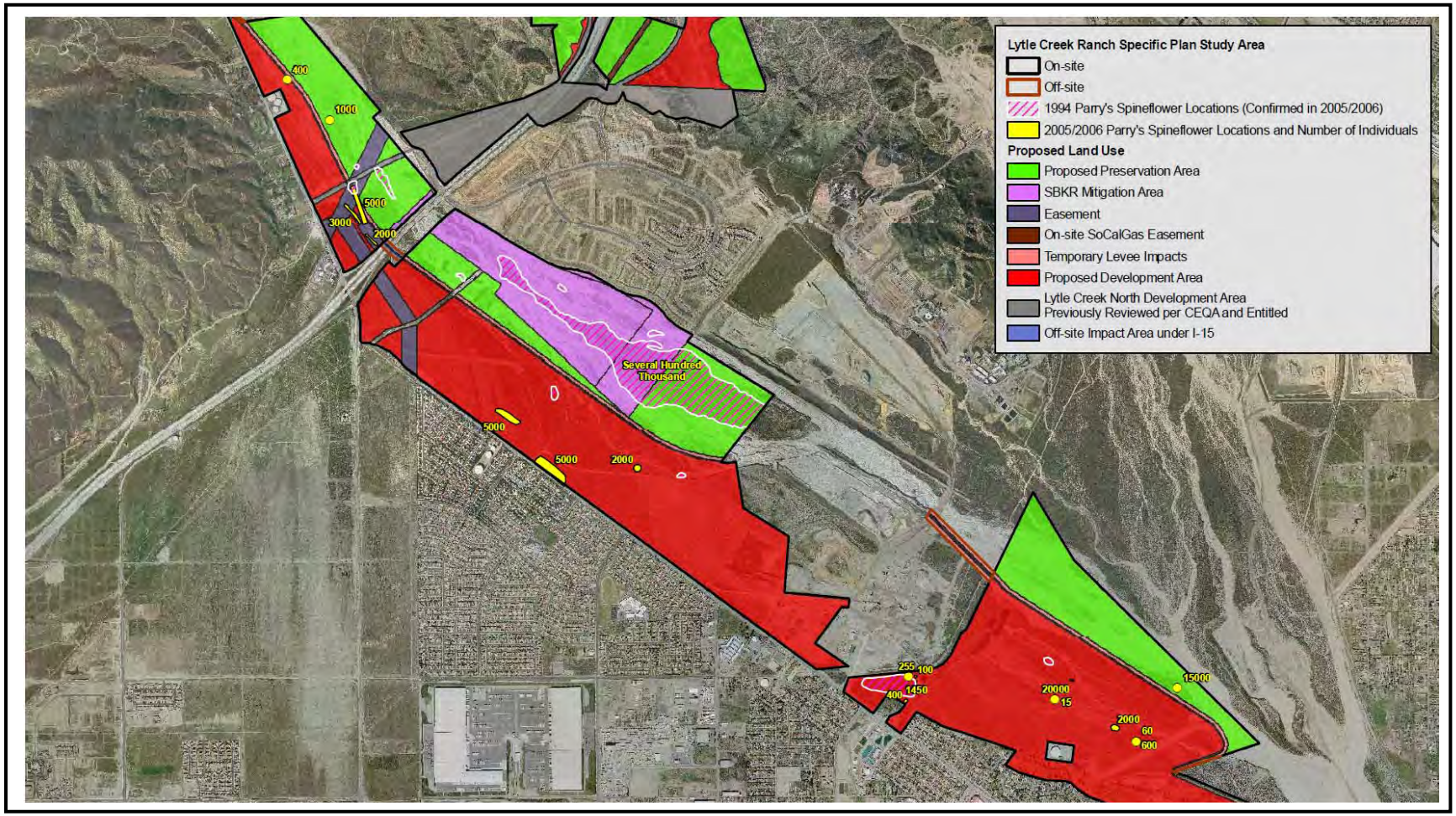

Figure 4.5-27
IMPACTS TO PARRY'S SPINEFLOWER LOCATIONS
Source: PCR Services Corporation

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Table 4.5-23
REGIONAL ANALYSIS OF IMPACTS TO SUITABLE HABITAT FOR SENSITIVE WILDLIFE SPECIES OBSERVED OR EXPECTED WITHIN BIOLOGICAL CUMULATIVE IMPACT STUDY AREA

Sensitive Wildlife Species	Existing Open Space within Regional Study Area				Total Available Suitable Habitat within Regional Study Area[2] (acres)	Direct Impact to Suitable Habitat within LCRSP Study Area[3] (acres)	Approximate Percent Impact of LCRSP Study Area within Regional Study Area
	Scrub (31,502 ac.)	**Chaparral** (25,981 ac.)	**Grassland**[1] (5,766 ac.)	**Riparian** (1,237 ac.)			
Scrub Species coast (San Diego) horned lizard, California leaf-nosed bat, Townsend's big-eared bat, and CAGN	X	-	-	-	31,502	688[2]	2%
Chaparral Species silvery legless lizard and coast patch-nosed snake	-	X	-	-	25,981	216[3]	1%
Grassland Species western spadefoot toad and burrowing owl	-	-	X	-	5,766	224[4]	4%
Riparian Species long-eared owl; willow flycatcher, LBV; yellow warbler, tricolored blackbird, and yellow-breasted chat	-	-	-	X	1,237	4[5]	1%
Scrub, Grassland, andRiparian Species Raptors[4] and Vaux's swift	X	-	X	X	38,505	804[6]	2%
Scrub, Chaparral, and Grassland Species orange-throated whiptail, western mastiff bat, northwestern San Diego pocket mouse, pocketed free-tailed bat, and San Diego black-tailed jackrabbit	X	X	X	-	63,249	984[7]	2%
Scrub, Chaparral, and Riparian Species San Diego desert woodrat	X	X	-	X	58,720	918[8]	2%
Scrub and Grassland Species loggerhead shrike, southern grasshopper mouse, and pallid bat	X	-	X	-	37,268	791[9]	2%

Notes.
1. Grassland includes open areas, such as vineyards and agriculture.
2. Impacts include all scrub communities (567.7 acres of permanent and 42.3 acres of temporary), non-native grassland/intermediate Riversidean alluvial fan sage scrub (21.0 acres of permanent), non-native grassland/California buckwheat scrub (47.7 acres of permanent), and disturbed/intermediate Riversidean alluvial fan sage scrub (9.5 acres permanent).

Table 4.5-23 (Continued)
REGIONAL ANALYSIS OF IMPACTS TO SUITABLE HABITAT FOR SENSITIVE WILDLIFE SPECIES OBSERVED OR EXPECTED WITHIN BIOLOGICAL CUMULATIVE IMPACT STUDY AREA

Notes (Continued).

3. Impacts include all chaparral (187.2 acres *of* permanent and 0.7 acre of temporary), non-native grassland/chamise chaparral (22.4 acres *of* permanent and 0.7 acre of temporary), and disturbed/northern mixed chaparral (4.9 acres of permanent).

4. Impacts include Riversidean sage scrub/non-native grassland (0.9 acre of permanent), intermediate Riversidean alluvial fan sage scrub/non-native grassland (25.4 acres of permanent and 1.9 acre of temporary), California buckwheat scrub/non-native grassland (2.7 acres of permanent), California buckwheat scrub/ ruderal (4.4 acres of permanent), northern mixed chaparral/non-native grassland (8.4 acres of permanent), chamise chaparral/non-native grassland (7.7 acres of permanent), chamise chaparral/ruderal (1.7 acre of permanent), all grassland communities (119.9 acres of permanent and 3.2 acres of temporary), and ruderal (47.8 acres of permanent and 0.4 acre of temporary).
5. Impacts include all riparian communities (3.6 acres of permanent).
6. Impacts include all scrub communities (567.7 acres of permanent and 42.3 acresof temporary), all grassland communities (119.9 acres of permanent and 3.2 acres of temporary), all riparian communities (3.6 acres of permanent), ruderal (47.8 acres of permanent and 0.4 acre of temporary), disturbed/intermediate Riversidean alluvial fan sage scrub (9.5 acres of permanent), and basin (9.9 acres of permanent).
7. Impacts include all scrub communities (567.7 acres of permanent and 42.3 acres of temporary), all grassland communities (119.9 acres of permanent and 3.2 acres of temporary),all chaparral (187.2 acres of permanent and 0.7 acre of temporary), ruderal (47.8 acres of permanent and 0.4 acre of temporary), disturbed/ intermediate Riversidean alluvial fan sage scrub (9.5 acres of permanent),and disturbed/northern mixed chaparral (4.9 acres of permanent).
8. Impacts include all scrub communities (567.7 acres of permanent and 42.3 acres of temporary), all riparian communities (3.6 acres of permanent), all chaparral communities (187.2 acres of permanent and 0.7 acre of temporary), non-native grassland/intermediate Riversidean alluvial fan sage scrub (21.0 acres of permanent), non-native grassland/California buckwheat scrub (47.7 acres of permanent), non-native grassland/chamise chaparral (22.4 acres of permanent and 0.7 acre of temporary), basin (9.9 acres of permanent), disturbed/intermediate Riversidean alluvial fan sage scrub (9.5 acres of permanent), and disturbed/ northern mixed chaparral (4.9 acres of permanent).
9. Impacts include all scrub communities (567.7 acres of permanent and 42.3 acres of temporary), all grassland communities (119.9 acres of permanent and 3.2 acres of temporary), ruderal (47.8 acres of permanent and 0.4 acre of temporary) and disturbed/intermediate Riversidean alluvial fan sage scrub (9.5 acres of permanent).

Source: PCR Services Corporation

Based on the threshold of significance criteria identified herein, the loss of potentially suitable habitat within the LCRSP study area represents an adverse but less-than-significant impact to those species and to their habitats and regional populations.

- **Birds**. Eleven sensitive bird species were observed within the LCRSP study area, including the American peregrine falcon,[112] willow flycatcher,[113] Vaux's swift, loggerhead shrike, yellow warbler, yellow-breasted chat, CAGN, LBV, BUOW, white-tailed kite, northern harrier, and golden eagle. Other sensitive bird species not observed within the LCRSP study area but with the potential to occur include long-eared owl and tricolored blackbird. Each of these species is separately discussed below.

  - ◊ **American peregrine falcon and willow flycatcher**. American peregrine falcon and willow flycatcher are not expected to breed within the LCRSP study area due to the lack of suitable nesting habitat (riparian). The presence of these species within the LCRSP study area is believed to be transitory and associated with seasonal migration. Because these bird species are highly mobile, the loss of potentially suitable habitat for resident and migrant birds represents a less-than-significant impact to regional populations of these species.

    Two willow flycatchers, of an undetermined subspecies, were observed (2006) within the LCRSP study area along the southern boundary of Neighborhood II. The observation was not made during a protocol SWWF survey (focused, protocol-level surveys were done for the SWWF within potentially suitable habitat but no individuals were detected), but rather during a CAGN survey adjacent to scrub habitat. The birds were observed in an area dominated by ruderal and ornamental vegetation and were not seen on any prior or subsequent surveys. In 2007, one transient willow flycatcher was observed within Neighborhood I during the first survey period but not during subsequent surveys in 2007. Similarly, in 2008, focused surveys detected one individual in the Sycamore Flat East riparian corridor within Neighborhood I. Based on willow flycatcher migration patterns and periods, all willow flycatchers are considered to have been transient birds migrating to areas farther north.

    Potentially suitable habitat (riparian scrub) for the SWWF (the subspecies that does breed in southern California) in the LCRSP study area is about 38.4 acres. The proposed project will permanently impact approximately 13.5 acres of this habitat within the LCRSP study area or about one percent within the regional study area. However, no SWWFs have been found within the LCRSP study area based upon three consecutive years (2006, 2007, and 2008) of protocol surveys. Due to the lack of occupied habitat in the LCRSP study area, potential project-related impacts to the SWWF are deemed less than significant and no mitigation is required or recommended.

  - ◊ **Vaux's swift**. The LCRSP study area does not support suitable breeding habitat (coniferous forest) for the Vaux's swift which is a migrant species in this area. Because no coniferous forest habitat exists within the LCRSP study area, the

[112]/ Federally delisted but State endangered.
[113]/ Full species of the willow flycatcher (*Empidonax traillii*) is State-listed endangered. The federally endangered subspecies does not occur within the LCRSP study area.

proposed project will not contribute to the loss of potentially suitable breeding habitat.[114] For this species, a regional analysis is, therefore, not warranted.

As indicated below, as a migrant, this species may utilize all available habitat types for foraging (scrub, grassland, and riparian) (1,513.8 acres). The proposed project will permanently impact about 758.4 acres and temporarily impact about 45.9 acres (totaling 804.3 acres) of suitable foraging habitat within the LCRSP study area or about two percent within the regional study area. Based on the threshold of significance criteria identified herein, because the proposed project will not eliminate suitable breeding habitat and would only have a relatively minor impact on regionally available migratory habitat for this species, potential project-related impacts are deemed to be less than significant.

Plant Community	LCRSP Study Area (acres)	Permanent Impact (acres)	Temporary Impact (acres)	Total Impact (acres)
All Scrub	1,252.8	567.7	42.3	610.0
All Grassland Communities	156.9	119.9	3.2	123.1
All Riparian	28.5	3.6	0.0	3.6
Ruderal	56.2	47.8	0.4	48.2
Disturbed RAFSS (Intermediate)	9.5	9.5	0.0	9.5
Disturbed Basin	9.9	9.9	0.0	9.9
Total	1,513.8	758.4	45.9	804.3

Source: PCR Services Corporation

◊ **Loggerhead shrike**. Suitable habitat for the loggerhead shrike in the LCRSP study area is about 1,475.8 acres. The proposed project will permanently impact approximately 744.9 acres and temporarily impact about 45.9 acres (totaling 790.8 acres) of suitable habitat (scrub, grassland, and riparian) within the LCRSP study area or about two percent within the regional study area. The proposed project would result in the loss of about three percent of the regionally available habitat for this species. This potential project-related impact would not be significant on a regional basis as it would not cause the regional population of this species to drop below self-sustaining levels.

◊ **Tricolored blackbird**. Suitable habitat (riparian/marsh) for the tri-colored blackbird in the LCRSP study area is about 28.5 acres. The proposed project will permanently impact approximately 4.0 acres of suitable habitat (riparian/marsh) within the LCRSP study area or about one percent within the regional study area. The tricolored blackbird was not observed within the LCRSP study area and has a low potential to occur due to the lack of dense marsh habitat. As this impact would not cause the regional populations of this species to drop below self-sustaining levels, potential project-related impacts to this riparian bird species would constitute a less-than-significant impact and no mitigation is required or recommended.

[114]/ Although this species breeds in coniferous forests it was observed within the riparian habitats on the LCRSP. For that reason, this species was analyzed with regard to its potential foraging habitats.

◊ **Yellow warbler**. Suitable habitat (riparian/scrub) for the yellow warbler in the LCRSP study area is about 28.5 acres. The proposed project will permanently impact approximately 4.0 acres of suitable habitat within the LCRSP study area or about one percent within the regional study area. The yellow warbler was not observed within the LCRSP study area and has a low potential to occur due to the lack of riparian/scrub habitat. As this impact would not cause the regional populations of this species to drop below self-sustaining levels, potential project-related impacts to this bird species would constitute a less-than-significant impact and no mitigation is required or recommended.

◊ **Yellow-breasted chat** Suitable habitat (riparian scrub) for the yellow-breasted chat in the LCRSP study area is about 28.5 acres. The proposed project will permanently impact approximately 4.0 acres of suitable habitat within the LCRSP study area or about one percent with the regional study area. The yellow-breasted chat was not observed within the LCRSP study area and has a low potential to occur due to the lack of riparian scrub habitat. As this impact would not cause the regional populations of this species to drop below self-sustaining levels, potential project-related impacts to this bird species would constitute a less-than-significant impact and no mitigation is required or recommended.

◊ **Coastal California gnatcatcher**. Over the past decade sightings of the federally-listed threatened CAGN in this portion of the County have been limited to relatively few occurrences, mostly as individual birds on the Etiwanda Fan, within GHRP, and in the Jurupa Mountains. In 1990, one CAGN was observed at the confluence of Lytle Creek and Cajon Creek, about one-quarter mile north of the LCRSP study area.[115] In 1993, on one occasion, a single bird was observed in the LCNPD.[116] There are no known records of this species being seen or detected in the LCRSP study area.

Separate CAGN survey efforts, following the USFWS survey guidelines, have been conducted in the LCRSP study area in 2005, 2006, and 2007.[117]. No CAGNs were observed or otherwise detected during any of the three surveys. Based on these findings, it is concluded that this species neither currently disperses through nor resides as a breeder in the LCRSP study area. Potential project-related impacts to the CAGN are, therefore, deemed to be less than significant and no mitigation is required or recommended.

◊ **Least Bell's vireo**. As illustrated in Figure 4.5-19 (Least Bell's Vireo Locations within the LCRSP Study Area) and as summarized in Table 4.5-10 (Least Bell's

[115]/ *Op. Cit.*, Natural Diversity Data Base, RareFind, Database Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species and Communities, 2008.

[116]/ *Ibid*.

[117]/ Many of the various plant and wildlife surveys noted above were not conducted every year from 2004 through 2008. The average number of consecutive survey years during that period for any one species was three years. For certain species (e.g., Plummer's mariposa lily, slender-horned spineflower, woollystar, SBKR, and CAGN), PCR biologists concluded that surveys every year from 2004 through 2008 were not necessary for one or more of the following reasons: (1) previous consecutive years surveys were repeatedly negative and therefore, the target species was concluded to be absent; (2) focused surveys (i.e., plants) were completed under optimal environmental conditions where presence would have been captured, if present; (3) external sources, such as the wildlife agencies, determined the potential for the species to be present in the vicinity not likely; and (4) multiple years of wildlife trapping bouts allowed the researcher to accurately identified all occupied habitat.

Vireo Observations within the LCRSP Study Area [2006-2008]), the LBV was observed in the Sycamore Flat East riparian corridor (Neighborhood I) as well as in the small mule fat-dominated riparian corridor in the southwest portion of Neighborhood II near a pump station located off the site near Riverside Avenue.

During protocol surveys in 2006, two breeding pairs were observed in Sycamore Flat East riparian corridor. In that same year, at least one LBV was observed and/or heard on several occasions within Neighborhood II; however, breeding was not confirmed. Although one individual was also observed within Neighborhood III on one occasion, there is no suitable riparian habitat within Neighborhood III and the bird is believed to have been moving through the area. During protocol surveys conducted in 2007, one pair of LBV was observed on three consecutive survey dates within the "County parcel" just off the site and to the north of Neighborhood within the Sycamore Flat East riparian corridor (that corridor is within Neighborhood I and extends beyond and to the north of the LCRSP study area). Focused surveys conducted in 2008 did not, however, detect the presence of LBV within the LCRSP study area.

As the small drainage providing LBV habitat in Neighborhood II is within the proposed development footprint, direct impacts to this species are deemed potentially significant. In total, direct impacts to the LBV include the loss of about 2.9 on-site acres of habitat that was utilized by at least one transient individual LBV in 2006 (including 1.2 acres of mule fat scrub and 1.7 acres of southern cottonwood willow riparian within Neighborhood II). In addition, indirect impacts to the LBV would be expected to occur within the Sycamore Flat East riparian corridor area (Neighborhood I) where proposed development is within several hundred feet of potentially suitable habitat for this species. Indirect impacts resulting from edge effects primarily include potential noise impacts from adjacent construction and potential predation by pets introduced as a result of adjacent human habitation. Indirect impacts to LBV are deemed to be potentially significant. A mitigation measure (Mitigation Measure 5-4) has, therefore, been formulated requiring the provision of compensatory resources for direct impacts to southern willow scrub and mule fat scrub habitat and the imposition of controls on construction activities to reduce indirect impacts on this species. Implementation of that measure would reduce potentially significant direct and indirect LBV impacts to a less-than-significant level.

With regards to LBV, the Applicant-nominated "project design features" concerning "nesting birds," as identified in the BRA and presented above, is adequately addressed in the above referenced recommended mitigation measure, such that the replication of that or the incorporation of similar language is not specifically required to accomplish that feature's intended purpose with regards to the avoidance or minimization of the project's impacts on LBV and LBV habitat. However, since the recommended mitigation measure only addresses LBV and not other nesting birds under the federal Migratory Bird Treaty Act, because the biological resource assessment is based on the assumption that this Applicant-nominated "project design feature" constitute a project-related element, a comparable mitigation measure (Mitigation Measure 5-5) has been formulated to provide protection for other protected bird species.

◊ **Burrowing owl**. Burrowing owls were observed in 2006, 2007 and 2009 along the southern bank of the 80-acre "island" that is part of the existing "SBKR Conservation Area." This species was not observed within the proposed development area during Phase I and II surveys performed in 2006 and 2007.[118]

As depicted in Table 4.5-23 (Regional Analysis of Impacts to Suitable Habitat for Sensitive Wildlife Species Observed or Expected within Biological Cumulative Impact Study Area) and summarized below, suitable habitat (grassland) for the burrowing owl in the LCRSP study area is 354.7 acres. The proposed project will permanently impact approximately 218.9 acres and temporarily impact 5.5 acres (totaling 224.4 acres of suitable habitat within the LCRSP study area or 4 percent within the regional study area. This species is not listed by State or federal agencies as threatened or endangered and the loss of individuals would not threaten regional populations or reduce those populations to below self-sustaining levels. Potential project-related impacts to burrowing owl are, therefore, deemed less than significant.

Plant Community	LCRSP Study Area (acres)	Permanent Impact (acres)	Temporary Impact (acres)	Total Impact (acres)
RAFSS/Non-Native Grassland	0.8	0.9	0.0	0.9
I-RAFSS/Non-Native Grassland	31.9	25.4	1.9	27.3
California Buckwheat Scrub/ Non-Native Grassland	2.7	2.7	0.0	2.7
California Buckwheat/Ruderal	4.4	4.4	0.0	4.4
Northern Mixed Chaparral/ Non-Native Grassland	52.6	8.4	0.0	8.4
Chamise Chaparral/Non-Native Grassland	47.5	7.7	0.0	7.7
Chamise Chaparral/Ruderal	1.7	1.7	0.0	1.7
All Grassland Communities	156.9	119.9	3.2	123.1
Ruderal	56.2	47.8	0.4	48.2
Total	354.7	218.9	5.5	224.4

Source: PCR Services Corporation

Since no mitigation measures have been formulated with regards this species, the Applicant-nominated "project design features" concerning the "burrowing owl," as identified in the BRA and presented above, has not been adequately addressed in any referenced recommended mitigation measures. Because the biological resource assessment is based on the assumption that this Applicant-nominated "project design feature" constitute a project-related element, a comparable mitigation measure (Mitigation Measure 5-6) has been formulated to provide protection for this species.

◊ **White-tailed kite, northern harrier, long-eared owl, and golden eagle**. For the purposes of this analysis, scrub, grassland, and riparian plant communities mapped within the LCRSP study area are deemed potentially suitable for raptor foraging due to their relatively open nature. The open space of the Lytle Creek floodplain and the LCRSP study area provides a corridor of undeveloped land for

[118]/ *Ibid*.

migrating birds of prey. However, with the exception of the Sycamore Flat East riparian corridor in Neighborhood I, the LCRSP study area provides limited nesting sites and foraging habitat is marginal for raptors due to the density of shrubs in vegetated areas. More suitable foraging habitat exists outside but within the general vicinity of the LCRSP study area. Specifically, the regional analysis presented in Table 4.5-21 (Regional Analysis of Impacts to Suitable Habitat for Sensitive Wildlife Species Observed or Expected within Biological Cumulative Impact Study Area) identified a total of approximately 38,505 acres of suitable raptor foraging habitat in the form of grassland, scrub, riparian, and similar open habitats.[119]

Suitable habitat for raptors in the LCRSP study area is approximately 1,513.8 acres. The proposed project will permanently impact approximately 758.4 acres and about temporarily impact 45.9 acres (totaling 804.3 acres) of suitable habitat (scrub, grassland, and riparian) within the LCRSP study area or about two percent within the regional study area.

The implementation of the proposed project would cause incremental loss of raptor foraging habitat, which would be deemed adverse but not regionally significant in terms of maintaining the population of raptor species in the region. In addition, the majority of these species are transient or wintering birds. Raptors are highly mobile and would be able to forage and nest in adjacent areas. Potential project-related impacts to non-listed sensitive raptor species, including white-tailed kite, northern harrier, long-eared owl, and golden eagle would, therefore, be less than significant and no mitigation is required or recommended.

- **Mammals**. Six sensitive mammal species were observed within the LCRSP study area, including the San Diego black-tailed jackrabbit, western mastiff bat, pocketed free-tailed bat, northwestern San Diego pocket mouse, LAPM, and SBKR. Several others sensitive mammal species potentially occur but were not observed, including the California leaf-nosed bat, Townsend's big-eared bat, pallid bat, San Diego desert woodrat, and southern grasshopper mouse. Sensitive mammal species identified within the LCRSP study area are separately discussed below.

  - ◊ **San Bernardino kangaroo rat**. In recognition of the Lytle Creek population and SBKR-occupied habitat, along with other populations and occupied habitat within the range of the SBKR, the USFWS established revised critical habitat for the species in 2008 (73 FR 20581). The designation of critical habitat was based on a landscape approach whereby broad areas where possible habitat could exist were delineated. The extensive trapping program, upon which this assessment is based, represents a refinement of the designation and is, therefore, viewed as a much more accurate assessment of occupied habitat for the species.

[119]/ Criteria used to determine the suitable raptor foraging habitat included: (1) the presence of raptors; (2) the presence of undeveloped open space (including vineyards and agricultural fields); (3) the size and degree of isolation (the potential foraging area must be at least 100 acres; if less than 100 acres, it must be within one-half mile of a larger potential foraging area or other open space area); (4) the presence of perches within, or in sight of, suitable foraging habitat in the form of trees, large shrubs, poles, or wires; (5) suitability for foraging (vegetative cover must be grasslands or, if scrub or vineyard, contain areas of bare ground or openings between shrubs; and, (6) evidence of a prey base (i.e., presence of burrows, reptiles, or small mammals).

Based on an intensive trapping program conducted in 2005, 2006, and 2007, the federally-listed endangered SBKR is known to occur in the LCRSP study area. Consistent with the literature on the species, the distribution of SBKR-occupied habitat is primarily associated with the P-RAFSS and I-RAFSS. In total, the SBKR is considered to occupy approximately 702.7 acres (696.8 on-site and 5.9 off-site acres) of the LCRSP study area. This includes about 217.6 acres within Neighborhood II, 402.7 acres within Neighborhood III, 76.5 acres within Neighborhood IV, 5.8 off-site acres within the proposed for levee improvements, and 0.1 off-site acres within the roadway proposed under the I-15 Freeway.

These approximately 702.7 acres include 51.0 on-site acres that are occupied on only an ephemeral basis. This 51.0-acre area (where the species was trapped) is comprised of two isolated patches of P-RAFSS and I-RAFSS outside the 100-year floodplain that are the result of anthropogenic surface disturbance and a levee failure of the Cemex USA mining operation. The distinctions between these circumstances of occupation are important to accurately understand the proposed project's impact on this species.

As illustrated in Figure 4.5-28 (Impacts to San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Occupied Habitat within LCRSP Study Area), the proposed project will permanently impact approximately 140.6 acres (139.2 on-site and 1.4 off-site acres) and temporarily impact about 41.0 acres (35.8 on-site and 5.2 off-site acres) of the 702.7 acres of SBKR-occupied habitat that exists in the LCRSP study area. These impacts include 51.0 acres of SBKR occupation that are outside the 100-year floodplain and hydrologically disconnected due to past levee construction and past and on-going mining activities.

While impacts to the SBKR in this 51.0-acre area represent a "take" under the FESA, that area's conservation is not likely to contribute meaningfully to the long-term sustainability of the species in Lytle Creek. This conclusion is based on three factors: (1) the vegetation in these areas is more than likely to re-establish itself and, consequently, form a vegetative cover too dense to be occupied by the species; (2) it is not possible to predict when an episodic flood event (greater than 100-year) will occur to maintain open habitat conditions suitable for long-term occupancy of the species and; (3) populations of this species occupying these isolated areas are isolated physically from founder populations elsewhere in the wash and, consequently, will be extirpated from these areas over time. In recognition of those conditions, the preservation of these 51.0 acres does not appear to be a viable component of a long-term strategy for the recovery or conservation of the species.

As proposed, the project would retain and contribute an additional 610.8 acre of natural open space to be preserved in perpetuity. Of that, about 443.1 acres are immediately adjacent to the existing 216.8-acre "SBKR Conservation Area." This additional 443.1 acres will result in the expansion of the protected SBKR area in Lytle Creek to 659.8 acres. As illustrated in Figure 4.5-20 (Existing San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Occupied Habitat), within these preservation areas, about 518.6 acres of SBKR-occupied habitat exist. The proposed project's contribution to this area would be about 316.2 acres (the remaining acreage is entirely within the existing "SBKR Conservation

Area"). Some of the 443.1 acres which are proposed for open space retention are located in and around Lyle Creek and currently support chamise chaparral adjacent and downstream of the "SBKR Conservation Area" within Neighborhood III. These areas appear to be good candidates for restoration to suitable SBKR habitat. In addition, areas temporarily impacted by the construction of the levee (which have not been included in the open space areas described above) may also be good candidates for restoration to suitable SBKR habitat.

Notwithstanding the significant "take" of the species and direct impacts to SBKR-occupied habitat, these preserved areas can serve as the core of a conservation program aimed at sustaining the species in Lytle Creek. In the absence of measures to prevent adverse indirect impacts from affecting the population in the wash, spill-over effects are also deemed to be potentially significant. Such impacts include the harmful effects of unrestricted access and habitat degradation, loss of habitat functions and values due to the establishment of invasive plant species, unnatural predation by domestic pets, and night-lighting.

In addition, the proposed project will discharge water back into Lytle and Sycamore Creeks a few days out of the year. The zone of influence from the discharge point will be localized. These discharge events may result in temporary periods of standing water or saturated soils that may lead to a more mesic riparian area where a few mule fat and willows grow in. This is not, however, expected to lead to the development of a plant community which dominates and changes over time the existing sensitive vegetation communities currently existing in the vicinity of the future discharge points (RAFSS and southern willow scrub). These events are not expected to lead to the direct mortality of the SBKR. Indirect impacts associated with potential discharge events will not result in a substantial adverse effect on SBKR and impacts are deemed adverse less than significant.

Project-related impacts to SBKR are potentially significant and mitigation is required. In order to develop effective mitigation for the project-related impacts to the SBKR, several considerations were made including: (1) avoidance, preservation, enhancement, and/or creation of 316.2 acres of on-site habitat; (2) preservation, creation, and connectivity of approximately 40 acres of off-site habitat; (3) avoidance and minimization of direct individual SBKR mortality during construction; (4) minimization of indirect individual SBKR mortality through edge effects; and (5) management programs to assure the ability to sustain on-site and off-site SBKR populations in the long-term.

As illustrated in Figure 4.5-29 (Off-Site San Bernardino Kangaroo Rat Mitigation Opportunities), based on an examination of current aerial photography, there are at least 158.7 acres of land above the 100-year floodplain that support dense chamise chaparral, do not currently support the SBKR, and are adjacent to or proximal to the habitat area to be preserved on the project site.

This combination of on-site and off-site mitigation measures has been designed with the view that, to be effective, the mitigation should accomplish both of the following: (1) the mitigation must provide a large enough area of P-RAFSS and I-RAFSS habitat to accommodate numbers of animals equal to or greater than

those lost from the area to be impacted by the project's implementation; and (2) the mitigation must provide for areas of refuge above the 100-year flood event limits to assure the repopulation of populations in the lower wash areas in the event of an episodic flood event.

The amount of acreage needed for preservation and habitat creation need not be based on a "no net loss" of SBKR-occupied habitat approach. Compensatory acreage, however, needs to be located within an area and of a quality that will ensure, to the best of the body of knowledge on the species, that the SBKR population in Lytle and Cajon Creeks will be sustained in the long-term. The on-site and off-site preservation and creation of habitat will provide a large enough area of P-RAFSS and I-RAFSS habitat to accommodate numbers of animals equal to or greater than those lost from the areas to be permanently impacted. Additionally, the mitigation will provide for areas of refuge above the 100-year flood event limits to assure the repopulation of populations in the lower wash areas in the event of an episodic flood event.

In recognition of the designated status of this sensitive species, permanent impacts to about 140.6 acres and temporary impacts to 41.0 acres of SBKR-occupied habitat would be deemed potentially significant and, if avoidance where not possible, compensatory resources would be required to compensate for the loss of this occupied habitat, including the taking of those SBKR that reside within that habitat. A mitigation measure (Mitigation Measure 5-7) has been formulated addressing project-related impacts on SBKR-occupied habitat within the LCRSP study area. That measure would set aside (through the preservation of existing occupied and suitable habitat as well as creation and restoration) adequate wash and upland refugia in a biologically and geographically meaningful configuration necessary to sustain the species in the long-term rather than trying to achieve a set mitigation ratio. The proposed off-site mitigation will ensure recolonization of the wash by the species following catastrophic flood events downstream of the Cemex USA quarry pinch-point and will provide additional genetic exchange upstream and downstream of the Cemex USA quarry operation. It is the intent of the off-site mitigation (downstream of Cemex USA), in combination with on-site mitigation (upstream of Cemex USA), to accomplish long-term sustainability of the Lytle Creek and Cajon Creek population of SBKR through the creation of a system-wide conservation area for the species. Implementation of the recommended mitigation measure will reduce project-related impacts on SBKR to a less-than-significant level.

◊ **Other Sensitive Mammal Species**. As depicted in Table 4.5-23 (Regional Analysis of Impacts to Suitable Habitat for Sensitive Wildlife Species Observed or Expected within Biological Cumulative Impact Study Area) and summarized below, project-related impacts to southern grasshopper mouse habitat (scrub and grassland) represents about two percent of the regionally available suitable habitat (scrub and grassland). Suitable habitat for the southern grasshopper mouse in the LCRSP study area is approximately 1,475.4 acres. The proposed project will permanently impact about 744.9 acres and temporarily impact 45.9 acres (totaling 790.8 acres) of suitable habitat within the LCRSP study area.

Plant Community	LCRSP Study Area (ac.)	Permanent Impact (ac.)	Temporary Impact (ac.)	Total Impact (ac.)
All Scrub	1,252.8	567.7	42.3	610.0
All Grassland Communities	156.9	119.9	3.2	123.1
Ruderal	56.2	47.8	0.4	48.2
Disturbed RAFSS (Intermediate)	9.5	9.5	0.0	9.5
Total	1,475.4	744.9	45.9	790.8

Impacts to the western mastiff bat, northwestern San Diego pocket mouse, and San Diego black-tailed jackrabbit would result in the loss of about two percent of the available suitable habitat (scrub, chaparral, and grassland) for these species in the region. As summarized below, suitable habitat for these species in the LCRSP study area is about 1,848.6 acres. The proposed project will permanently impact about 942.0 acres and temporarily impact 46.6 acres (totaling 988.6 acres) of suitable habitat within the LCRSP study area.

Plant Community	LCRSP Study Area (ac.)	Permanent Impact (ac.)	Temporary Impact (ac.)	Total Impact (ac.)
All Scrub	1,252.8	567.7	42.3	610.0
All Grassland Communities	156.9	119.9	3.2	123.1
All Chaparral	363.3	187.2	0.7	187.9
Ruderal	56.2	47.8	0.4	48.2
Disturbed RAFSS (Intermediate)	9.5	9.5	0.0	9.5
Disturbed Northern Mixed Chaparral	9.9	9.9	0.0	9.9
Total	1,848.6	942.0	46.6	988.6

As summarized below, the proposed project would impact about one percent of the available suitable habitat (scrub, chaparral, and riparian) for the San Diego desert woodrat in the region. Suitable habitat in the LCRSP study area comprises about 1,793.0 acres. The proposed project will permanently impact approximately 873.9 acres and temporarily impact 43.7 acres (totaling 917.6 acres) of suitable habitat within the LCRSP study area.

Plant Community	LCRSP Study Area (ac.)	Permanent Impact (ac.)	Temporary Impact (ac.)	Total Impact (ac.)
All Scrub	1,252.8	567.7	42.3	610.0
All Riparian	28.5	3.6	0.0	3.6
All Chaparall	363.3	187.2	0.7	187.9
NNG/RAFSS	9.8	0.0	0.0	0.0
NNG/I-RAFSS	21.0	21.0	0.0	21.0
NNG/California Buckwheat Scrub	69.2	47.7	0.0	47.7
NNG/Chamise Chaparral	24.1	22.4	0.7	23.1
Disturbed Basin	9.9	9.9	0.0	9.9
Disturbed I-RAFSS	9.5	9.5	0.0	9.5
Disturbed Northern Mixed Chaparral	4.9	4.9	0.0	4.9
Total	1,793.0	873.9	43.7	917.6

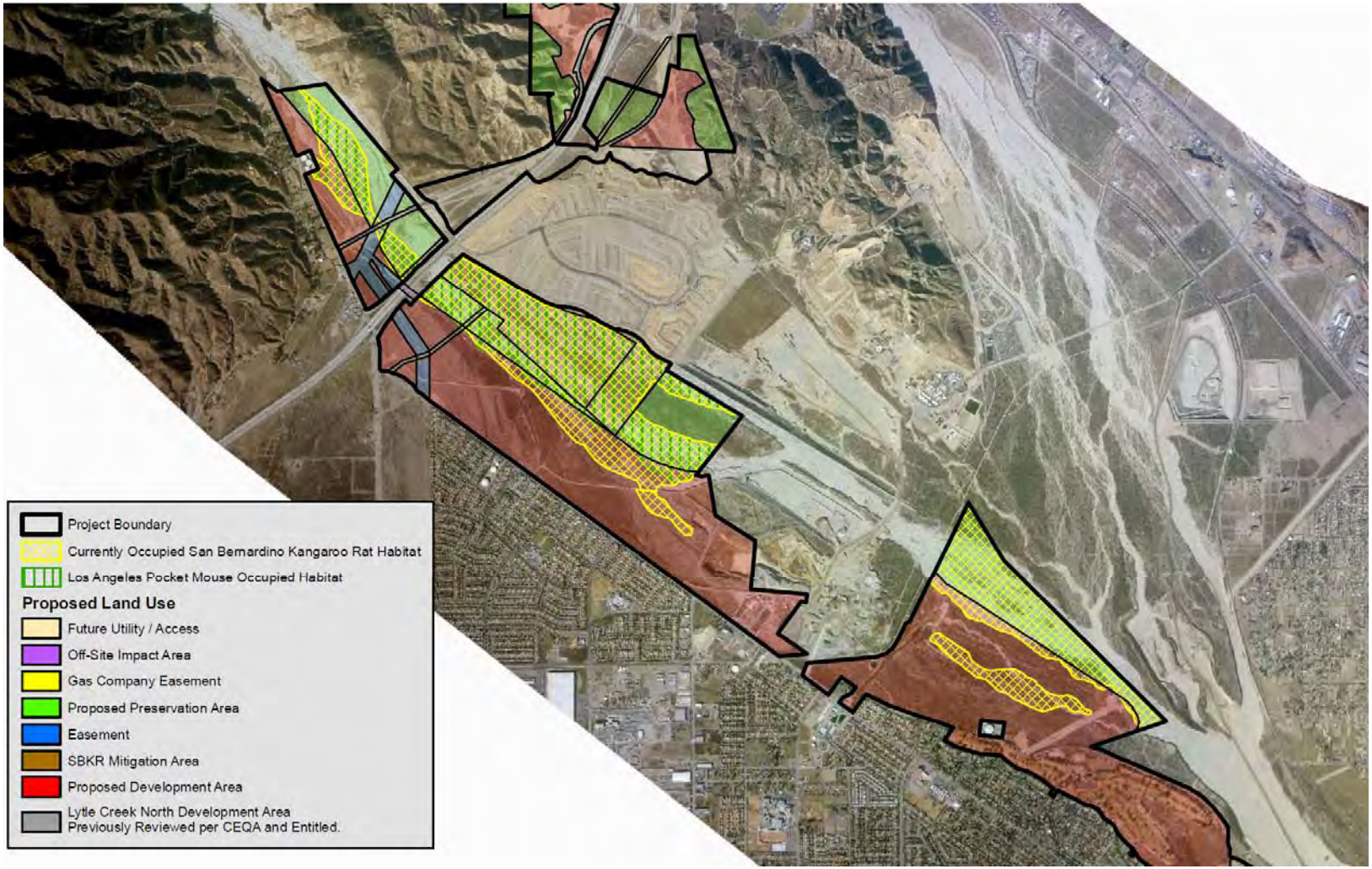

Figure 4.5-28
IMPACTS TO SAN BERNARDINO KANGAROO RAT AND LOS ANGELES POCKET MOUSE OCCUPIED HABITAT WITHIN LCRSP STUDY AREA
Source: PCR Services Corporation

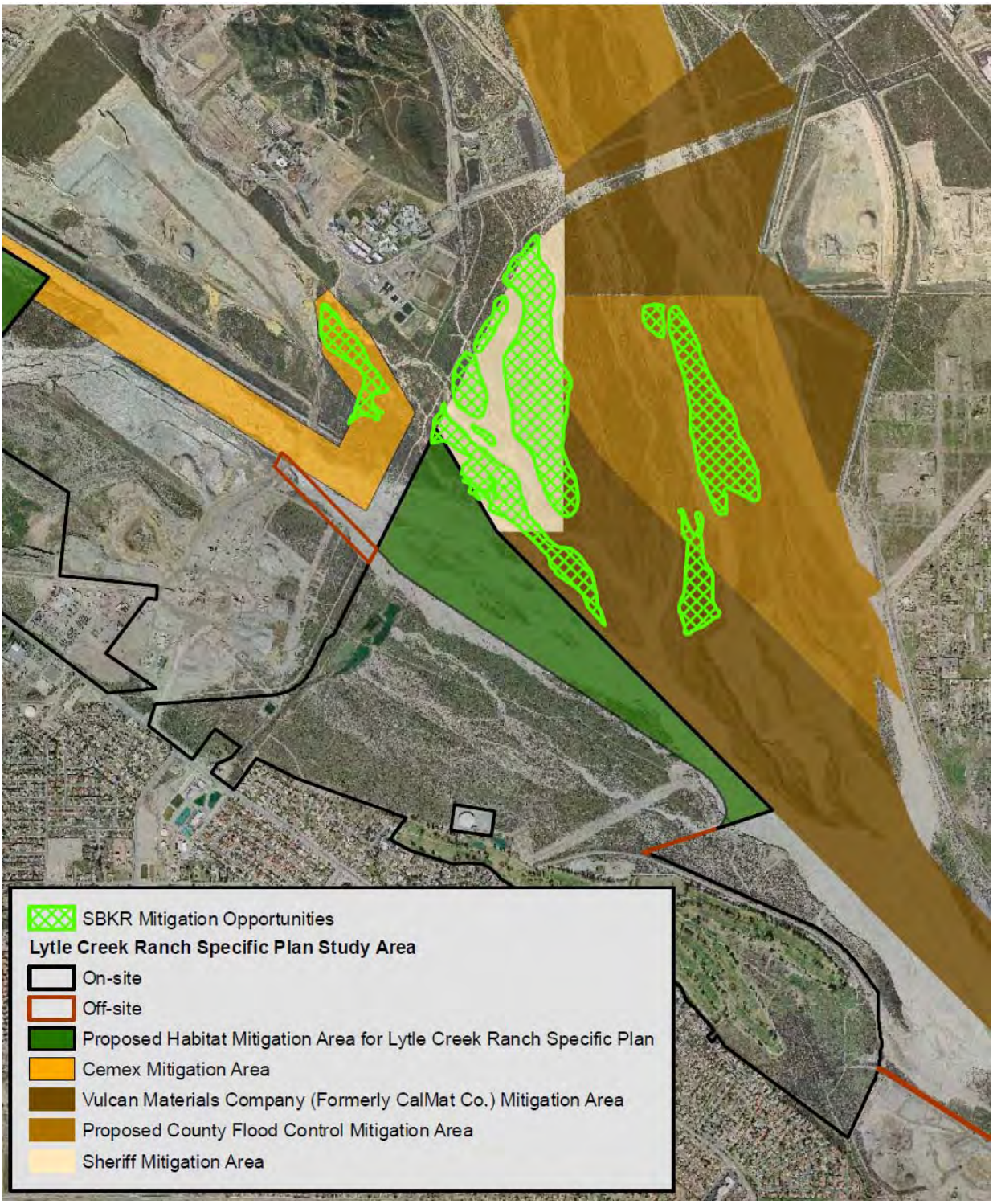

Figure 4.5-29
OFF-SITE SAN BERNARDINO KANGAROO RAT MITIGATION OPPORTUNITIES
Source: PCR Services Corporation

These species are not listed by State or federal agencies as threatened or endangered and the loss of individuals would not threaten the existence of regional populations. The loss of potentially suitable habitat represents a less-than-significant impact to regional populations of these sensitive mammal species and no mitigation is required or recommended.

Although they may forage within the LCRSP study area, roosting habitat for the California leaf-nosed bat, Townsend's big-eared bat, and pallid bat does not occur within the LCRSP study area. The proposed project would impact about two percent of the available suitable foraging habitat (scrub) for the California leaf-nosed and Townsend big-eared bats and about two percent of available suitable habitat (scrub and grassland) for the pallid bat in the region. The loss of foraging habitat for these three species would not be deemed a significant impact to these species due to the remaining available foraging habitat that exists throughout the region and no mitigation is required or recommended.

The LAPM is a CSC species and is not State or federally-listed as threatened or endangered. For this species, site-specific information regarding areas of occupied and unoccupied habitat within the LCRSP study area was obtained during focused trapping surveys. Project-related impacts can, therefore, be analyzed using this data rather than taking a regional habitat-based approach and assessing impacts to particular species based on impacts to potentially available suitable habitat.

From a site-specific perspective, a total of 397.8 acres (76.5 acres within Neighborhood IV and 321.3 acres within the "SBKR Conservation Areas" and adjacent wash within Neighborhood III) of LAPM-occupied habitat have been mapped within the LCRSP study area. As illustrated in Figure 4.5-28 (Impacts to San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Occupied Habitat), project-related impacts to 33.8 on-site acres (20.3 acres permanent and 13.5 acres of temporary) of LAPM-occupied habitat would represent a loss of about 8.5 percent of LAPM-occupied habitat within the LCRSP study area and a much smaller percentage of occupied habitat throughout the region.

Impacts to LAPM occupied habitat will not significantly reduce population numbers of this species within the LCRSP study area. In addition to the 216.8 acres already preserved within the "SBKR Conservation Area," about 160.6 acres of LAPM-occupied habitat will be preserved within the LCRSP study area. Potential project-related impacts to the LAPM are, therefore, less than significant and no mitigation is required or recommended.

Environmental Impact 5-8*. Invasive Plant Species. Project development has the potential to result in the introduction of invasive non-native plants that could spread to retained on-site open space areas and/or adjoining off-site areas, potentially reducing the propensity of native species to succeed in the general project area.*

Preliminary Determination 5-8*. Potentially significant unless mitigation incorporated.*[120]

[120]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate,

Grading and fuel modification activities could result in changes in light, temperature, and moisture altering the affected habitat such that conditions would no longer be optimal for native plant communities. These altered conditions may prove favorable for opportunistic non-native invasive species. Species that are prolific seed producers, have high seed germination rates, easily propagate asexually by root or stem fragments, and/or rapidly mature predispose a plant to being invasive. As a result, invasive species can have adverse ecological consequences by causing declines in native species and permanently reducing biological diversity. Alien species commonly have few natural predators, parasites, or diseases and can simply out-compete native species and dominate an ecosystem with their accentuated reproductive potential.

During construction, invasive species can be introduced through the use of hay, straw, and other organic mulches to control erosion and transported from off-site areas via construction equipment, soils, and landscape materials. In addition, following the commencement of the site's use, occupancy, and habitation, homeowners and other parties can introduce invasive plants through landscaping improvements that incorporate those species.

As reported by the USEPA, within the upper Santa Ana River watershed, a total of 283 species of vascular plants have been identified along Lytle and Cajon Creek. Of these, 13 species were cultivated (occurring near home sites) and 58 species or 21.5 percent of the flora were non-native. A total of 117 species (43.3 percent of the flora) were detected in the wash and 36 (30.8 percent) of these were non-natives. A total of 132 species (48.8 percent of the flora) were observed in the terrace scrub and 19 (14.3 percent) of these were introduced species. A total of 167 species (61.9 percent) were found in sage scrub, of which 32 (19.2 percent) were non-native; 121 species (44.8 percent) were detected in chaparral, of which 17 (14 percent) were introduced species; 57 species (21.1 percent) were found in slope woodlands, of which 9 (15.8 percent) were naturalized species; 135 species (50 percent) were observed in grassland, of which 30 (22.7 percent) were introduced; and 71 species (26.3 percent) were documented in disturbed areas, of which 27 (38 percent) were non-natives. Disturbed areas, as along the edge of Lytle Creek Road, were characterized by grasslands dominated by introduced weeds, intermixed with native annuals. Common genera of weedy species included *Bromus*, *Festuca* (*Vulpia*), *Avena*, *Erodium*, *Brassica*, *Hypochoeris*, *Centaurea*, *Salsola*, and *Picris*.[121]

The California Invasive Plants Council (CIPC) has published a list of exotic plants known to be invading native ecosystems and plant communities.[122] Independent of the USEPA inventory, as indicated in Table 4.5-24 (Non-Native Plants Observed within the LCRSP Study Area), a number of non-native plants have recently been observed or are suspected to occur on the project site. These species, as well as other invasive plants, could be introduced and could propagate in retained on-site open space areas and off the project site, including the SBNF.

Project implementation will result in the introduction of ornamental landscaping which will produce a substantial change to the existing plant palette within the LCRSP study area. Based

sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS; (2) have a substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS; and (3) have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal species or eliminate important examples of the major periods of California history or prehistory.

[121]/ Zembral, Richard and Hoffman, Susan, Environmental Assessment of the Santa Ana Watershed Program, 2000-2002, United States Environmental Protection Agency, December 2000, pp. 11-13.

[122]/ California Invasive Plant Council, California Invasive Plant Inventory, February 2006.

on the presence of sensitive plant species and habitats in the LCRSP study area and the site's proximity to the SBNF, introduced invasive and exotic species have the potential to degrade the quality of the environment, threaten native plant communities, and produce a substantial adverse effect on sensitive plant species and sensitive nature habitats. Impacts to and upon sensitive plants and plant communities resulting from introduced non-native plants are, therefore, deemed potentially significant prior to mitigation. A mitigation measure (Mitigation Measure 5-8), requiring the preparation of an invasive plant management plan, has been formulated and, when implemented, will reduce potential impacts to a less-than-significant level.

The Applicant-nominated "project design features" concerning "landscape design features," as identified in the BRA and presented above, is adequately addressed in the above referenced recommended mitigation measure, such that the replication of that or the incorporation of similar language is not specifically required to accomplish that feature's intended purpose with regards to the avoidance or minimization of the project's biological resource impacts on native plant species and the introduction of non-native species.

4.5.5.2 Operational Impacts

Environmental Impact 5-9*. Project implementation will result in the introduction of additional indirect or secondary effects that could adversely impact the viability of on-site and off-site open space areas to serve a continuing viable habitat function.*

Preliminary Determination 5-9*. Potentially significant unless mitigation incorporated.*[123]

Causal factors generated by human activities may be collectively termed "harassment." Harassment is defined as those activities of humans and their associated domestic animals that increase the physiological costs of survival or decrease the probability of successful reproduction in wildlife populations. The most common forms of harassment that accompany development include increased human presence, construction and background noise, light intrusion, the introduction of non-native species (including pets and ornamental plants), and the introduction of environmental contaminants. The effects of harassment manifest primarily on wildlife and predominately occur through habitat degradation. Although the impacts of harassment are not as complete as total habitat removal, they can nonetheless be significant.

Wildlife exhibits varying degrees of resilience and sensitivity to these indirect impacts. While some species are generally highly tolerant, other species are affected with very little apparent disturbance. Presented below are the possible indirect or secondary impacts that are likely to result from the use, occupancy, and habitation of the project site.

[123]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS (2) have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS; (3) have a substantial effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS; (4) interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites; and (5) have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal species or eliminate important examples of the major periods of California history or prehistory.

Table 4.5-24
NON-NATIVE PLANTS OBSERVED WITHIN THE LCRSP STUDY AREA

Common Name	Scientific Name	CIPC Classification		
		Rating[1]	Impact[2]	Invasiveness[2]
smooth cat's-ear	Hypochaeris glabra	Limited	C	B
tocalote	*Centaurea melitensis*	Moderate	B	B
pineapple weed	*Chamomilla suaveolens*	-	-	-
prickly lettuce	*Lactuca serriola*	EBNL[3]	D	B
prickly sow thistle	*Sonchus asper*	EBNL	D	B
common sow thistle	*Sonchus oleraceus*	-	-	-
black mustard	*Brassica nigra*	Moderate	B	B
short-podded mustard	*Hirshfeldia incana*	Moderate	B	B
London rocket	*Sisymbrium irio*	Moderate	B	B
hedge mustard	*Sisymbrium officinale*	-	-	-
Oriental mustard	*Sisymbrium orientale*	-	-	-
four-leaved allseed	*Polycarpon tetraphyllum*	-	-	-
lamb's quarters	*Chenopodium album*	-	-	-
Russian thistle	*Salsola tragus*	Limited	C	B
castor bean	*Ricinus communis*	Limited	C	B
sourclover	*Melilotus indica*	-	-	-
rose clover	*Trifolium hirtum*	Moderate	C	B
purple vetch	*Vicia benghalensis*	-	-	-
broad-lobed filaree	*Erodium botrys*	EBNL	D	C
red-stemmed filaree	*Erodium cicutarium*	Limited	C	C
horehound	*Marrubium vulgare*	Limited	C	C
curly dock	*Rumex crispus*	Limited	C	C
scarlet pimpernel	*Anagallis arvensis*	-	-	-
tree tobacco	*Nicotiana glauca*	Moderate	B	B
tamarisk	*Tamarix sp.*	High	A	A

Notes:
1. Each plant has received an overall rating based on evaluation using the CIPC criteria: (1) High – these species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure; their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment; most are widely distributed ecologically. (2) Moderate – these species have substantial and apparent (but generally not severe) ecological impacts on physical processes, plant and animal communities, and vegetation structure; their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, through establishment is generally dependent upon ecological disturbance; ecological amplitude and distribute may range from limited to widespread. (3) Limited – these species are invasive but their ecological impacts are minor on a Statewide level or there was not enough information to justify a higher score; their reproductive biology and other attributes result in low to moderate rates of invasiveness; ecological amplitude and distribution are generally limited but these species may be locally persistent and problematic.
2. Scores: A – Severe; B – Moderate; C – Limited; D – None; and U – Unknown.
3. Categorized as "evaluated but not listed" (EBNL) because CIPC lacks sufficient information to assign a rating or the available information indicates that the species does not have significant impacts at the present time.

Source: Environmental Impact Sciences

- **Introduction of non-native animals**. This is a typical aspect of development and results from the introduction of non-native wildlife and exotic animals into native habitats, such as the increased presence of brown-headed cowbirds in disturbed habitats and along trails. Associated with this persistent impact is the loss of some native wildlife and the resulting introduction of human-associated wildlife (such as European starlings and house sparrows) and an increase in certain native species (such as skunks, opossums, and coyotes). These species assume a role as pest species in a human environment. Unnatural predation by domestic pets is anticipated to be minimal due to the on-going and increased presence of coyotes, an effective meso-predator.

- **Noise intrusion**. Noise can affect wildlife by signal masking, hearing loss, and changes to the neuroendocrine system. Signal masking and hearing loss may adversely impact species that rely on auditory signals for activities such as mating, territory establishment, defense, young recognition, prey detection, and predator evasion. Neuroendocrine system effects include changes in blood chemistry, sexual function, auditory function, and seizure susceptibility. The extent and nature of noise-induced effects depends on a number of variables (e.g., intensity, frequency spectrum, duration, rest intervals, exposure patterns, and species susceptibility). Wildlife stressed by noise may be extirpated from adjoining open space, leaving only wildlife tolerant of noise generated from human activity.

  During construction, noise levels at the project site will increase substantially over present levels and have the potential to disrupt foraging, nesting, and denning activities for a variety of wildlife species. Construction noise will add additional stress to remaining wildlife populations and could hinder reproductive and other behavior. Once operational, on-going noise levels associated with on-site land uses will contribute to and increase the existing ambient noise now generated by the I-15 Freeway and Cemex USA mining facility. Open space areas adjacent to development will be subject to higher levels of disturbance than under pre-project conditions.

- **Artificial lighting**. Lighting of residential, commercial, institutional, and active recreational areas will result in an indirect effect on the behavioral patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife, including effects on small ground-dwelling animals that use the darkness to hide from those predators which are specialized night foragers. The potential consequences of artificial lighting include general disruptions in daily activity cycles and reductions in dispersal, foraging, and reproductive opportunities.

  Orientation and disorientation are species responses to ambient illumination (the amount of light incident on objects in the environment). Attraction and repulsion occur in response to the light sources themselves and are responses to luminance or the brightness of the light source. Increased illumination may extend diurnal or crepuscular behaviors into the nighttime by improving an animal's ability to orient itself. In contrast, artificial lighting may disorientate those species accustomed to navigating at night.[124] Available research shows that artificial night lighting disrupts predator-prey relationships. Artificial lighting favors light-tolerant species and excludes others. The most notable effects occur in areas where lights are placed close to natural habitats.[125]

[124]/ Longcore, Travis and Rich, Catherine, Ecological Light Pollution, Frontiers in Ecology and the Environment, Volume 2, No. 4, 2004, p. 193.
[125]/ *Ibid*., p. 196.

Many birds and other animals are affected by stray light intruding into their night world, interrupting movement, confusing natural patterns, deterring establishment of foraging areas, and affecting breeding cycles (e.g., causing premature breeding). Lights attract and disorientate animals and increase the mortality rates of wild birds.[126]

For the purpose of environmental review, the introduction of high-intensity sports lighting has been assumed within the neighborhood park area. Sports lighting, based on the elevated nature of luminaries and the high intensity of the lighting that is utilized, could impact and deter the movement of nocturnal and diurnal species. Except for those light sources adjacent to open space areas, street lights, parking lot lighting, security lighting, and other lighting associated with urban areas, would be assumed to have a lesser impact because pole heights, the size of luminaries, the intensity of lighting levels, and the amount of spill light would be substantially less than that which would be associated with sports lighting.

- **Erosion-siltation hazards and urban pollutants**. Grading activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and other plants, impacting plant health and photosynthesis. In addition, excessive input of fine sediment, such as silt, fine clay particles, and fine sand, is generally considered one of the most prevalent forms of pollution affecting the nation's streams and waterways. Unless effectively mitigated, construction activities can result in elevated rates of sediment input in streams and culverts, resulting in increased turbidity and increased sediment deposition within downstream areas. Any project-induced change in water quality within Lytle and Sycamore Creeks could adversely impact dependent plant and wildlife species and habitats. If discharged off the project site, these impacts could adversely affect water quality in the surface waters of downstream segments of the Santa Ana River system.

  Urban runoff can contain petroleum residues. The potential for improper disposal of petroleum and chemical products from construction equipment or residential areas could adversely affect water quality and, in turn, affect populations of aquatic species and species that use riparian areas. Once operational, water quality could also be adversely affected by runoff of nutrients from residential and other landscaped areas.

- **Other human activities**. Project residents may utilize the adjoining open space areas for active recreational pursuits, resulting in increased noise and associated disturbance of those areas. Human disturbance could disrupt normal foraging and breeding behavior of wildlife remaining within the LCRSP study area, thus diminishing the value of retained habitat areas. Pets and feral cats and dogs would become introduced predators and increase the stresses on remaining wildlife, particularly those birds that nest in the open or in low shrubs and small vertebrates. Human access to open space areas facilitates invasion by exotic non-native plant species, dispersed by wind, water, vehicles, and other human activities.

  In evaluating indirect impacts, it is recognized that the build-out of Neighborhoods II, III, and IV will be limited to the terraces which naturally provide a topographic break from the wash where the preserved open space areas are proposed. Aside from the open

[126]/ British Astronomical Association, Campaign for Dark Skies, The Problems Caused by Lighting, The Threat to Wildlife (http://www.star.le.ac.uk/~dbl/cfds/wildlife.html?4O#animals).

space areas, fencing, and signage, the natural topographic break between the terrace and the wash will minimize potential indirect effects on sensitive wildlife species.

Indirect impacts to the LBV are potentially significant and would be expected to occur within the Sycamore Flat East riparian corridor area of Neighborhood I where proposed development is within several hundred feet of potentially suitable habitat for this species. Indirect impacts to LBV would not be anticipated to affect any other portions of the LCRSP study area as the riparian habitat within Neighborhood II is entirely within the project's proposed development footprint. Indirect impacts resulting from edge effects primarily include potential noise impacts from adjacent construction as well as potential predation by pets as a result of adjacent human habitation.

A mitigation measure (Mitigation Measure 5-4) has been formulated requiring the provision of compensatory resources for direct impacts to southern willow scrub and mule fat scrub habitat and the imposition of controls on construction activities to reduce indirect impacts on this species. Indirect impacts to LBV would be reduced to a level below significance as the result of the implementation of that measure.

Similarly, indirect impacts to the SBKR are also potentially significant due to spill-over effects. Such impacts include the harmful effects of unrestricted access and habitat degradation, loss of habitat functions and values due to the establishment of invasive plant species, unnatural predation by domestic pets,[127] and night-lighting. A mitigation measure (Mitigation Measure 5-7) has been formulated addressing project-related impacts on SBKR-occupied habitat within the LCRSP study area. Indirect impacts to SBKR would be reduced to a level below significance as the result of the implementation of that measure.

Indirect impacts to other plant and wildlife within the LCRSP study area would be less than significant based on the following presumptions: (1) dust control requirements for air quality management will limit the extent to which fugitive dust may affect plants; (2) the area that may be affected would be limited to the vegetation immediately adjacent to soil disturbance areas; (3) any effects are short term as dust is only generated during the grading period; and (4) landscape design features have been incorporated to restrict landscaping near open space areas to non-invasive plant species. Additionally, indirect impacts related to increased human-related disruption such as an increase in nighttime lighting, noise, road kills, and the presence of domestic pets may result in mortality of native wildlife species. Those impacts would be adverse but would be less than significant.

Project-related operational noise impacts will be minimal when compared with existing noise generated by the I-15 Freeway and the CEMEX USA quarry. Mitigation measures (Mitigation Measure 5-4 and Mitigation Measure 5-7) have been formulated to reduce noise impacts on protected species. Similarly, light impacts will be minimized with the implementation of design features aimed at shielding light away from natural open space areas, as incorporated as a mitigation measure (Mitigation Measure 5-7) below. Unrestricted access and habitat

[127]/ As reported by the USEPA: "Little information exists on the specific types and local abundance of predators that feed on the San Bernardino kangaroo rat. Potential native predators include the common barn owl, great horned owl, long-eared owl, grey fox, coyote, long-tailed weasel, bobcat, badger, San Diego gopher snake, California king snake, red diamond rattlesnake, and southern Pacific rattlesnake, among others. Domestic cats (*Felis cattus*) are known to be predators of native rodents and have the ability to reduce population sizes of rodents. Predation of San Bernardino kangaroo rats by domestic cats has been documented" (Source: Zembral, Richard and Hoffman, Susan, Environmental Assessment of the Santa Ana Watershed Program, 2000-2002, United States Environmental Protection Agency, December 2000, p. 64).

degradation will be effectively minimized through mitigation (Mitigation Measure 5-7). Because coyotes are known to prey on domestic pets, unnatural predation by domestic pets on native species is anticipated to be minimal and constitutes a less-than-significant impact due to the presence of coyotes within the open space areas.

Indirect impacts to wildlife movement associated with proximity to human habitat may result from the proposed project. Edge effects such as increased lighting, noise, and domestic pets are not, however, anticipated to substantially reduce the functions and values of the existing wildlife movement corridor through Lytle Creek Wash. Due to the width of the proposed open space area (approximately 2,100 feet-wide at it narrowest point in the LCRSP study area under the I-15 Freeway) indirect effects associated with the development are likely to dissipate over this distance and may be limited to the edge of the open space shared with the development. Indirect effects to wildlife movement in Lytle Creek will also be lessened through mitigation (Mitigation Measure 5-7) lessening indirect impacts to the SBKR; therefore, indirect impacts to wildlife movement are deemed to be less than significant.

4.5.5.3 Cumulative Impacts

Environmental Impact 5-10*. Implementation of the proposed project, in combination with other reasonably foreseeable future projects, will contribute incrementally to the continuing reduction in relatively natural, undisturbed open space areas found within the general project area and contribute to the progressive fragmentation of habitat areas and decline in species diversity throughout the region.*

Preliminary Determination 5-10*. Potentially significant unless mitigation incorporated.*[128]

Biological resource values within, adjacent to, and outside the LCRSP study area were determined by consideration of several factors, including the overall size of habitats to be affected, previous land uses and disturbance history, surrounding environments and regional context, biological diversity and abundance, the presence of sensitive and special-status species (including these species' importance to regional populations), and the degree to which the LCRSP study area habitats are limited or restricted in distribution on a regional basis.

For the purpose of analyzing cumulative biological resource impacts, several criteria were used to establish the scope of the analysis:

- For impacts related to sensitive plant communities, sensitive wildlife species, and wildlife movement corridors, as illustrated in Figure 4.5-6 (Regional Impact Analysis Study Area) and described in Table 4.5-21 (Regional Analysis of Impacts to Suitable Habitat for Sensitive Wildlife Species Observed or Expected within Biological Cumulative Impact Study Area), the geographic extent was established to encompass the open space within southwestern San Bernardino County. This roughly 187,000-acre area contains approximately 64,486-acres of open space and contains a regional complex of relevant

[128]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal species or eliminate important examples of the major periods of California history or prehistory and (2) have impacts that are individually limited, but cumulative considerable.

habitats, species' populations, and biological systems bounded on the north by higher mountain elevations, on the south by extensive urban development within Riverside and San Bernardino Counties, on the east by the desert environs of the Banning Pass, and on the west by substantial urban development within incorporated foothill cities. This area, identified as the "biological cumulative impact study area" (BCISA or regional study area), is thought to provide a meaningful, regional ecological and biological unit upon which to base the cumulative impact analysis.

For RAFSS and RAFSS only, the assessment examined cumulative impacts in the broader context of the distribution of all RAFSS (including Los Angeles, San Bernardino, and Riverside Counties) and the broader context of all alluvial fan sage scrub within the coastal southern California floristic province (including Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties).

- The assessment considered past, present, and reasonably foreseeable future projects (within the next fifteen years), including federal, non-federal, and private actions to the extent that information was available and deemed to be reliable and accurate. In order to accomplish this, specific and general plans for the County and cities within the relevant geographic region were reviewed, interviews were conducted with appropriate municipal planning department staff, and information collected during previous EIR review processes was compiled (where available). Information on relevant projects was also utilized.

  In completing the cumulative biological analysis for this project, it was most important to focus on those projects with associated impacts that would make measurable contribution to cumulative impacts. That is, it is most important to include those projects that are of a size and scale and support native and naturalized habitats that support regionally noteworthy resources (e.g., sensitive habitats, plant and wildlife species populations). It is also deemed important to identify and delineate a BCISA that provides an analysis based on regional biological systems. Appropriately, the BCISA is not the same as the cumulative study area for other analysis (e.g., traffic).

  The following partial list of projects represents a partial listing of project used in this analysis: (1) "Agua Mansa Industrial Corridor Specific Plan" (4,285 acres) (Cities of Colton and Rialto, County of San Bernardino); (2) "Arboretum Specific Plan" (458 acres) (City of Fontana); (3) "Renaissance Rialto" (1,500 acres) (City of Rialto); (4) "Rio Vista Specific Plan" (918 acres) (County of Riverside); and (5) "Lytle Creek North Planned Development Project" (677 acres) and "Glen Helen Specific Plan" (3,400 acres) (County of San Bernardino). Each of these is relatively large in size and contains substantial areas of native and natural habitats potentially supporting sensitive habitats and species.

- Potentially affected resources were categorized and addressed in accordance with their sensitivity (scarcity), significance (importance to habitat functions and values), and role in ecosystem sustainability (contribution to biological diversity). In this manner, all resources potentially affected were considered; however, focus was placed on those resources upon which cumulative impacts potentially have the greatest cause-and-effect implications. Those resources include plant communities and habitats identified as highest priority for inventory under the CNDDB, State and federal listed species, species of special concern, and species identified as endangered or rare by the CNPS.

- Because the analysis considers cumulative impacts to be additive as well as potentially synergistic in their effects, the concept of "thresholds for impacts" (beyond which resource functions and values are lost despite the persistence of resources in limited amounts) was taken into consideration. The thresholds used for the cumulative impacts analysis were the same as used for the direct and indirect impacts analysis.

- Data were collected from the Cities of Fontana, Highland, Rancho Cucamonga, Redlands, Rialto, and San Bernardino and the Counties of Riverside and San Bernardino. Data was extracted from general plan and specific plan maps. In areas where open space areas overlapped with proposed developments, the proposed development was chosen to represent the reasonably foreseeable conditions within those areas. Where overlaps occurred, city-generated data was given precedence over county-generated data.

- The determination of whether or not a project-related impact contribution is cumulatively considerable was based on a number of quantitative and qualitative considerations. These included the extent of existing resource (e.g., sensitive plant communities, sensitive species habitats) within the BCISA, the degree to which connectivity and exchange would be effected on a cumulative basis, the criticality of the role the resource plays in biological systems and/or ecosystem sustainability, and the degree of sensitivity a resource possesses as compared to its additional cumulative losses (e.g., impacts to a habitat of a particularly scarce species occupying a relatively small habitat area within the BCISA could be deemed cumulatively considerable at even a one percent loss of habitat on a cumulative basis; a sensitive species occupying habitats that are much more extensive within the BCISA could sustain a substantially larger percentage of losses of habitat before impacts would be deemed cumulatively considerable).

SoCalGas holds an easement for a natural gas line of which a segment traverses a portion of Neighborhood I and continues off-site, a portion of which traverses County-owned property. The land-use planning for the proposed LCRSP takes into consideration a small portion of this existing easement, including a 3.9-acre on-site segment which traverses Neighborhood I and the 3.6-acre off-site segment which extends to the north onto a parcel owned by the County. Others portions of that easement, extending beyond the limits of the LCRSP study area, were not considered in this analysis.

There is currently a 16-foot-wide maintenance road that runs through the applicable segments of the 100-foot-wide SoCalGas easement. The LCRSP project proposes no improvements within that easement area. It is, however, anticipated that SoCalGas, at a future date, and independent of the LCRSP project, may undertake improvements to the existing maintenance road, including installing rip-rap and constructing a V-ditch in this easement area to address drainage and erosion issues. These improvements will be addressed independent of the proposed LCRSP project. Because of its proximity and potential effect on a small portion of the project site, the SoCalGas gas line project has been included in this cumulative analysis.

As indicated in Table 4.5-25 (Impacts to Plant Communities within the SoCalGas Easement), the 7.5-acre (3.9 on-site and 3.6 off-site acres) SoCalGas easement included within the LCRSP study area supports 1.0 on-site acre of California buckwheat scrub/disturbed, 3.7 (1.8 on-site and 1.9 off-site) acres of southern willow scrub, 1.7 (1.0 on-site and 0.7 off-site) acre of mule fat scrub, 0.9 off-site acre of ruderal, 0.1 on-site acre of disturbed, and 0.1 off-site acre of developed.

Table 4.5-25
IMPACTS TO PLANT COMMUNITIES WITHIN THE SOCALGAS EASEMENT

Plant Community	Existing Conditions (acres)		Proposed Impacts (acres)	
	On-Site	Off-Site	On-Site	Off-Site
Mule Fat Scrub	1.0	0.7	0.3	0.1
Developed	0.0	0.1	0.0	0.0
Southern Willow Scrub	1.8	1.9	0.4	0.3
Ruderal	0.0	0.9	0.0	0.1
Disturbed	0.1	0.0	0.0	0.0
California Buckwheat Scrub/Disturbed	1.0	0.0	0.1	0.0
Total	3.9	3.6	0.8	0.5

Source: PCR Services Corporation

Because the extent, if any, of future improvements that may be undertaken by SoCalGas in the SoCalGas easement is unknown, for the purposes of this analysis, the analysis assumes that future SoCalGas-initiated improvements within the SoCalGas easement will permanently impact approximately 1.3 (0.8 on-site and 0.5 off-site) acres, including 0.1 on-site acre of California buckwheat scrub/disturbed, 0.7 (0.4 on-site and 0.3 off-site) acre of southern willow scrub, 0.4 (0.3 on-site and 0.1 off-site) acre of mule fat scrub, and 0.1 off-site acre of ruderal.

Cumulative impacts to sensitive wildlife species' suitable habitats are illustrated in Figure 4.5-30 (Regional Cumulative Impacts to Habitat Types) and summarized in Table 4.5-26 (Cumulative Impacts to Sensitive Wildlife Species Suitable Habitats within Biological Cumulative Impact Study Area). Given the scale of the BCISA (64,486 acres of open space), only an assessment of general open space habitat types (e.g., scrub, chaparral, grassland, and riparian) was considered practicable. Cumulative impacts on sensitive species and habitats are separately discussed below.

It is acknowledged that there are inherent limitations of this analysis. Nonetheless, the analysis is based on the best reasonably available information; is as analytically rigorous as reasonably possible based on available information; and attempts to accurately reflect the order of magnitude for potential impacts to sensitive species and habitats (i.e., significant or less than significant). In addition, it is recognized that the sensitivity levels or concern of certain species and/or habitats warrant habitat or species-specific analyses. These include listed species (e.g., SBKR and LBV), habitats of concern (e.g., RAFSS), species of special concern (e.g., western spadefoot toad, BUOW, and LAPM), and raptor foraging habitat.

- **Scrub-Species**. Within the BCISA, a total of about 31,502 acres of scrub habitat were mapped. Although not all scrub habitat exists as RSS, this number is useful in determining a rough estimate of cumulative impacts since the faunal and floristic characteristics of various scrub habitats overlap to a high degree. The amount of scrub habitat within approved and pending projects, including the proposed project, is about 3,591 acres (11 percent) of the total existing in the relevant BCISA. This level of loss, while not incremental, cannot be shown to reduce common and general plant and animal populations to a level that threatens their sustainability. Despite the presence of resources in limited amounts, cumulative impacts to this plant community would not exceed the threshold beyond which resource functions and values are irreparably lost.

Table 4.5-26
CUMULATIVE IMPACTS TO SENSITIVE WILDLIFE SPECIES SUITABLE HABITATS WITHIN BIOLOGICAL CUMULATIVE IMPACT STUDY AREA

General Habitat Type	Column A[1]	Column B[2]	Column C[3]	Column D[4]
	Available/Existing Acreage within the BCISA (acres)[5]	**Acreage of Proposed Cumulative Impacts within BCISA Study Area[6]** (% Column A)	**Proposed Project Impact Acreage[7]** (% Contribution to Column B)	**Acreage Subject to Long-Term Preservation[8,9]** (% Column A)
Scrub (including RAFSS)	31,502	3,591(11%)	608 (17%)	9,990 (32%)
Chaparral	25,981	4,747 (18%)	188 (4%)	1,922 (7%)
Grassland	5,766	2,193 (38%)	330 (15%)	93 (2%)
Riparian	1,237	6 (0.5%)	4 (67%)	503 (41%)
Total	64,486	10,537	1,130	12,508

Notes:
1. "Column A" summarizes all existing acres of general habitat types.
2. "Column B" summarized the cumulative impacts to those general habitat types, inclusive of the LCRSP.
3. "Column C" summarizes the contribution of only the LCRSP to those cumulative impacts.
4. "Column D" summarizes the general habitat types that are projected to be preserved in the long-term.
5. PCR biologists derived the acreages for the BCISA through interpretation of aerial photography and ground thruthing for accuracy, as needed.
6. Included all general habitat types within approved, pending, and reasonably foreseeable future projects. Impact acreages were calculated through GIS analysis.
7. Due to the large-scale at which acreages were derived for the BCISA, the acreages represented in this column for the LCRSP are rounded to the nearest whole acre but do not vary from the actual total by 0.5±-acre.
8. Open space preservation includes project-proposed open space areas (including LCRSP).
9. Including other open areas, such as vineyards, agriculture, and ruderal areas.

Source: PCR Services Corporation

Table 4.5-27
CUMULATIVE IMPACTS TO RIVERSIDEAN ALLUVIAL FAN SAGE SCRUB

	Total Within BCISA (acres)	**Proposed and Existing Open Space within the BCISA[1]** (LCRSP study area alone) (acres)	**Approved, Pending, and Reasonably Foreseeable Future Projects[1]** (LCRSP study area alone) (acres)[2]	**Percent Cumulative Impact to Resource within the BCISA** (LCRSP study area alone) (%)
RAFSS	10,638	7,064 (391[3])	1,098 (520[3])	10% (5%)

Notes:
1. This analysis entailed the gathering of data from city and county jurisdictions regarding proposed, approved, and reasonably foreseeable future projects and open space areas. EIRs, general plans, and large-scale specific plans were analyzed and the relevant information was extracted. Where available, GIS data for projects and open space within the BCIA were utilized for the RAFSS cumulative impact analysis. These data were then overlain on the comprehensive mapping of existing RAFSS to calculate acreages of habitat to be impacted in the BCISA. Where GIS information was not available for RAFSS in the BCISA, aerial photography interpretation was relied upon, followed by ground truthing and GIS analysis.
2. Acreage in parentheses represents acreage of proposed RAFSS disturbance in the LCRSP study area.

Source: PCR Services Corporation

Although the proposed project will incrementally contribute to the cumulative loss of RSS habitat within the region, cumulative impacts on scrub-species are deemed adverse but less than significant and no mitigation is required or recommended.

- **Grassland-Species**. As indicated in Table 4.5-23 (Regional Analysis of Impacts to Suitable Habitat for Sensitive Wildlife Species Observed or Expected within Biological Cumulative Impact Study Area), the analysis of impacts to grassland-dependent sensitive wildlife species indicated that the proposed project would directly impact about four percent (224 acres out of 5,766 acres of potentially suitable grassland habitat within the BCISA. Impacts to grassland-dependent species are deemed adverse but less than significant and no mitigation is required or recommended.

  As indicated in Table 4.5-26 (Cumulative Impacts to Sensitive Wildlife Species Suitable Habitat), the analysis of cumulative impacts to sensitive wildlife species identified a total of 2,193 acres (38 percent) of grassland habitat within the BCISA that occurs within approved or pending projects. Potentially suitable habitat in the form of grasslands includes other open areas such as vineyards, other agriculture, and ruderal areas. These communities are not considered sensitive and are generally the result of disturbance. Due to the coarse-scale nature of the mapping for this analysis, the grassland designation should not be interpreted to signify native grasslands.

  The two species that are more or less solely dependent upon grassland-type habitats include the western spadefoot and BUOW. Two additional categories of species that are highly dependent upon grasslands but may also utilized other habitat types include raptors (for foraging) and LAPM. Each of those species is separately discussed below.

  - ◊ **Western spadefoot**. The western spadefoot occurs within open grassland areas or near quiet streams with loose soil for burrowing and where temporary pools are available for reproduction. This species, however, is generally restricted to grassland areas near seasonal ponds or calm streamsides utilized for breeding. As a result, this species does not occur uniformly throughout grassland habitat and is likely sparsely distributed throughout the region. According to the CNDDB, no occurrences of this species have been recorded within the BCISA[129] and this species has not been detected within the LCRSP study area.

  - ◊ **Burrowing owl**. With respect to the BUOW, this species prefers berms, ditches, and grasslands adjacent to rivers, agricultural, and scrub areas. Although BUOW have been observed within the "SBKR Conservation Area," this species has not been detected during any of the surveys within the areas proposed for development impact within the LCRSP study area. According to the distribution throughout the BCISA, based upon CNDDB occurrences, the nearest occurrence is approximately 1.5 miles south of the LCRSP study area[130].

    Cumulative impacts to the western spadefoot toad and BUOW are, therefore, likely less than the 38 percent of cumulative grassland habitat which is anticipated to be lost in the BCISA. As these species have not been detected within the impact footprint of the proposed project, the incremental contribution of

[129]/ *Op. Cit*., RareFind, Database Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species and Communities, 2008.
[130]/ *Ibid*.

the proposed project to cumulative impacts would be less than significant and no mitigation is required or recommended.

- **Scrub, Chaparral, and Riparian Species**. As indicated in Table 4.5-23 (Cumulative Impacts to Sensitive Wildlife Species Suitable Habitat within Biological Cumulative Impact Study Area), the analysis of cumulative impacts to sensitive wildlife species dependent on these habitat types identified a total of 11 percent (3,591 out of 31,502 acres), 18 percent (4,747 out of 25,981 acres), and 0.5 percent (6 out of 1,237 acres) to scrub, chaparral, and riparian habitats, respectively. With the exception of the LBV and SBKR, which are separately discussed below, sensitive wildlife species dependent upon these habitat types are neither State nor federally-listed as threatened or endangered. The loss of individuals due to these relative levels of habitat loss would, therefore, not threaten their regional populations within the BCISA. Excluding LBV and SBKR, which are separately addressed below, the potential cumulative loss or disruption of potentially suitable habitat represents an adverse but less-than-significant impact to regional populations of these species and no mitigation is required or recommended.

  - **Least Bell's Vireo**. The analysis of cumulative impacts to the LBV are based upon the coarse-scale mapping of riparian habitat within the BCISA and the amount of this potentially suitable habitat that falls within approved, pending, and reasonably foreseeable future projects. Approved, pending and reasonably foreseeable future projects total about 6.0 acres of potentially suitable riparian habitat for the LBV. These related projects, including the LCRSP, represent a loss of about 0.5 percent of the potential LBV riparian habitat within the BCISA.

    Several proposed and designated preserves were identified and mapped totaling approximately 503 acres or about 41 percent of the suitable LBV riparian habitat within the BCISA. These preserves are primarily locating in and around the Santa Ana River, Lytle and Cajon Creeks, Sycamore Flat, and the Etiwanda Fan.

    Because of its close proximity and potential effect on the proposed project to effectively mitigate for LBV, relevant to this project's analysis of cumulative impacts are those activities potentially associated with the future SoCalGas natural gas-line project. Potential impacts associated with the future SoCalGas gas-line project could permanently impact about 1.1 acre (on-site or off-site) of LBV habitat (0.7 acre of southern willow scrub and 0.4 acre of mule fat scrub).

    As illustrated in Figure 4.5-31 (Sycamore Flat Riparian Mitigation Area), the Sycamore Flat East riparian corridor provides for opportunity to mitigate potential impacts to LBV under the LCRSP project, which requires mitigation for impacts to 1.7 acres of southern cottonwood willow riparian and 1.2 acres of mule fat scrub. Given that there are approximately 18.9 acres of existing riparian habitat within the Sycamore Flat East riparian corridor that can be preserved and enhanced, the future SoCalGas project will not have an effect on the proposed project's ability to effectively mitigate for LBV.

    The proposed project will add incrementally to the cumulative impacts to LBV habitat within the BCISA but, although adverse, the impacts from the proposed project would not be deemed cumulatively significant in light of the amount of habitat or this species that remains available and protected.

◊ **Los Angeles Pocket Mouse Habitat**.[131] About 37,268 acres of suitable LAPM (scrub and grassland) habitat exist within the BCISA. In order to complete an analysis of cumulative impacts to LAPM habitat within the BCISA, PCR biologists performed an assessment of the amount of suitable habitat within currently approved, pending, and reasonably foreseeable future projects. Approved, pending, and reasonably foreseeable future projects total 5,784 acres (3,591 acres of scrub and 2,193 acres of grassland) of suitable LAPM habitat (scrub and grassland). These projects, including the proposed LCRSP, represent a loss of approximately 15 percent of the potential LAPM habitat within the BCISA.

The proposed project will add incrementally to the cumulative impacts to LAPM habitat within the BCISA but the impacts from the proposed project, while adverse, would not be deemed cumulatively significant in light of the amount of habitat that remains available for this species in the BCISA.

- **Raptor Foraging Habitat**. Approximately 38,505 acres of suitable raptor foraging habitat (scrub, riparian, and grassland) exist within the BCISA. In order to complete an analysis of cumulative impacts to raptor foraging habitat within the region, PCR biologists performed an assessment of the amount of suitable foraging habitat within currently approved, pending, and reasonably foreseeable future projects. Approved, pending, and reasonably foreseeable future projects (including but not limited to single-family residences, commercial, and mining) total approximately 5,790 acres of suitable raptor foraging habitat (scrub, grassland, and riparian). These approved, pending, and reasonably foreseeable future projects represent a cumulative loss of approximately 15 percent of the available raptor foraging habitat within the BCISA.

  Several proposed and designated preserves were identified and mapped totaling approximately 10,586 acres or about 27 percent of the existing raptor foraging habitat within the BCISA. These preserves are primarily locating in and around the Santa Ana River, Lytle and Cajon Creeks, and the Etiwanda Fan. The proposed project will add incrementally to the cumulative impacts to raptor foraging habitat within the BCISA but the impacts from the proposed project, while adverse, would not be cumulatively significant in light of the amount of habitat that remains available for this species in the BCISA and no mitigation is required or recommended.

- **Riversidean Alluvial Fan Sage Scrub**. An analysis was conducted to determine the amount of development that has and will occur within approved, pending, and reasonably foreseeable future projects in the BCISA within areas currently containing RAFSS. Based upon the results of the regional analysis of remaining RAFSS, as illustrated in Figure 4.5-32 (Regional Cumulative Impacts to Riversidean Alluvial Fan Sage Scrub), about 10,638 acres of RAFSS remains within the BCISA. Of these 10,638 acres, approximately 1,098 acres (10 percent) are within the borders of approved, pending, and reasonably foreseeable future projects, including 519.6 acres within the LCRSP study area. Table 4.5-27 (Cumulative Impacts to Riversidean Alluvial Fan Sage Scrub) summaries the anticipated cumulative impacts to RAFSS attributable to approved, pending, and reasonably foreseeable future projects within the BCISA.

[131]/ Several proposed and designated preserves were identified and mapped, totaling approximately 10,083 acres or about 27 percent of the suitable LAPM habitat within the BCISA. These preserves are primarily located in and around the Santa Ana River, Lytle and Cajon Creeks, and the Etiwanda Fan.

An assessment was conducted to determine whether cumulative impacts to RAFSS were greater when cumulative impacts were evaluated on a broader geographic scale.[132] An inventory of the remaining habitat historically classified as RAFSS[133,134] within all of Los Angeles, San Bernardino, and Riverside Counties was performed. An even broader inventory of the recently classified alluvial fan sage scrub within the entire cismontane southern California floristic province was completed in recognition of more recent habitat classification research. This research, particularly by Barbour and Wirka[135], does not view RAFSS as materially different from subcategories or groups of alluvial fan sage scrub which are primarily distinguished by geography.

Within this larger geographic area, in the case of habitats constituting the historically defined RAFSS, there remains approximately 14,674 acres of RAFSS habitat, of which 1,178 acres (8 percent) is projected to be directly impacted by approved, pending, and reasonably foreseeable future projects, including the LCRSP. As indicated in Table 4.5-28 (Alluvial Fan Sage Scrub in Southern California [2008]) and Figure 4.5-33 (Alluvial Fan Sage Scrub Regional Analysis), within the greater cismontane southern California floristic province, approximately 16,770 acres of alluvial fan sage scrub habitat remains, of which approximately 1,181 acres (7 percent) are projected to be directly impacted by approved, pending, and reasonably foreseeable future projects, including the LCRSP.[136]

The total remaining AFSS at the 26 major drainages containing AFSS in the region encompasses approximately 16,770 acres (of which 15,634 is outside of the LCRSP study area). This total outside of the LCRSP study area consists of about 6,933 acres of mature and intermediate AFSS that is still within an active hydrologic regime; 2,009 acres of AFSS that is cut off from a hydrologic regime; 1,865 acres of disturbed AFSS; and 4,827 acres of pioneer-stage AFSS.[137]

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[132]/ As with the BCISA, both of the expanded regional analyses entailed contacts with city and county planning agencies to ascertain projects that were either approved, planned, and reasonably foreseeable that would impact alluvial fan sage scrub habitat.

[133]/ Smith, R. L., Alluvial Scrub Vegetation of the San Gabriel River Floodplain, California, Madrono, Vol. 27. No. 3, July 23, 1980, pp. 126-138.

[134]/ Hanes, T. L., R. D. Friesen, and K. Keane, Alluvial Scrub Vegetation in Coastal Southern California, In Proceedings of the California Riparian Conference, September 22-24, 1988, 1989.

[135]/ Barbour, Michael G. and Wirka, Jeane, Classification of Alluvial Scrub in Los Angeles, Riverside, and San Bernardino Counties, United States Fish and Wildlife Service, Final Contract Report FG5638-R5, April 15, 1997.

[136]/ The region-wide inventory was completed by PCR in February 2008. The study methodology consisted of initially obtaining current color aerial photographs and mapping vegetation types at the major stands remaining today, including 26 major drainages within the region, as defined by Holland's California floristic province for southern California. These drainages were initially identified using the body of scientific literature on alluvial fan sage scrub including Barbour and Wirka, Smith (Source: Smith, Darren Scott, Floristic Composition and Diversity of Diegan Alluvial Sage Scrub Vegetation, A Thesis Presented to the Faculty of San Diego State University, Spring 1996), Stafford and Quinn, as well as earlier work by Hanes *et al*. (Source: Hanes, T. L., Friesen, R. D. and Keane, K., Alluvial Scrub Vegetation in Coastal Southern California, in Proceedings of the California Riparian Conference. September 22-24, 1988). After preliminary mapping on the aerial photographs, a reconnaissance-level verification of the mapping was performed in the field for all of the drainages under study. At the same time, the AFSS vegetation at each of the drainages was broadly characterized and dominant species were recorded.

[137]/ The dominant species found by PCR in the 26 drainages examined showed considerable overlap. In particular, scale-broom was a co-dominant species in 24 (96.2 percent) of the drainages; California buckwheat was co-dominant in 22 (84.6 percent) of the drainages; and *Opuntia* spp. was co-dominant in 13 (50 percent) of the drainages. The overlap in habitat structure (that is, the physical form) and plant species is also indicative of the expected overlap in all but a relatively few wildlife species. As a result, the opportunity to meaningfully mitigate for project-related impacts to habitat and general plant and wildlife species, in kind on a regional basis, reasonably exists in any one of these 26 drainages.

Table 4.5-28
ALLUVIAL FAN SAGE SCRUB IN SOUTHERN CALIFORNIA (2008)

Watershed Name	**Mature and Intermediate Alluvial Scrub** (Active Hydrologic Regimes) (acres)	**Alluvial Scrub** (Outside Active Hydrologic Regimes) (acres)	**Disturbed Alluvial Scrub** (acres)	**Barren Wash** (Pioneer Alluvial Scrub) (acres)	**Total** (acres)
Santa Ana River Wash	1,854	-	1,005	725	3,611
Cajon Wash	1,434	-	199	733	2,367
San Jacinto River	415	3	-	494	912
Bautista Creek/Wash	48	16	8	3	74
Big Tujunga Wash	207	104	-	234	545
Deer Creek/Day Creek	38	842	-	12	892
San Antonio Creek	694	-	10	18	722
San Gabriel River	250	-	-	162	411
East Etiwanda Creek	13	675	7	10	705
Cucamonga Creek	10	100	62	49	221
Mill Creek	325	-	154	489	968
Lytle Creek[1]	1,088	-	397	1,490	2,975
San Timoteo Wash	58	-	-	108	167
San Sevaine	25	-	-	80	105
Castaic Creek	7	32	2	-	41
Lake Henshaw	-	-	-	38	38
San Francisquito Canyon	84	-	17	-	101
San Gorgonio Wash	423	196	-	155	774
San Juan Creek	62	-	-	100	162
San Luis Rey River	33	-	-	-	33
Santa Clara River	205	-	12	159	377
Santiago Creek	29	-	-	67	96
Temecula Creek	171	-	-	32	203
Temescal Wash	27	41	-	-	68
Trabuco Canyon	57	-	-	126	182
Vail Lake	12	-	8	-	20
Total[1]	7,569	2,009	1,881	5,311	16,770

Notes:
1. Acreage in parenthesis represents the portion of RAFSS within the LCRSP study area.

Source: PCR Services Corporation

On a cumulative basis, taking into consideration the role of the RAFSS community within the BCISA to provide habitat for the plant and animal species described in the biological resources analysis, a 10 percent cumulative loss of habitat would not result in declines of numbers below self-sustaining levels for any particular species and would not result in the remaining AFSS in the BCISA falling below self-sustaining levels as a community.

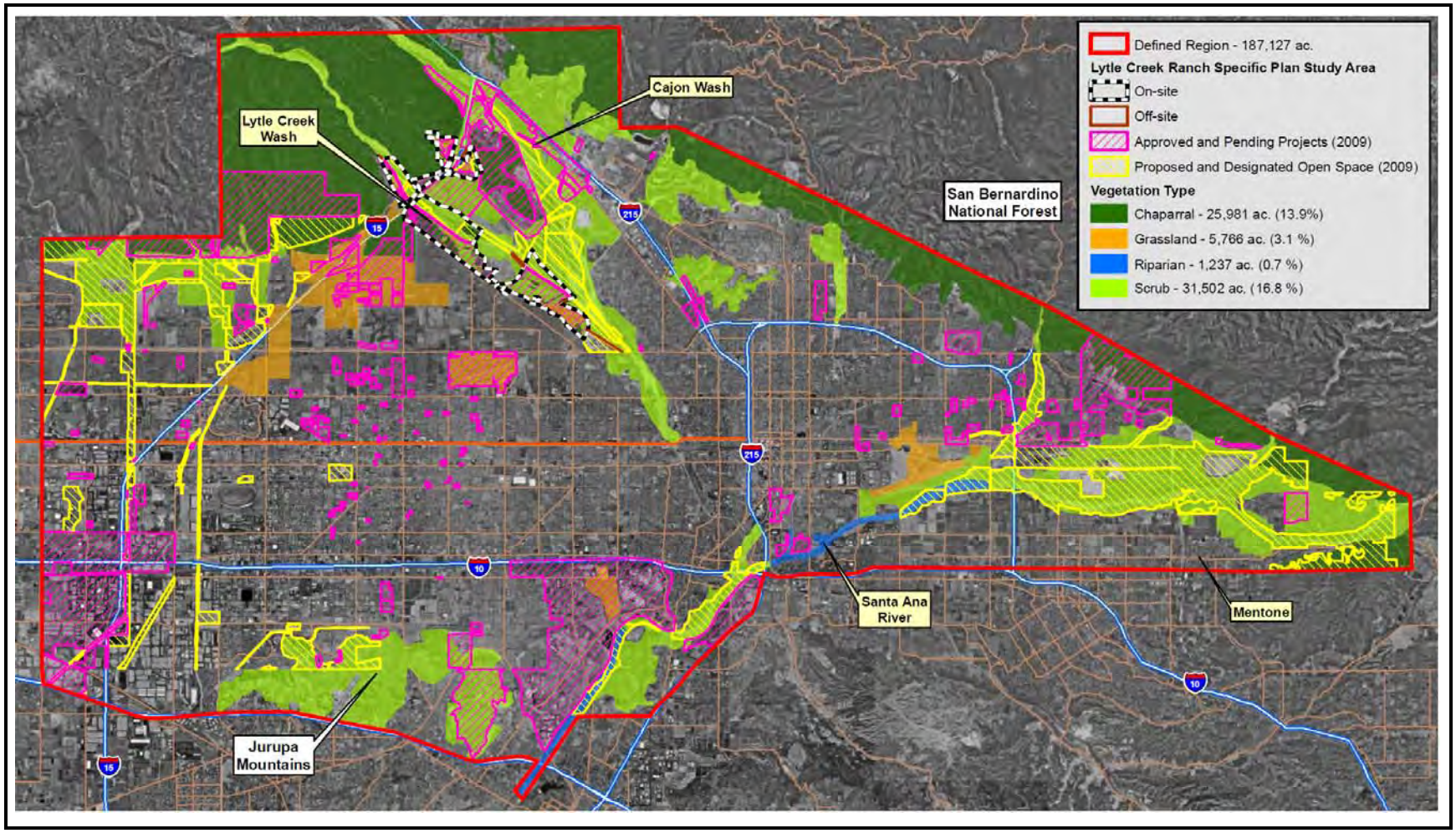
Differentiating between RAFSS and AFSS, the cumulative impacts to AFSS as a habitat for sensitive plants and animal species is, therefore, adverse but not deemed significant and no mitigation is required or recommended. In other words, RAFSS is the habitat for a wide variety and number of plant and animal species and, with the exception of the SBKR, these species are expected to continue to occur at self-sustaining levels throughout this habitat within the entire BCISA taking into consideration the impacts of this project and the cumulative development considered. Nonetheless, RAFSS is a plant community with an assemblage of plant and animal species that is unique and restricted in distribution within the region. In addition, this community is found along linear wash features that have relatively high perimeter to area ratios which make them more susceptible to adverse edge effects and more easily fragmented by development along their length (such as from bridge crossings, flood control improvements, and groundwater recharge facilities). Therefore, prior to consideration of any compensatory mitigation, cumulative impacts to RAFSS, like project-related impacts, would be potentially significant. At the project level, a number of mitigation measures have been formulated addressing both the provision of compensatory resources for impacts to RAFSS (Mitigation Measure 5-1) and, with regards to SBKR, the avoidance, preservation, enhancement, and creation of on-site habitat and off-site connectivity, minimization of impacts, and the implementation of a management program to enhance sustainability (Mitigation Measure 5-7). From a cumulative impact perspective, implementation of those same measures will reduce the project's incremental contribution to a less-than-significant level by facilitating the assemblage of large blocks of continuous preserved habitat.

It is noted that the "Western Riverside County Multiple Species Habitat Conservation Plan" (Western Riverside County MSHCP), as adopted by the County of Riverside in 2003, allowed for the potential take of 34 percent (2,710 acres) of RAFSS out of a total of 7,940 acres within the Western Riverside County MSHCP study area[138]. The Western Riverside County MSHCP concluded that although 66 percent of this habitat would be included as "conserved habitat," substantial impacts to RAFSS scrub would remain due to the patchy distribution of this vegetation community in the plan area and the loss of 34 percent of this sensitive habitat. Specific "features" incorporated therein, including the configuration of conserved lands and adaptive management and monitoring, were determined to reduce this 34 percent loss to a less than significant level.

In comparison, the BSICA includes 10,638 acres of RAFSS, of which only 10 percent (1,098 acres) are within the borders of approved, planned, or foreseeable future projects and at least 8,761 acres are within public ownership.[139] In addition, there are approximately 2,352 acres of habitat abutting the LCRSP study area that are within five separate conservation areas, including: (1) CEMEX USA mitigation area (154 acres); (2) San Bernardino County Sheriff's Facility woollystar preserve (128 acres); (3) San Bernardino County Flood Control District conservation area (475 acres); the (4) Vulcan Material Company conservation bank (1,378 acres); and (5) "SBKR Conservation Area" (216.8 acres). To this, the proposed LCRSP will add approximately 395.4 acres of open space within Lytle Creek, for a total dedicated habitat conservation area of about 2,747 acres, of which over 90 percent is RAFSS.

[138]/ County of Riverside Transportation and Land Management Agency (Dudek & Associates), Western Riverside County Multiple Species Habitat Conservation Plan, Draft Final MSHCP, June 17, 2003.

[139]/ Ownership was derived by a review of County assessor's ownership records for all parcels determined to contain RAFSS during the BCISA baseline mapping effort.



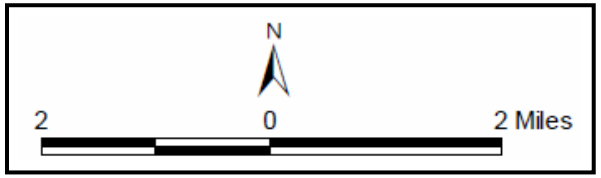


Figure 4.5-30
REGIONAL CUMULATIVE IMPACTS TO HABITAT TYPES
Source: PCR Services Corporation

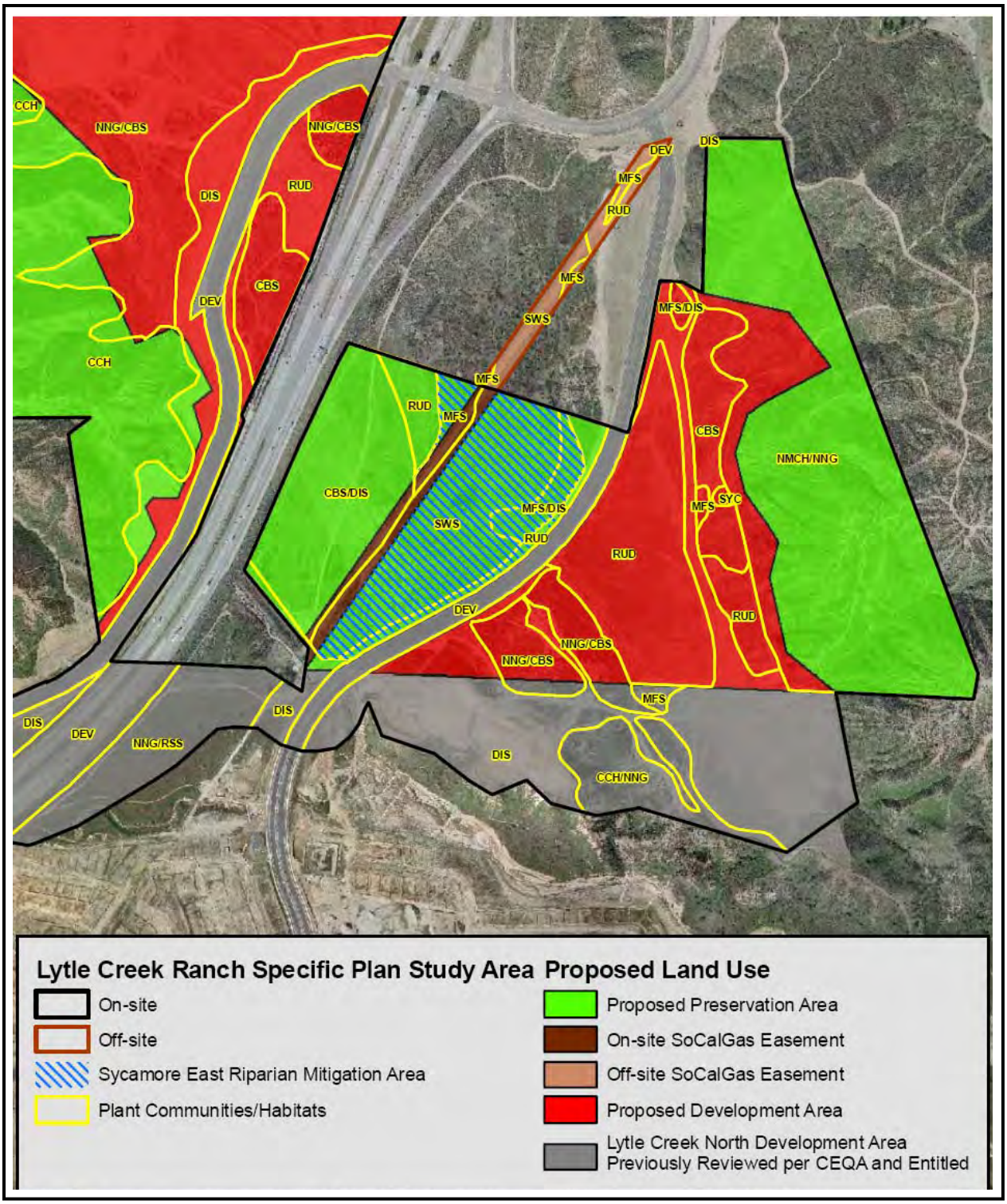
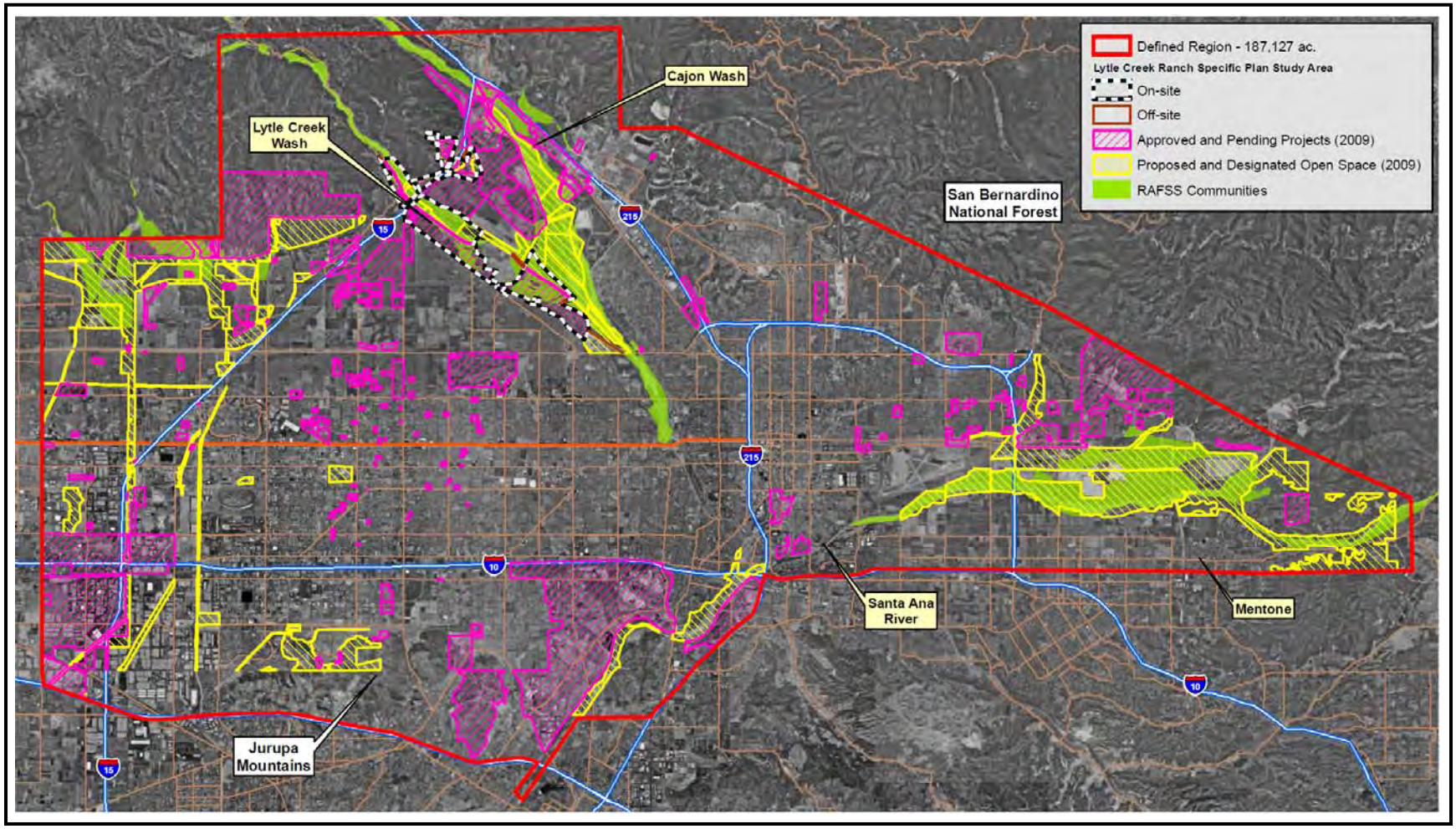


Figure 4.5-31
SYCAMORE FLAT RIPARIAN MITIGATION AREA
Source: PCR Services Corporation



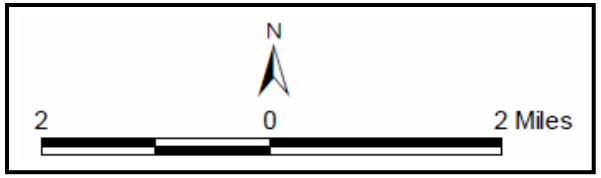


Figure 4.5-32
REGIONAL CUMULATIVE IMPACTS TO RIVERSIDEAN ALLUVIAL FAN SAGE SCRUB
Source: PCR Services Corporation

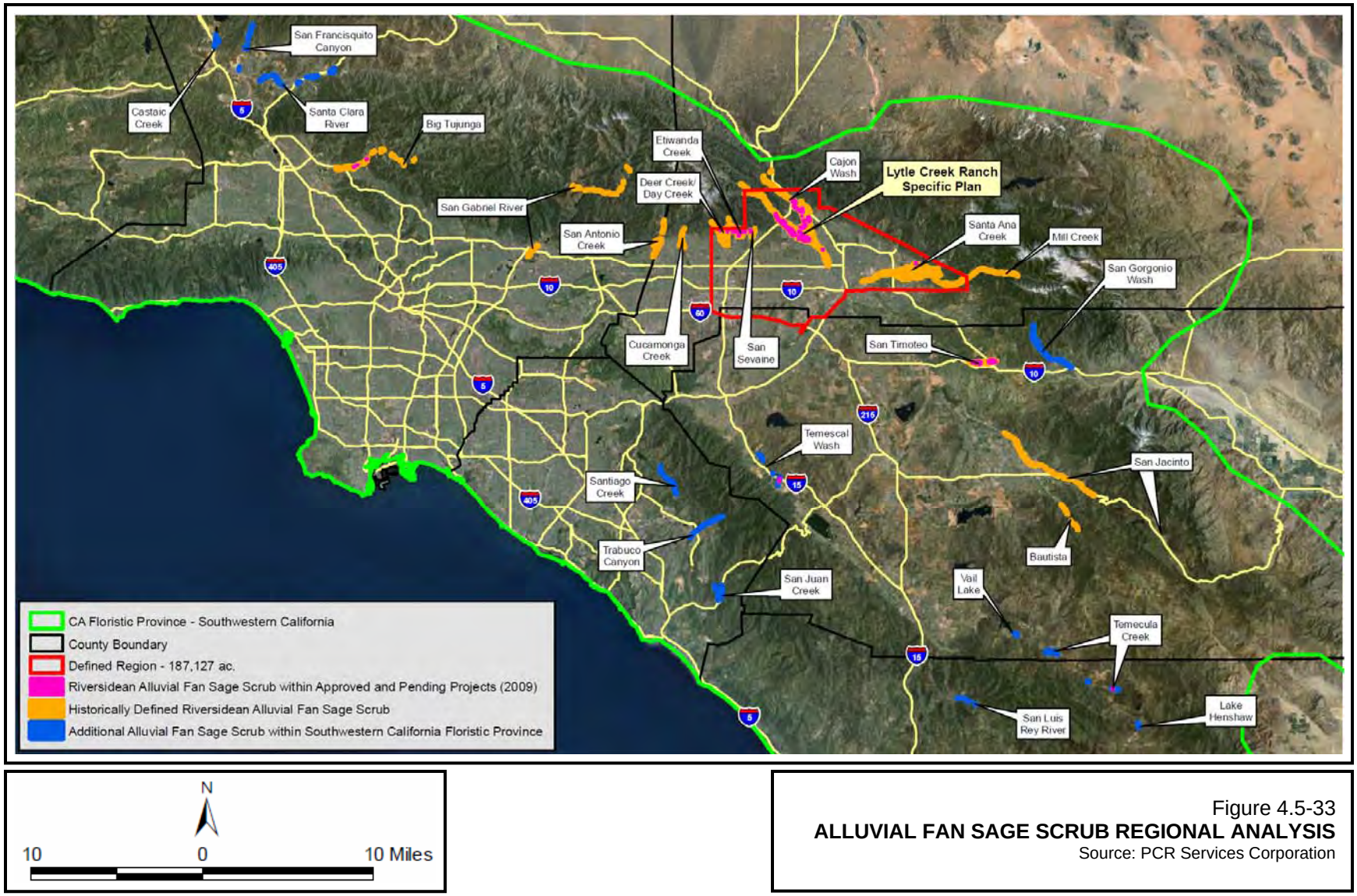


Figure 4.5-33
ALLUVIAL FAN SAGE SCRUB REGIONAL ANALYSIS
Source: PCR Services Corporation

After the project's 395.4-acre contribution to dedicated habitat conservation is made, a total of 7,064 acres (derived by GIS analysis during the BCISA baseline study effort), or 66 percent of the remaining RAFSS habitat within the BCISA, will be placed under permanent conservation. Without factoring in any future dedications for other projects in the region, this is highly comparable to the 66 percent of RAFSS targeted as "conserved habitat" in the Western Riverside County MSHCP. Through this preservation, it is expected that the contribution of RAFSS to regional biological diversity will be maintained along with its habitat function and value within regional biological systems.

- **San Bernardino Kangaroo Rat**. In order to assess potential cumulative impacts to SBKR habitat within the region, the assessment of cumulative impacts to RAFSS habitat was utilized. Of the approximately 10,638 acres of RAFSS, a total of about 1,098 acres (10 percent) will be cumulatively impacted within the BCISA. Not all of this, however, is necessarily considered suitable habitat for the SBKR.

  For the purposes of this assessment, as an approach to identifying potentially suitable habitat for the SBKR, it is meaningful to consider only alluvial scrub that is both within active hydrological regimes and viable in the long-term as suitable habitat (including P-RAFSS). Within the BCISA study area, these areas total about 7,530 acres. Of these, 769 acres (10 percent) will be cumulatively impacted by approved, pending, and reasonably foreseeable future projects. This level of potential cumulative loss is deemed significant on a regional basis. This determination is based on the endangered status of the species and the degree to which a seven percent cumulative loss, in the absence of mitigation, could accentuate the fragmentation and isolation of existing populations.

  The Lytle Creek and Cajon Creek SBKR population is, in its entirety, a single gene pool with exchange between animals upstream and downstream of the Cemex USA mining operation occurring by way of the active wash that flows through the center of the mining facility. As such, as illustrated in Figure 4.5-25 (Areawide Proposed and Dedicated Open Space), there are approximately 2,694 acres of occupied and/or potentially suitable habitat currently preserved in the vicinity of the proposed project which can support this species. To this, the project proposes to add 316.2 acres of currently occupied and potentially suitable habitat (representing an 11 percent increase).

  Because the SBKR is a federally-listed species, whether initiated by the proposed project or as a consequence of other approved, pending, and reasonable foreseeable future projects, no "take" would be permitted without federal authorization. In authorizing any "take" of the SBKR, the USFWS would have to first conclude that the proposed take and its associated mitigation and avoidance and minimization measures would not jeopardize the continued existence of the species or adversely modify its CHD.

  At the project level, a number of mitigation measure have been formulated addressing both the provision of compensatory resources for impacts to RAFSS (Mitigation Measure 5-1) and, with regards to SBKR, the avoidance, preservation, enhancement, and creation of on-site habitat and off-site connectivity, minimization of impacts, and the implementation of a management program to enhance sustainability (Mitigation Measure 5-7). From a cumulative perspective, implementation of those same mitigation measures will reduce the proposed project's incremental contribution to potential cumulative impacts to a less-than-significant level by facilitating the assemblage of large blocks of continuous preserved habitat.

- **Wildlife Movement**. Although the proposed project preserves the majority of Lytle Creek as a wildlife corridor within the LCRSP study area, development along the southern edge of the wash limits the area of available habitat that could be utilized for wildlife movement. In combination with the levee that has been built along the northern bank of LCNPD, the proposed project will reduce the width of the corridor used by wildlife in this area and would contribute to cumulative regional impact on wildlife movement corridors. The width of the existing Lytle Creek corridor varies from a minimum of about 1,200 feet at the I-15 Freeway underpass to a maximum of about 2,500 feet in Neighborhood III (across the "SBKR Conservation Area").

  With implementation of the proposed project, the minimum corridor width along Lytle Creek would remain at 1,200 feet at the I-15 Freeway undercrossing. The corridor would be somewhat constrained in Neighborhood III due to the presence of development on either side of the wash. In Neighborhoods II and IV, adjacent open space areas (including the confluence of Cajon Creek and the foothills north of the wash within the SBNF) help buffer the effects of any corridor narrowing.

  According to the scientific literature, a minimum corridor width necessary to maintain connectivity and use by large mammals is difficult to determine. As a point of reference; however, it has been recommended that mountain lions moving though a corridor greater than 1 km (0.62 miles) in length would need a corridor width of at least 400 meters (1,312 feet).[140,141] This is not to say mountain lions actually move across the LCRSP study area, rather this recommendation is noted to indicate the relative parameters for a large mammal that are typically considered in corridor design.

  Areas to be preserved along Lytle Creek will, therefore, provide for a continuous corridor along the wash that connects several biological mitigation open space sites and conservation banks near the confluence of Lytle and Cajon Creeks with the alluvial fan habitats and NFS lands to the north and northwest of the LCRSP study area. Recommended mitigation for indirect impacts to the SBKR will also minimize edge effects to the Lytle Creek corridor. Since no known future projects are proposed in the vicinity of Lytle Creek that would further constrict or impact this wildlife corridor, cumulative impacts to wildlife movement are not deemed significant.

  Cumulative impacts on wildlife movement would be less than significant. No mitigation for cumulative impacts to wildlife movement is required or recommended.

4.5.6 Recommended Mitigation Measures

- **Mitigation Measure 5-1**. Riversidean Alluvial Fan Sage Scrub. Two alternative compensatory approaches to Riversidean alluvial fan sage scrub (RAFSS) mitigation have been identified and are described herein. The first approach is based on an "appropriately-scaled ratio" of acres to be preserved to acres to be impacted. The second approach is based on a "habitat equivalency analysis" (HEA) incorporating the measurement and comparative analysis of common ecological metrics (or indicators)

[140]/ Beier, P., Dispersal of Juvenile Cougars in Fragmented Habitat, Journal of Wildlife Management 1995, 59:228-237.

[141]/ Hilty, J. A., Lidicker, Jr., W. Z., and Merenlender, A. M., Corridor Ecology: The Science and Practice of Linking Landscapes for biodiversity Conservation, 2006.

between impacted sites and mitigation sites such that the functions and values between those areas can be demonstrated to be reasonably equivalent.

◊ **Mitigation Based on Appropriately-Scaled Ratios**. Impacts to 519.6 acres (478.0 acres of permanent and 41.6 acres of temporary impacts) of RAFSS may be mitigated at a minimum mitigation ratio of 2:1 (replacement:disturbance) through the preservation of 1,039.2 acres of alluvial fan sage scrub (AFSS) vegetation both on and off the project site.[142] This shall be accomplished, in part, by the preservation of 395.4 acres of RAFSS on the site and the preservation of existing and/or the enhancement, restoration, or creation of AFSS off the site, on private and/or public lands.

The Applicant's acquisition of qualifying off-site and/or dedication of qualifying on-site AFSS habitat and/or the Applicant's securing of appropriate rights and authorization allowing for the preservation, enhancement, restoration, and/or creation of protected habitat on public and/or private lands, together with adequate funding to achieve the necessary preservation, enhancement, restoration, and/or creation, shall be secured by the Applicant at a minimum ratio of 2:1 (replacement:disturbance) prior to directly impacting RAFSS habitat for grading, grubbing, construction, and/or fuel modification activities.

Prior to the issuance of any permits and/or approvals that would result in the removal of RAFSS habitat, the Development Services Director (Director) shall verify that the Applicant has secured sufficient and appropriate AFSS habitat (whether on and/or off the site) to be preserved, enhanced, restored, and/or created to fulfill this 2:1 mitigation ratio, based on the amount of RAFSS habitat that would be removed under the then-issued grading, clearing, or grubbing permits, and has delivered to the City a binding instrument ensuring the implementation of the specified action.

◊ **Mitigation Based on Habitat Equivalency Analysis**. An alternative method for determining the extent and location of mitigation lands for impacts to RAFSS is to calculate the amount of compensatory acreage of RAFSS habitat to be provided based upon a "habitat equivalency analysis" (HEA).[143]

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[142]/ This mitigation for RAFSS includes, but is not limited to, 316.2 acres of SBRK habitat to be preserved on the site and 75.0 acres of SBKR habitat to be created upstream and downstream of the CEMEX USA quarry.

[143]/ Recognizing that RAFSS is a habitat of concern that possesses value to a unique assemblage of plant and animal species, "habitat equivalency analysis" (HEA) provides a consistent basis to mitigate impacts in a manner that promotes the conservation of RAFSS habitats and the associated biological diversity in a sustainable manner. Such benefits include: (1) larger contiguous conservation areas/habitat reserves; (2) enhanced connectivity between fragmented habitats; (3) improved and more diverse habitat conditions; and (4) long-term stewardship through on-going management and maintenance activities. HEA will also facilitate the realization of benefits within the Lytle Creek and Cajon Creek complex where such benefits will be most effective in compensating for project-related impacts and maintaining diversity in local biological systems. HEA is a methodology shown to be effective and applicable in a wide variety of circumstances and settings where appropriately-scaled mitigation is being sought for biological impacts.

As a tool for quantifying impacts and appropriately-scaled mitigation, HEA was developed in the early 1990's and became the recommended approach to the replacement of damaged natural resources in the Oil Pollution Act of 1990 regulations promulgated by the United States Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) in 1996. Since that time it has been widely used in other contexts. HEA, also know as the "service-to-service" approach to scaling, is supported by several federal agencies (e.g., United Stated Department of the Interior, USEPA, National Oceanic and Atmospheric Administration) and by federal court decisions (e.g., United States v. Melvin A. Fisher *et al*.) as a valid approach for determining compensation for habitat impacts and for

Prior to issuance of any permits or approvals that would result in the removal of RAFSS, the Director shall verify that the Applicant has secured sufficient qualifying RAFSS habitat to be preserved, enhanced, restored, and/or created to conserve habitat functions and values equivalent to the functions and values of habitat that would be removed under the then-issued grading permits for the project, as determined through the HEA approach.

The basic steps that shall be used for implementation of the HEA approach are: (A) determine the extent of potential impact; (B) determine the value of candidate mitigation site(s); and (C) determine required mitigation. Prior to issuance of any grading permit that would result in the removal of RAFSS, the Director shall verify that the Applicant has: (1) applied the HEA metrics to the acres of RAFSS to be removed; (2) determined the appropriate set of mitigation/conservation activities to apply to the mitigation lands (in accordance with the ecological currency established by the HEA metrics); and (3) has assured that the mitigation lands will serve as mitigation in perpetuity and assured that long-term management will be provided.

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measuring environmental improvement. HEA has been used as an "*ex ante*" (before the event) evaluation tool in the contexts of CEQA and the National Environmental Policy Act (NEPA), as well as in regulatory permit processing under the federal Clean Water Act.

In order to apply HEA, a system of "ecological currency", with which to quantify and scale mitigation is required. Such a system of ecological currency, whereby trade-offs are quantified, can be described as a tool of net environmental benefit analysis, which is derived from the same theoretical foundation as economic cost-benefit analysis. An important distinction, however, is that in applying an ecological currency system, only the ecological effects of an action are considered. Fundamental to this approach is the recognition that the value of biological resources (e.g., wildlife carrying capacity, habitat diversity, suitability to support threatened and endangered species) is defined by the quality and quantity of the services provided by the resource. Enhancement, stewardship, and/or long-term protection of a habitat (such as AFSS), then, can be defined in terms of the increase in quality and/or quantity of ecological services that it provides. Applying a systematic valuation framework to assess ecological costs and benefits is a necessary step in this process. The ecological currency approach accomplishes this objective.

The principle concept underlying the HEA approach, as it applies to this assessment, is that adequate compensation for losses of habitat services can be achieved by providing net gains in habitat service value (at mitigation sites) of the same type according to combinations of habitat quantity and quality. In other words, HEA assumes a one–to-one trade-off between a unit of value at the impact site and a unit of value at the mitigation site. Replacement can occur in a variety of ways and in combinations of ways that, cumulatively, generate mitigation synergisms. That is, HEA does not necessarily assume a one-to-one trade-off in resources (acres of habitat), but instead in the values they possess and the functions they provide.

HEA is a tool with which to apply a system of ecological currency. The currency is based on biological metrics or indicators common to the habitats at both the impact and mitigation sites. Further, when choosing a system of metrics to evaluate the quantity and quality of values provided per unit of habitat, it is important to examine the existing and potential values of habitats for comparative purposes. It is also important that the metrics reflect CEQA concerns, including providing for mitigation of significant impacts to habitats and species of concern. Therefore, in the context of mitigation for impacts to biological resources, intermediate alluvial fan sage scrub occupied by SBKR was considered to be the most appropriate basis, or benchmark, for establishing metrics. Metrics for vegetation analysis address the following habitat attributes which reflect form and function relative to the benchmark: (1) canopy cover of native trees and large shrubs over six feet in height; (2) percent canopy cover of native trees and shrubs less than six feet in height; (3) number of native, indicator shrub species for the benchmark intermediate alluvial fan sage scrub; (4) percent of ground cover by non-native plants; and (5) percent of ground cover by organic litter. Metrics for landscape context address habitat attributes that are related to species-area relationships, potential edge effects, connectivity, occupation by SBKR, and sustainability, including patch size, surrounding habitats, presence of an active hydrologic regime (within the 100-year floodplain), and documented presence of SBKR. Metrics for net gains, or increases in habitat conserved address a suite of attributes that add to the benchmark in terms of target species, increased protection of habitat, enhancement of habitat, and/or long-term management, including: (1) presence of targeted species of concern; (2) off-site acquisition and protection of habitat for preservation purposes; (3) on-site preservation and protection of habitat; (4) habitat enhancement and restoration efforts; (5) habitat modifications to create habitat suitable for targeted species of concern; and (6) long-term maintenance and management activities or the provision of funds to support such activities.

The provision of compensatory resources and/or the acquisition of mitigation credits to offset impacts shall be secured by the Applicant prior to removing RAFSS for grading, grubbing, construction, and/or fuel modification activities. Prior to the issuance of any permits and/or approvals resulting in the removal of RAFSS, the Director shall verify that the Applicant has secured sufficient and appropriate RAFSS habitat conservation credits (whether on and/or off the site) based on the amount of RAFSS habitat that would be removed under the then-issued grading, clearing, or grubbing permit and has delivered to the City a binding instrument ensuring the implementation of the specified action.

The Applicant shall assure, to the satisfaction of the Director, that the compensatory acreage and/or mitigation credits to serve as mitigation will be secured to serve its specified function and that the appropriate long-term management of this habitat will be provided. Such assurance shall include those performance measures and guarantees as may be reasonably required by the Director to ensure the fulfillment of the intent of this measure.

At the Applicant's sole expense, the City may select and hire a qualified biologist(s) to provide technical consultation, third-party review, and independent oversight of specified biological mitigation. At its sole discretion, the City's acceptance of any Applicant-nominated compensatory resources and/or mitigation credits shall occur prior to the issuance of any permits and/or approvals resulting in direct impacts to RAFSS and any such permits or approvals shall be conditioned with the details of those actions which are to be implemented.

- **Mitigation Measure 5-2**. Other Sensitive Riparian Communities. Mitigation for direct impacts to approximately 1.7 acres of southern cottonwood willow riparian shall include preservation, enhancement, and restoration of a minimum combined 3.4 acres within the existing and available mule fat scrub, southern willow scrub, and southern cottonwood willow riparian habitat within the Sycamore Flat East riparian corridor. This mitigation represents a minimum 2:1 (replacement:disturbance) mitigation ratio.

  The Applicant's acquisition of qualifying off-site and/or dedication of qualifying on-site riparian habitat and/or the Applicant's securing of appropriate rights and authorization allowing for the preservation, enhancement, restoration, and/or creation of protected habitat on public and/or private lands, together with adequate funding to achieve the necessary preservation, enhancement, restoration, and/or creation, shall be secured by the Applicant at a minimum ratio of 2:1 prior to directly impacting southern cottonwood willow riparian habitat for grading, grubbing, construction, and/or fuel modification activities. Prior to the issuance of any permits and/or approvals resulting in the removal of southern cottonwood willow riparian habitat, the Director shall verify that the Applicant has secured sufficient and appropriate riparian habitat (whether on and/or off the site) to be preserved, enhanced, restored, and/or created to fulfill this 2:1 mitigation ratio, based on the amount of southern cottonwood willow riparian habitat that would be removed under the then-issued grading, clearing, or grubbing permit, and has delivered to the City a binding instrument ensuring the implementation of the specified action.

  The Applicant shall assure, to the satisfaction of the Director, that the compensatory acreage to serve as mitigation will be secured to serve its specified function and that this function will continue over the long term. Such assurance shall include those

performance measures and guarantees as may be reasonably required by the Director to ensure the fulfillment of the intent of this measure.

- **Mitigation Measure 5-3**. Jurisdictional Waters. Prior to the issuance of any grading permits affecting State and/or federal jurisdictional waters, the Applicant shall provide the Director with documentation, as may be deemed acceptable by the Director, demonstrating the Applicant's ability and binding commitment to provide the following compensatory resources: (1) the preservation, restoration, and/or enhancement (individually or in combination) of USACE jurisdictional waters on or off the site (within the watershed) at a ratio of no less than 1:1 (replacement:disturbance); and (2) preservation, restoration, and/or enhancement (individually or in combination) of CDFG jurisdictional areas on or off the site (within the watershed) at a ratio of no less than 1:1. Temporary impacts to jurisdictional waters may be mitigated through restoring affected areas to pre-project conditions, followed by hydroseeding with native plant species typical of the area.

  Prior to issuance of any grading permit for work in jurisdictional waters, as applicable, the Applicant shall provide the City with evidence of the Applicant's receipt of a Section 404 permit issued by the United States Army Corps of Engineers (USACE), a Section 1600 streambed alteration agreement with California Department of Fish and Game (or other evidence of compliance with Section 1600 *et seq*. of the California Fish and Game Code), Section 401 water quality certification issued by the Regional Water Quality Control Board, Santa Ana Region and shall provide the Director with an agency approved habitat mitigation and monitoring plan (HMMP), prepared pursuant to USACE guidelines.[144]

- **Mitigation Measure 5-4**. Least Bell's Vireo. Mitigation for direct impacts to approximately 2.9 acres of least Bell's vireo (LBV) habitat (including the loss of 1.2 acres of mule fat scrub and 1.7 acres of southern cottonwood willow riparian within Neighborhood II) shall include on-site preservation, restoration, and enhancement of southern willow scrub and adjacent mule fat scrub habitat at a minimum 2:1 (replacement:disturbance) ratio. Mitigation shall be accomplished through the enhancement and/or restoration of lands within the Sycamore Flat East riparian corridor. Mitigation shall include a combination of enhancement and restoration of approximately 5.8 acres within the existing Sycamore Flat East riparian corridor and adjacent floodplain to improve the quality of habitat for this species.

  Potential indirect impacts to LBV shall be mitigated by implementing the following measures during all construction activities within 300 feet of potential LBV habitat: (1) to the extent feasible, grading and other construction activities within 300 feet of potential LBV habitat should take place outside the breeding season (March 15 to September 15); if grading or construction activities occur during breeding season, the mitigation measures in items (8)-(11) below shall be implemented; (2) to the extent practicable, all potential LBV habitat to be removed by the project should be cleared outside the breeding season (March 15 to September 15); if grading or construction activities occur during breeding season, the mitigation measures in items (8)-(11) below shall be implemented; (3) construction limits in and around LBV potential habitat shall be delineated with flags and fencing prior to the initiation of any grading or construction

[144]/ United States Army Corps of Engineers, Habitat Mitigation and Monitoring Proposal Guidelines, Los Angeles District Regulatory Branch, June 1, 1993.

activities; (4) prior to grading and construction a training program shall be developed and implemented to inform all workers on the project about listed species, sensitive habitats, and the importance of complying with avoidance and minimization measures; (5) all construction work shall occur during the daylight hours; (6) noise from construction activities shall be limited to the extent possible through the maximum use of technology available to reduce construction equipment noise; (7) two brown-headed cowbird traps shall be installed and maintained within the general vicinity (within 500 feet) of the habitat for five years. Additional measures shall be taken for all construction activities within 300 feet of potential LBV habitat during the breeding season (March 15 to September 15) and are set forth in items (8)-(11) herein; (8) pre-construction surveys shall be conducted within one week prior to initiation of construction activities and all results forwarded to the USFWS and CDFG; focused surveys shall be conducted for LBV during construction activities; (9) if at any time LBV are found to occur within 300 feet of construction areas, the monitoring biologist shall inform the appropriate construction supervisor to cease such work and shall consult with the USFWS and CDFG to determine if work shall commence or proceed during the breeding season; and, if work may proceed, what specific measures shall be taken to ensure LBV are not affected; (10) monitoring by a qualified acoustician shall be conducted as needed to verify noise levels are below 60 dBA required within identified, occupied LBV territories; if the 60 dBA requirement is exceeded, the acoustician shall make operational changes and/or install a barrier to alleviate noise levels during the breeding season; and (11) installation of any noise barriers and any other corrective actions taken to mitigate noise during the construction period shall be communicated to the USFWS and CDFG.

- **Mitigation Measure 5-5**. Nesting Birds. To protect nesting birds regulated by the federal Migratory Bird Treaty Act, to the extent feasible, vegetation removal activities shall be scheduled between September 1 and February 14 to avoid the nesting bird season. If clearing and/or grading activities cannot be avoided during the nesting season, all suitable habitat will be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to removal. If any active nests are detected, the area will be flagged, along with a minimum 100-foot buffer (buffer may range between 100 and 300 feet as determined by the monitoring biologist) and will be avoided until the nesting cycle is complete or it is determined by the monitoring biologist that the nest has failed. A biologist will be present on the site to monitor any vegetation removal to ensure that nests not detected during the initial survey are not disturbed.

- **Mitigation Measure 5-6**. Burrowing Owl. In order to avoid impacts to any burrowing owls that may colonize the development impact footprint prior to commencement of construction activities, a Phase III protocol survey shall be conducted within 30 days prior to commencement of any ground disturbance activities (California Burrowing Owl Consortium, 1993). This pre-construction survey would entail four separate days between two hours before sunset to one hour after or one hour before sunrise to two hours after. This survey applies during both the breeding season (February 1 through August 31) as well as the non-breeding season when wintering owls are most likely detected if present (December 1 through January 31). If burrowing owls are detected within the development impact footprint or within approximately 150 feet of the impact area, on-site passive relocation would be conducted during the non-breeding season in accordance with the established protocol (California Burrowing Owl Consortium, 1993).

- **Mitigation Measure 5-7**. San Bernardino Kangaroo Rat. In order to effectively mitigate the project-related impacts to the San Bernardino kangaroo rat (SBKR), a combination of several measures shall be implemented including: (1) avoidance, preservation, and creation of on-site habitat; (2) preservation, creation, and connectivity of off-site habitat; (3) avoidance and minimization of direct individual SBKR mortality during construction; (4) minimization of indirect individual SBKR mortality through edge effects; and (5) management programs to assure the ability to sustain on-site and off-site SBKR populations in the long-term. Implementation of these measures shall result in the preservation of a minimum of 316.2 acres of occupied on-site habitat and the creation of a minimum of 75.0 additional acres of habitat for the species (approximately 34.5 acres upstream of and a minimum of 40.5 acres downstream of the Cemex USA quarry).

  - ◊ **On-site avoidance and preservation**. On-site avoidance and preservation of occupied habitat shall contribute a total of approximately 316.2 acres to the existing 216.8-acre "SBKR Conservation Area." The acreage to be contributed shall support pioneer and intermediate RAFSS where SBKR populations are reported to reach their highest numbers and densities and mature RAFSS which are theorized to serve as refugia and sources for recolonization and repopulation following episodic flooding in active wash areas. On-site mitigation shall include restoration, creation, and preservation of approximately 34.5 acres of chamise chaparral within Neighborhood II above the 100-year floodplain that is immediately downstream of, and contiguous with, the "SBKR Conservation Area." The Applicant shall remove the chamise and other species detrimental to the SBKR (such as non-native grasses) and manage these approximately 34.5 acres to supplement the already established founder population (that utilizes the habitat in the "SBKR Conservation Area") within the wash upstream of the Cemex USA quarry operation. Individual SBKR within the impact footprint shall be salvaged and translocated to unoccupied rehabilitated habitat within the mitigation area.

  - ◊ **Off-site preservation and connectivity**. In order to achieve adequate mitigation for impacts to occupied habitat downstream of the Cemex USA quarry, the Applicant shall remove chamise from and manage a total of 40 acres within off-site areas offering refugia habitat downstream of the Cemex USA quarry operations to assure a stable population in the downstream wash area. This shall be done by the Applicant in combination with a long-term management plan and managed in perpetuity within the existing Cemex USA mitigation area, San Bernardino County Sheriff woollystar preserve, San Bernardino County Flood Control conservation area, and/or Vulcan Materials Company's Cajon Creek conservation bank.

    The criteria for such off-site lands are: (1) upland refugia must be adjacent to active wash areas; (2) the minimum size of any single upland island/patch is 5 acres; and (3) upland refugia must have 80 to 90 percent of its interface between the active wash and upland (common perimeter) that is topographically passable by the species (not supporting steep escarpments) to ensure individuals have access to the wash. Individual SBKR shall be translocated from the impact areas to newly acquired and restored areas to assist with initial colonization.

◊ **Refinement of mitigation program through consultation with USFWS**. As required under the Federal Endangered Species Act, during the "formal" Section 7 consultation the USFWS will gather all relevant information concerning the proposed project and the potential project-related impacts on the SBKR and designated critical habitat, prepare a biological opinion with respect to whether the project is likely to jeopardize the continued existence of the species, and formulate alternatives and mitigation/conservation measures where appropriate. Among those measures to be considered by USFWS are those described herein. At its sole discretion, the USFWS may refine, expand, and/or substitute some of these measures, or parts thereof, based on its analysis and determination that such modifications are required to comply with federal law. Accordingly, as long as any such modified, different or substituted on-site or off-site habitat creation, restoration, enhancement and/or management measures are found by the USFWS to result in a SBKR conservation program that is at least as effective in mitigating the impacts to SBKR as proposed herein (as evidenced by a determination by USFWS that the proposed project will not jeopardize the continued existence of the SBKR or result in the adverse modification of its designated critical habitat), such measures may be substituted for the on-site and off-site habitat creation, restoration, enhancement and/or management measures identified herein.

◊ **Avoidance and minimization of direct mortality of individuals**. Construction-related mortality to individual SBKR shall be avoided through the design and implementation of a pre-construction trapping and relocation program. Key elements of this program shall include: (1) initial establishment of one or more receiver sites where suitable habitat is known to be unoccupied, is significantly below carrying capacity levels, and/or where scrub vegetation has been restored and colonization by the species has not occurred; (2) installation of exclusionary fencing at the limits of construction within suitable habitat areas; and (3) live-trapping of suitable habitat within construction areas and the relocation of trapped individuals to one or more biologically appropriate receiver sites.

Implementation of the trapping and relocation program shall begin with the installation of appropriate exclusionary fencing to a height of three feet around all construction areas within occupied SBKR habitat. A qualified and permitted biologist shall then conduct live trapping of the construction area to the extent necessary to be confident that all SBKR have been removed and relocated. It is anticipated that live trapping and relocation shall be conducted one time prior to construction; however, follow-up monitoring of the silt fence integrity shall be preformed on a daily basis during construction. If at any point the fencing is compromised, construction shall be suspended in the area, repairs to the fence shall be made, and the trapping and relocation program shall be repeated.

◊ **Minimization of indirect mortality of individuals**. Edge effects, or mortality due to the "spillover" effects of development near and adjacent to areas preserved for the benefit of the species shall be minimized through design elements intended to buffer and avoid human-wildlife conflicts. Key elements shall include: (1) installation of a cat-proof fence at the perimeter of development where it abuts preservation areas, and the location of all pedestrian and vehicular routes and trails outside the fence (except any routes necessary solely for

conservation activities within the preserved habitat areas or associated with any pre-existing easements); (2) prohibition of night lighting along the perimeter of preserved areas; (3) direction of all night lighting within development areas away from preserved areas; (4) installation of signage to direct human activity away from preserved habitat areas; (5) prohibition of unleashed dogs within preserved habitat areas; and (6) implementation of a homeowner's awareness program to educate residents about the conservation values associated with preserved habitat areas.

◊ **Long-term management of preserved habitat areas**. All areas to be preserved as natural (undisturbed) biological open space to benefit the SBKR within the LCRSP study area, as well as all areas to be restored both on and off the site, shall be monitored biologically for five years and managed in perpetuity by an appropriate management entity. Monitoring of SBKR populations within the areas to be preserved shall take place over a five-year period to ensure the success of the mitigation efforts such that they provide suitable habitat for this species. On-going maintenance (e.g., fence and sign repair) and management (e.g., periodic vegetation thinning) shall be a part of the long-term management plan. As determined by the Director, this plan shall be funded through a combination of up-front capital costs and revenue-generating, non-wasting endowment funded by the Applicant. If additional work is determined to be necessary after the five years of monitoring, the funds provided by the Applicant shall be such that they cover adaptive management necessary to meet the success criteria stated therein.

- **Mitigation Measure 5-8**. Invasive Plant Management Plan. Prior to the commencement of any grubbing or grading activities, the Applicant shall submit and, when acceptable, the Director shall approve an invasive plant management plan, including, but not necessarily limited to: (1) preventive practices to avoid the transport and spread of weeds and weed seed during project development and operation; (2) a plan to control noxious weeds and weeds of local concern within designated open space areas; and (3) a strategy to educate construction personnel and homeowners in noxious weed identification and awareness. The invasive plant management plan shall incorporate weed prevention and control measures including, but not necessarily limited to: (1) use of only certified weed-free hay, straw, and other organic mulches to control erosion; (2) use of road surfacing and other earthen materials for construction that are certified weed free; and (3) use of only certified weed-free seed for the reclamation of disturbed areas.

4.5.7 Significant Unavoidable Adverse Effects

The approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative biological resource impacts.

4.6 TRANSPORTATION AND TRAFFIC

4.6.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- Crain & Associated, Phasing of Lytle Creek Ranch Roadway Improvement Mitigation Measures, February 10, 2010 (see Appendix II-A-A).
- Crain & Associates, Lytle Creek Ranch Specific Plan – Specific Plan Maximum Trip Allowance Procedure, December 14, 2009 (see Appendix II-A-B).
- Crain & Associates, Lytle Creek Development Mobile Emissions Analysis Input, September 15, 2009 (see Appendix II-A-C).
- Crain & Associates, Lytle Creek Ranch Threshold of Significance Criteria, May 12, 2009 (see Appendix II-A-D).
- Crain & Associates, Lytle Creek Ranch Recommended Roadway Improvements, March 19, 2009 (see Appendix II-A-E).
- Crain & Associates, Traffic Impact Analysis Report for the Lytle Creek Ranch Planned Development Project, City of Rialto, February 2008 (see Appendix II-A-F).
- Crain & Associates, Lytle Creek Ranch Specific Plan – Project Trip Generation Comparison, February 26, 2008 (see Appendix II-A-G).
- Crain & Associates, Traffic Impact Analysis Report for the El Rancho Verde Project, City of Rialto, April 2006.
- Crain & Associates, Traffic Impact Analysis Report for the Lytle Creek Project North Planned Development, January 2001.
- Southern California Association of Governments, San Bernardino Associated Governments, and California Department of Transportation (Parsons Brinckerhoff), I-15 Comprehensive Corridor Study, Final Report, December 20, 2005.

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.6.2 Regulatory and Policy Setting

4.6.2.1 United States

The following information presents a general discussion of certain federal statutes, regulations, and related policies that may be applicable to an understanding of the proposed project's regulatory and policy setting.

- **United States Code**. Under federal law, states must carry out a continuing, comprehensive, cooperative and intermodal statewide transportation planning process. The State, in cooperation with participating organizations, including metropolitan planning organizations (MPOs) and other regional transportation planning agencies (RTPAs), provides for a fully coordinated process. Section 135 in Title 23 of the United States Code (U.S.C. or USC) requires states to develop regional transportation plans

(RTPs) and programs and establishes project funding procedures for metropolitan and non-metropolitan areas.

Under Section 176(c) of the Federal Clean Air Act (42 U.S.C. 7506[c]), with regards to air quality, the United States Department of Transportation (USDOT), Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) require that non-attainment areas submit a RTP every four or five years. The plan must conform with air quality requirements and meet a number of other requirements in order to continue receiving federal transportation funding. With respect to air quality, for attainment areas categorized as "severe," federal requirements for mobility and air quality include, but may not be limited to, the following: (1) contribute to an increase in peak-period average vehicle ridership (AVR) by large employers with 100 or more employees (42 U.S.C. 7511a[d][1][B]); and (2) offset with transportation control measures (TCMs) the growth of emissions due to an increase in vehicle trips and vehicle miles traveled (VMT) (42 U.S.C. 7511a[d][1]).

- **Safe, Accountable, Flexible, Efficient Transportation Equity Act**. On August 10, 2005, President George W. Bush signed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users: A Legacy for Users (Public Law 109-59) (SAFETEA-LU) authorizes and funds federal transit and highway improvement projects through 2009. SAFETEA-LU echoes and expands upon the Transportation Equity Act for the 21st Century (Public Law 105-178) (TEA-21), passed in 1998, and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Under SAFETEA-LU, the RTP must be comprehensively updated once every four years. In air quality attainment regions, MPOs may elect to update their RTPs every five years (23 CFR 450.322[c]).

  On February 14, 2007, the USDOT, FHWA, and FPA issued a final rule (72 FR 7224) revising the regulations governing the development of metropolitan transportation plans and programs for urbanized areas, state transportation plans and programs, and the regulations for congestion management systems. The revision results from the passage of SAFETEA-LU, which also incorporates changes initiated in TEA021, and generally will make the regulations consistent with current statutory requirements.

4.6.2.2 State of California

The following information presents a general discussion of certain State statutes, regulations, and related policies that may be applicable to an understanding of the proposed project's regulatory and policy setting.

- **California Government Code**. Section 65080 of the CGC requires MPOs and RTPAs in urban areas to prepare, adopt, and submit an updated RTP to the California Transportation Commission and Caltrans every four to five years.[1]

  The "congestion management program" (CMP) was enacted in July 1989[2] and the requirements for its preparation became effective upon voter approval of Proposition

[1]/ Section 65080 requires that MPOs located in nonattinment regions update their RTPs at least every four years. State statute required MPOs located in air quality attainment regions and all RTPAs that prepare RTPs to update their RTPs every five years.

[2]/ Assembly Bill 471 (Section 65088, *et seq*., CGC).

111[3] in June 1990. Section 65089(a) of the CGC stipulates that a CMP shall be "developed, adopted, and updated biennially, consistent with the schedule for adopting and updating the regional transportation improvement program, for every county that includes an urbanized area, and shall include every city and the county."

Section 65089(b)(2)(B) of the CGC stipulates that, when the level of service on a segment or at an intersection fails to attain the established level of service standard, a "deficiency plan" shall be adopted pursuant to Section 65089.4. A local jurisdiction shall prepare a deficiency plan when highway or roadway level of service (LOS) standards are not maintained on segments or intersections of the designated system. The deficiency plans shall be adopted by the city or county at a noticed public hearing.

In addition, through the enactment of Sections 66001 through 66009 of the CGC, the State Legislature has authorized the City of Rialto to enact development impact fees. As specified under Resolution No. 4484, the City presently (2008) collections the following "Measure I traffic fees": (1) $2,457.99 per "single-family unit"; (2) $1,702.90 per "multi-family unit"; (3) $5.62 per square foot for commercial space; (4) $3.39 per square foot for office service space; and (5) $1.95 per square foot for industrial space.[4]

- **California Health and Safety Code**. With respect to air quality, State requirements for mobility and air quality include the following: (1) achieve an average vehicle occupancy of 1.5 persons per vehicle during commuter period hours by 1999 in severe and extreme non-attainment areas (Section 40920[a][2], H&SC); (2) achieve substantial decrease in the growth of passenger vehicle trips and VMT in serious, severe, and extreme non-attainment areas (Section 40919[a][3], H&SC); and (3) allow no net increase in mobile source emissions after 1997 in severe and extreme non-attainment areas (Section 40920[a][2], H&SC).

- **California Streets and Highways Code**. The California Streets and Highways Code (S&HC) allows utility owners to locate within State highway rights-of-way (ROW) any structures or fixtures necessary for telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures (Section 117, S&HC). In order to protect public investment in the State highway system and promote the safety of highway users, Caltrans has developed minimum standards for the occupancy and use of State highway ROW for utility facilities. All utility encroachments in State highway ROW shall be designed, installed, and maintained so that traffic disruption and other hazards to highway users are minimized. The design shall be in compliance with Section 309 of Caltrans' "Highway Design Manual."[5]

  The S&HC requires permits for the transportation of oversized load on county roads (Sections 117 and 660-72, S&HC; Section 35780 *et seq*., CVC) and regulates right-of-way encroachment and the granting of permits for encroachment on State and county roads (Sections 660, 670, 1450, 1460 *et seq*., and 1480 *et seq*., S&HC).

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[3]/ Proposition 111, passed in June 1990, provided additional transportation funds through a $0.09 per gallon increase in the State gas tax. Included in the provision for additional transportation funding was a requirement to undertake a congestion management program (CMP) within each county with an urban area of more than 50,000 population to be developed and adopted by a designated Congestion Management Agency (CMA). Within San the County, in August 1990, the San Bernardino Associated Governments (SanBAG) was designated the CMA by the County Board of Supervisors and a majority of the cities representing a majority of the incorporated population.

[4]/ City of Rialto, City of Rialto Schedule of Development Impact Fees, revised May 29, 2008.

[5]/ California Department of Transportation, Highway Design Manual, updated January 4, 2007.

Section 890.4 of the S&HC defines a "bikeway" as a facility that is provided primarily for bicycle travel. Three types (classes) of bikeways are defined: (1) Class I (bike path) provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized; (2) Class II (bike lane) provides a striped lane for one-way bicycle travel on a street or highway; and (3) Class III (bicycle route) provides for shared use with pedestrian or motor vehicle traffic. As indicated in the Caltrans' "Highway Design Manual": "It is emphasized that the designation of bikeways as Class I, II and III should not be construed as a hierarchy of bikeways; that one is better than the other. Each class of bikeway has its appropriate application."[6]

- **California Vehicle Code**. The California Vehicle Code (CVC) defines hazardous materials (Section 353), regulates highway transportation of hazardous materials, the routes used, and restrictions thereon (Sections 31303-31309), regulates the transport of explosive materials (Sections 31600-31620), regulates licensing of carriers and includes noticing requirements (Sections 32000-32053), establishes special requirements for the transportation of inhalation hazards and poisonous gases (Sections 32100-32109), establishes special requirements for the transportation of flammable and combustible liquids (Sections 34000-34121), regulates the safe operation of vehicles, including those used for the transportation of hazardous materials (Sections 34500 *et seq*.), authorizes the issuance of licenses by the California Highway Patrol (CHP) for the transportation of hazardous materials and explosives (Sections 2500-2505), and addresses the licensing of drivers and the classifications of licenses required for the operation of particular types of vehicles. The CVC requires the possession of certificates permitting the operation of vehicles transporting hazardous materials (Sections 13369, 15275, and 15278).

- **California Health and Safety Code**. Section 25160 *et seq*. of the H&SC addresses the safe transport of hazardous materials.

4.6.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **San Bernardino County General Plan**. As indicated in the County General Plan (Circulation and Infrastructure Element) and depicted in Figure 4.6-1 (San Bernardino County General Plan – Circulation Map [Valley Region]), the circulation maps graphically depict the County's policy for the designation of the major streets and roads under its jurisdiction.[7] Those transportation and traffic goals, objectives, and programs presented in the County General Plan that appear to be most closely related to the unincorporated County portion of the project site are presented below.

  - Goal CI1. The County will provide a transportation system, including public transit, which is safe, functional, and convenient; meets the public's needs; and enhances the lifestyles of County residents.

[6]/ *Ibid*, Chapter 1000 (Bikeway Planning and Design), June 26, 2006, p. 1000-3.
[7]/ *Op. Cit*., San Bernardino County 2007 General Plan, Circulation and Infrastructure Element, p. III-4.

- Goal CI3. The County will have a balance between different types of transportation modes, reducing dependency on the automobile and promoting public transit and alternative modes of transportation, in order to minimize the adverse impacts of automobile use on the environment.

  ◊ Policy CI3.1. Encourage the reduction of automobile usage through various incentive programs.

  Programs. (1) Provide a pattern of land use designations, along with appropriate development standards that facilitate development of local retail uses near residential uses, consistent with Smart Growth and New Urbanism Concepts in new development to reduce the number of automobile trips by providing neighborhood shopping facilities and connectivity through pedestrian and bicycle paths. (2) Promote and encourage the design and implementation of land uses, development standards, and capital improvement programs that maximize the use of public transit facilities and programs, and the availability of local retail uses accessible to local residents by walking or biking to reduce dependence on the automobile. (3) Designate existing park-and-ride facilities on the [County] General Plan Circulation Maps, work with Caltrans to identify appropriate future park-and-ride facilities, and develop a program to acquire and develop sites for such facilities in areas where there is an identified need.

- Goal CI4. The County will coordinate land use and transportation planning to ensure adequate transportation facilities to support planned land uses and ease congestion.

  ◊ Policy CI4.2. To reduce the dependence on the automobile for local trips, integrate transportation and land use planning at the community and regional levels by promoting transit-oriented development (TOD), where appropriate and feasible.

  Program. Encourage mixed-use and transit oriented design, where applicable. The integration of mixed-use and transit design may reduce the use of the automobile, but the extent of the benefits and remaining impacts may nonetheless require independent traffic impact analysis and environmental impact assessment.

- Goal CI6. The County will encourage and promote greater use of non-motorized means of personal transportation. The County will maintain and expand a system of trails for bicycles, pedestrians, and equestrians that will preserve and enhance the quality of life for residents and visitors.

  ◊ Policy CI6.1. Require safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial and institutional developments to facilitate access to public and private facilities and to reduce vehicular trips. Install bicycle lanes and sidewalks on existing and future roadways, where appropriate and as funding is available.

- Goal CI9. The County will ensure the quality of life by pacing future growth with the availability of public infrastructure.

  - ◊ Policy CI9.1. Control the timing and intensity of future development and ensure that future development is contingent on the provision of infrastructure facilities and public services.

  - ◊ Policy CI9.4. Ensure that new development pay a fair share of the costs to provide infrastructure facilities required to serve such development. If an applicant is required to pay more than a proportional share, reimbursement agreements or other mechanisms shall be used.[8]

- **San Bernardino County Congestion Management Plan**. The "San Bernardino County Congestion Management Plan, 2005 Update"[9] (County CMP) was adopted by the San Bernardino Associated Governments (SANBAG) on November 2, 2005. The adopted LOS standards for the County CMP system are the minimum standards allowable under Section 65089(b)(1)(B) of the CGC, namely LOS "E" for all segments and intersections, except those designated LOS "F" (in Chapter 2 of the County CMP). A provision is made for any LOS "F" facility not to deteriorate greater than 10 percent below its level of service value at the time of the County CMP's initial adoption. The procedures in the 2000 "Highway Capacity Manual"[10] (HCM) have been adopted as the level of service procedures for the County CPM.

  Each local jurisdiction is required to adopt a regional transportation development mitigation program (RTDMP). Failure to adopt a program compliant with the County CMP may result in significant loss of State gas tax, Measure I,[11] and federal and State funding necessary for the ongoing maintenance of and improvements to the County Maintained Road System (CMRS). The SANBAG Nexus Study determined the fair-share contributions from new development for each local jurisdiction. The "Regional Transportation Development Mitigation Plan of the County of San Bernardino"[12] (County RTDMP) has been developed to satisfy the provisions of the County CMP. The total development fair-share of cost (target share amount) for which the County is responsible to generate through the County RTDMP is $197 million,[13] distributed among the subareas[14] based upon project lists and growth forecasts. As illustrated, in part, in Figure 4.6-2 (Nexus Study Network – San Bernardino Valley), a list of major arterial road improvement projects was developed for each subarea, consisting of all County maintained roads with an existing master plan classification of "secondary" or greater (as

[8]/ *Ibid*., pp. III-2 through III-12.

[9]/ San Bernardino Associated Governments, San Bernardino County Congestion Management Plan, 2005 Update, adopted November 2, 2005.

[10]/ Transportation Research Board, Highway Capacity Manual, Special Report 209, 2000.

[11]/ In November 2004, County voters approved Measure I 2010-2040 imposing a half-cent transaction and use tax dedicated to Countywide transportation improvements.

[12]/ County of San Bernardino, Department of Public Works, Transportation Public and Support Services Group, Regional Transportation Development Mitigation Plan of the County of San Bernardino, undated.

[13]/ The County RTDMP is intended to generate only the development fair-share contribution of project costs as required by the CMP and is not intended to provide 100 percent funding for or construct all projects listed in the County RTDMP. Additional Measure I and federal and State funds, as administered by SANBAG, are required for full funding of County RTDMP-listed projects.

[14]/ The RTDMP contains 16 subareas of which 12 represent unincorporated areas within the San Bernardino Valley. With two exceptions, including the Devore/Glen Helen area, the boundaries of these subareas correspond to the boundaries of the cities' spheres of influence, as defined by LAFCO.

defined in the 1989 "San Bernardino County General Plan"). The County also developed a list of traffic signal projects for inclusion in the County RTDMP and a list of freeway interchange projects was compiled by SANBAG as part of the SANBAG Nexus Study.[15]

As identified in Table 4.6-1 (Regional Transportation Development Mitigation Plan - Project List and Costs [Rialto Sphere of Influence]), a fee program has been established to fund the fair-share development contribution of improvement cost for specific transportation facilities.[16] In calculating fees, the fair-share contribution of total project costs in each subarea is divided by the projected vehicular generation attributable to new development in that subarea, as summarized in Table 4.6-2 (Regional Transportation Development Mitigation Plan - Fair-Share Fees).

As indicated in the County CMP, local jurisdiction responsibilities include, but may not be limited to: (1) include in deficiency plans, TIA reports, and related studies only those mitigation measures deemed by the South Coast Air Quality Management District to be compatible with air quality requirements; (2) continue implementation of transportation control measures in accordance with the County CMP; (3) encourage job creation in the County through strategies which increase the County's ability to attract basic industry; and (4) study and consider methods for encouraging transit, transportation demand management (TDM), pedestrian, and bicycle-oriented development.[17]

- **County of San Bernardino Development Code**. As indicated in Section 83.05.010 (Purpose) in Chapter 83.05 (Dedication and Installation of Streets and Trail Improvements) in the County Development Code, this chapter regulates and controls dedications and installation of street improvements and trails. With regards to the dedication of street and highway rights-of-way in the Valley Region, additional rights-of-way shall be required in compliance with road widths established by the County General Plan after review by the Director of Public Works (Section 83.06.030[b][3]). With regards to the dedication and installation of trails, where approved plans or ordinances do not exist, the required dedications may be required for specific plans and planned development projects and shall be as follows: (1) Proposed development adjacent to trail systems may be required to dedicate land for trail access points, as determined by the Director of Public Works; and (2) The dedication or offers of dedication of trail easements may be required for establishing a planned trails system alignment or where an established trial is jeopardized by impending development (Section 83.05.040[b]).[18]

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[15]/ The SANBAG Nexus Study identifies a Nexus Study Network, representing regional roadways in the urbanized areas of the County. Roadway improvement projects must be located on this network for their costs to be included in the SANBAG Nexus Study. In addition, projects must be included in the SANBAG Nexus Study to receive Measure I 2010-2040 Valley Interchange and Major Street Funds and Victor Valley Major Local Highway Projects Funds or SANBAG allocations of State/federal transportation funds.

[16]/ The purpose of the development impact fees is to fund the fair-share development contribution of improvement costs for specific transportation facilities as identified in the RTDMP. Fees are intended to generate only the development fair-share contribution of project costs as required by the CMP and are not intended to provide 100 percent funding for or construct all projects listed in the plan.

[17]/ San Bernardino Associated Governments, Congestion Management Program for San Bernardino County, 2003 Update, December 3, 2003, p. 5-7.

[18]/ As specified in Section 83.05.040(c) of the County Development Code: "To ensure application of uniform design standards and to promote the safety of trail users and their enjoyment of the trails system, the [Public Works] Director shall apply the 'County Trail Use and Design Guidelines.' These standards are intended to serve as a general guide, and may at times be superseded by standards of managing agencies other than San Bernardino County. Standards may vary depending on the proposed use and operation of the trail; more detailed standards for specific trails may be developed at the time specific siting and planning for a trail link is completed."

Table 4.6-1
REGIONAL TRANSPORTATION DEVELOPMENT MITIGATION PLAN - PROJECT LIST AND COSTS
(Rialto Sphere of Influence)

Road Name	From	To	County Miles	Description	Total Estimated Project Cost	Subarea Development Contribution	SANBAG and Other Jurisdiction Contribution
Alder Avenue	Jurupa Avenue	0.12 Mile North of Jurupa Ave	0.12	Widen 1 LED[1]	$ 382,294	$ 147,467	$ 234,827
Alder Avenue	0.12 Mile North of Jurupa Avenue	Slover Avenue	0.90	Widen 1 LED	$ 2,867,207	$ 1,106,003	$ 1,761,204
Alder Avenue	Slover Avenue	0.23 Mile North of Slover Avenue	0.23	Widen 1 LED	$ 732,731	$ 282,645	$ 450,085
Bloomington Ave	Cedar Avenue	0.09 Mile Northeast of Larch Ave	0.30	Widen 1 LED	$ 955,736	$ 368,668	$ 587,068
El Rivino Road	Cedar Avenue	Agua Mansa Road	1.24	Widen 1 LED	$ 3,950,374	$ 1,523,827	$ 2,426,547
Glen Helen Pkwy	Lytle Creek Road	0.25 Mile East of I-15 Freeway	2.50	Widen 1 LED	$ 7,964,463	$ 3,072,231	$ 4,892,232
Jurupa Avenue	Locust Avenue	Cedar Avenue	0.66	Widen 1 LED	$ 2,102,618	$ 811,069	$ 1,291,549
Jurupa Avenue	Cedar Avenue	Lilac Avenue	1.00	Widen 1 LED	$ 3,185,785	$ 1,228,892	$ 1,956,893
Jurupa Avenue	Lilac Avenue	0.09 Mile West of Willow Avenue	0.16	Widen 1 LED	$ 509,726	$ 196,623	$ 313,103
Jurupa Avenue	Tamarind Avenue	Alder Avenue	0.13	Widen 2 LED	$ 828,304	$ 319,512	$ 508,792
Locust Avenue	Seventh Street	Eleventh Street	0.13	Widen 1 LED	$ 414,152	$ 159,756	$ 254,396
Locust Avenue	Jurupa Avenue	Santa Ana	0.52	Widen 1 LED	$ 1,656,608	$ 639,024	$ 1,017,584
Locust Avenue	Santa Ana Avenue	Slover Avenue	0.48	Widen 1 LED	$ 1,529,177	$ 589,868	$ 939,309
Locust Avenue	Valley Boulevard	San Bernardino Avenue	0.50	Widen 1 LED	$ 1,592,893	$ 614,446	$ 978,446
Locust Avenue	San Bernardino Ave	Randall Avenue	0.50	Widen 1 LED	$ 1,592,893	$ 614,446	$ 978,446
Randall Avenue	Alder Avenue	Cedar Avenue	0.25	Widen 1 LED	$ 796,446	$ 307,223	$ 489,223
San Bernardino Ave	Laurel Avenue	0.07 Mile East of Larch (Rialto C/L)	1.31	Widen 1 LED	$ 4,173,379	$ 1,609,849	$ 2,563,530
Santa Ana Avenue	Tamarind Avenue	Locust Avenue	0.76	Widen 1 LED	$ 2,421,197	$ 933,958	$ 1,487,239
Santa Ana Avenue	Locust Avenue	Cedar Avenue	0.75	Widen 1 LED	$ 2,389,339	$ 921,669	$ 1,467,670
Santa Ana Avenue	Cedar Avenue	0.12 Mile East of Cactus Avenue	0.88	Widen 1 LED	$ 2,803,491	$ 1,081,425	$ 1,722,066
Sierra Avenue	I-15 Freeway	Lytle Creek Road	0.22	Widen 1 LED	$ 700,873	$ 270,356	$ 430,516
Slover Avenue	Alder Avenue	Cactus Avenue	2.35	Widen 1 LED	$ 7,486,596	$ 2,887,897	$ 4,598,698
Glen Helen Pkwy	Lytle Creek Road	-		Install TS	$ 607,028	$ 234,156	$ 372,871
Jurupa Avenue	Alder Avenue	-		Install TS	$ 303,514	$ 117,078	$ 186,436
Jurupa Avenue	Locust Avenue	-		Install TS	$ 303,514	$ 117,078	$ 186,436
Randall Avenue	Locust Avenue	-		Install TS	$ 151,757	$ 58,539	$ 93,218
Santa Ana Avenue	Alder Avenue	-		Install TS	$ 607,028	$ 234,156	$ 372,871
Santa Ana Avenue	Locust Avenue	-		Install TS	$ 607,028	$ 234,156	$ 372,871
				Total Rialto Sphere of Influence	$53,616,149	$20,682,021	$32,934,127

Notes: LED – lane each direction; TS – traffic signal

Source: County of San Bernardino

Table 4.6-2
REGIONAL TRANSPORTATION DEVELOPMENT MITIGATION PLAN FAIR-SHARE FEES

Jurisdiction	Single-Family Dwelling Unit	Multi-Family Dwelling Unit	Retail (sq. ft.)	Office (sq. ft.)	Industrial (sq. ft.)	High Cube Industrial (sq. ft.)
Rialto Sphere	$6,223	$4,311	$14.22	$8.59	$4.93	$1.43

Source: County of San Bernardino

Before final inspection of a structure or improvement resulting in an increase or change of vehicular traffic that necessitates the construction of street improvements for the purposes of protecting public health and safety, the installation of street improvements may, at the discretion of the Public Works Director, be required in compliance with the current adopted County standards (Section 83.05.050[a]).

The right-of-way dedication and installation of street improvements shall be required before the occupancy of the premises or commencement of uses (Section 83.05.060[a]). Where it is impractical to install the required improvements at the time of the proposed development, a written agreement shall be entered into with the County Department of Public Works to make the improvements (Section 83.05.060[b]).

Section 89.03.010 (Purpose) in Chapter 89.03 (Transportation Facilities Financing) states that the purpose of this chapter is to "require the payment of transportation facilities fees for new development that is within the boundaries of an adopted Local Area Transportation Facilities Plan" in order to defray the "actual or estimated costs of constructing transportation facilities that are necessary to accommodate vehicular traffic generated by new development." Thos chapter's provisions only affect those unincorporated County areas that are located within the boundaries of an adopted "Local Area Transportation Facilities Plan" (Sections 89.03.020[A] and 89.03.090).

As indicated in the RTDMP, the local area transportation facilities plans are entirely separate from RTDMP, as the primary intent of those plans is to construct a backbone of north/south and east/west major thoroughfares within the boundaries of an unincorporated community. No "Local Area Transportation Facilities Plan" has been adopted for the general project area.

In addition, as stipulated in Section 83.14.020 (Applicability) in Chapter 83.14 (Transportation Control Measures) in the County Development Code, specific "transportation control measures development standards" apply to all non-residential projects within unincorporated areas that are greater than 10,000 square feet in area. Those standards include: (1) Bicycle parking facilities or secured bicycle lockers shall be provided for all non-residential and multi-family (10 or more units) developments when discretionary review is required (parking racks or secure lockers shall be provided at a rate of 1 per 30 parking spaces); (2) On-site pedestrian walkways and bicycle facilities shall be provided connecting each structure in a development to public streets for all new non-residential and multi-family (10 or more units) development; (3) A minimum of one shower facility accessible to both men and woman shall be provided for persons bicycling or walking to work for all new non-residential development generating 250 or more peak-hour trips; (4) Passenger loading areas in locations close to building entrances shall be provided for all new non-residential and multi-family (10 or more

units) developments with at least 100 parking spaces (loading area shall be equivalent to a minimum of five parking spaces); (5) Preferred parking facilities shall be provided near building entrances for vanpools in all new non-residential developments, where appropriate; (6) Transit improvements (i.e., bus pullouts, bus pads, bus shelters) shall be provided for all new residential and non-residential development along existing or planned transit routes (the need for and nature of those improvements shall be determined in cooperation with the designated local transportation authority); (7) On-site video conferencing facilities shall be provided for all office park developments with 1,000 or more employees; (8) Parking requirements for new non-residential development shall be reduced when linked to other actions that reduce trips to account for increased ridesharing and other modes of transportation (the amount of reduction shall be based on the recommendations of a parking study prepared by a qualified traffic engineer); (9) Incentives to incorporate on-site child-care facilities and senior citizen facilities (e.g., increased parcel coverage, reduced parking requirements) shall be provided; and (10) Participate in implementation of the Countywide Bicycle Plan, when adopted.

4.6.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. The City General Plan acknowledges that "[a]s Rialto grows, good internal flow and access for local traffic must be maintained; through traffic, which offers many costs and few benefits to the City, must be channeled into efficient corridors separated from and protective of the life of the City. . .It is evident that the City's circulation systems have grown with the City, keeping pace with demands generated by new development. In order to maintain this concurrency of land use and circulation development, as well as to meet present and future transportation needs resulting from unprecedented local and regional growth, it is necessary to identify significant pending issues and the goals and policies to address them."[19] Those transportation and traffic goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

  - Goal 3.2.1. Cooperate and coordinate with Caltrans and the San Bernardino Association of Governments to accommodate growing volumes of east-west traffic.

  - Goal 3.2.2. Confine trucking to designated, efficient and convenient routes within and through the City.

  - Goal 3.2.3. Maintain Level of Service D or better on all Rialto arterial roadways.

    - ◊ Policy 3.2.3.2. New streets and improvement to existing streets made necessary by new development shall be provided concurrent with the new development.

[19]/ *Op. Cit*., City of Rialto General Plan, Circulation Element, pp. V-1 and V-2.

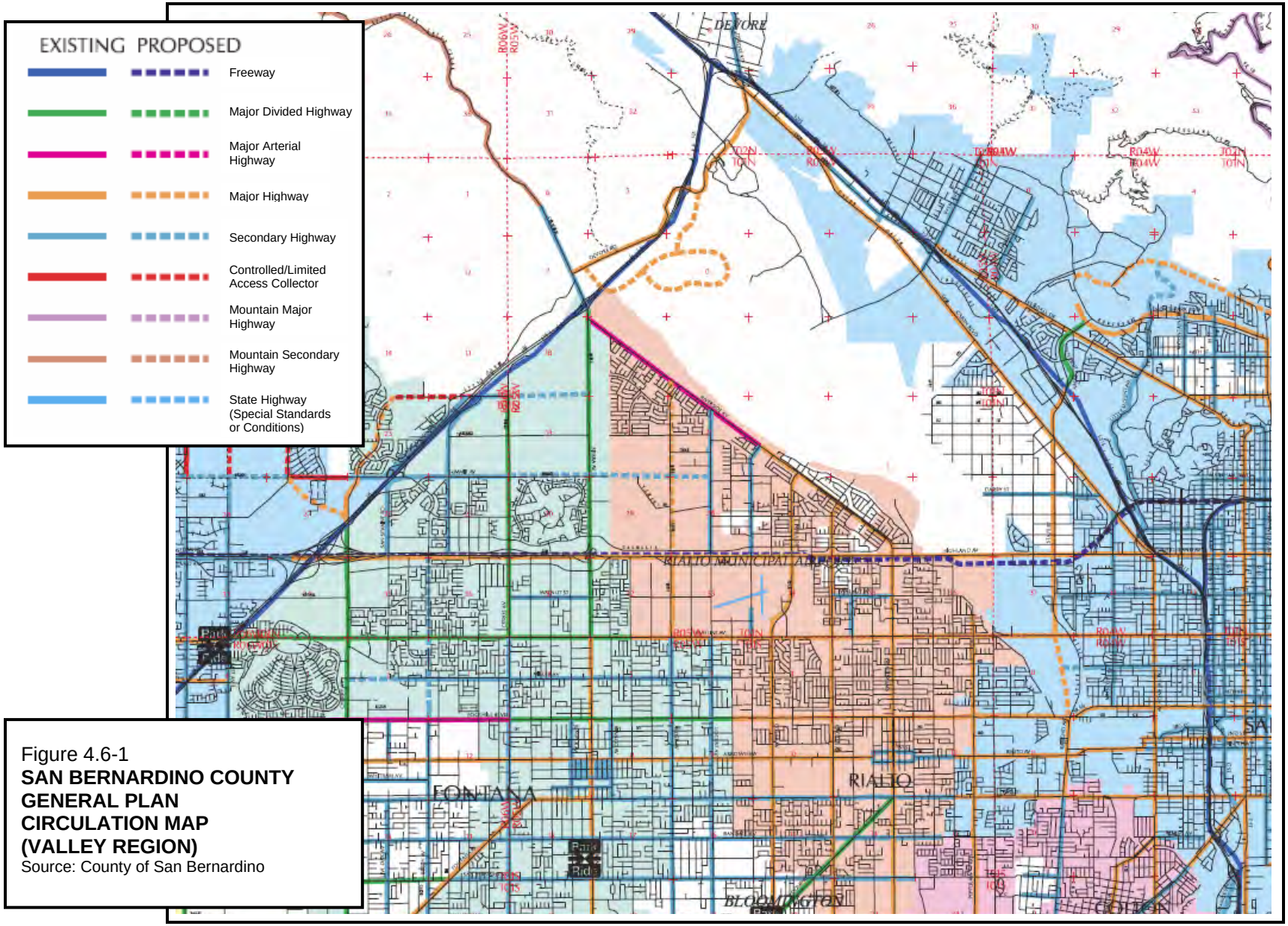

Figure 4.6-1
SAN BERNARDINO COUNTY GENERAL PLAN CIRCULATION MAP (VALLEY REGION)
Source: County of San Bernardino

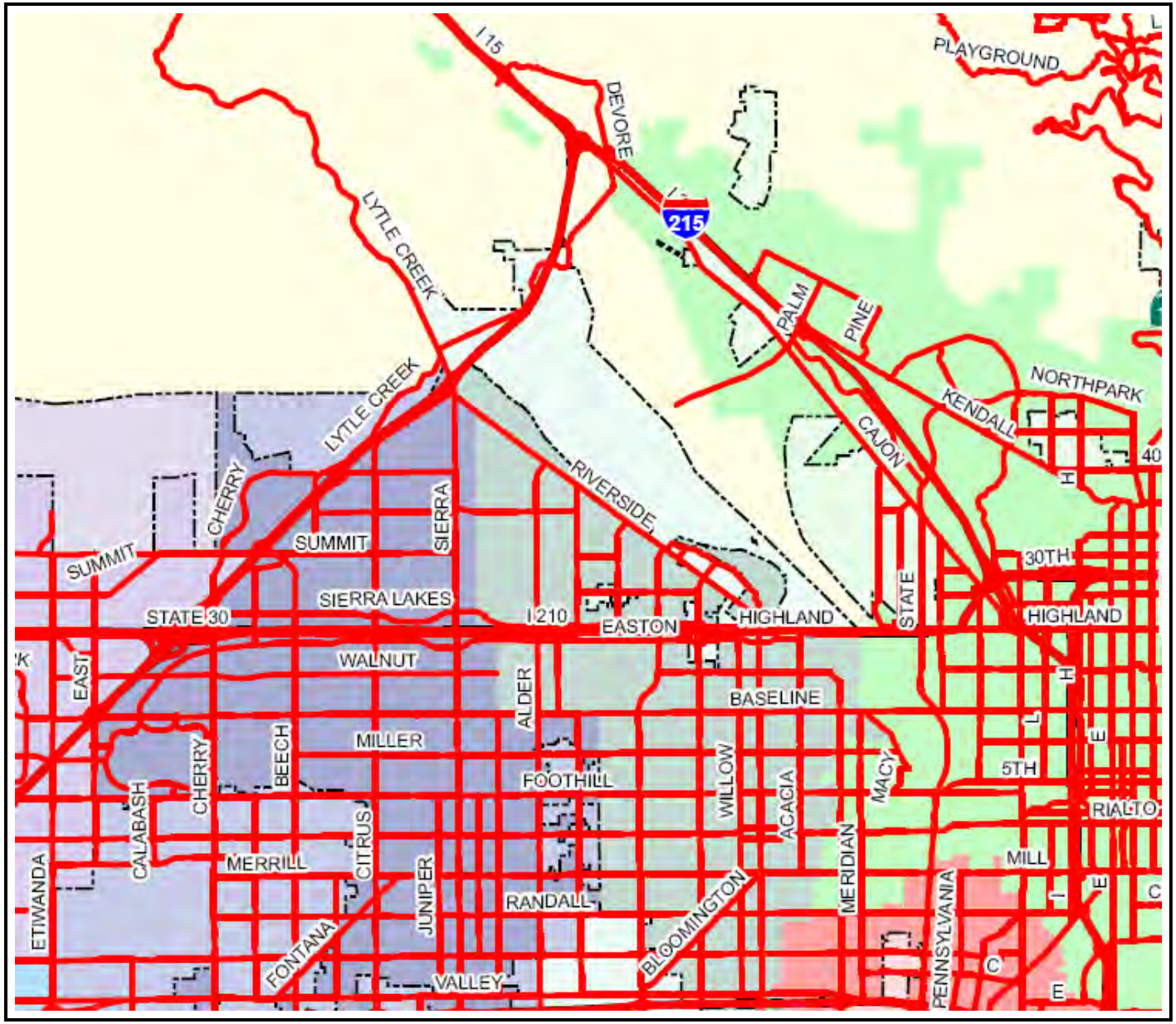

Figure 4.6-2
NEXUS STUDY NETWORK SAN BERNARDINO VALLEY
Source: San Bernardino Associated Governments

- ◊ Policy 3.2.3.4. Alternative modes of travel such as commuter rail, park and ride facilities, bus transit and bicycle trails shall continue to receive cooperation and support from the City.

- Goal 3.2.4. Residential neighborhoods in Rialto shall be protected from the noise, pollution and danger of excessive vehicular traffic.

  - ◊ Policy 3.2.4.2. Non-local vehicular traffic shall be discouraged from using neighborhood streets by use of appropriate street design, street configuration, stop signs and the like. If required, traffic barriers will be constructed for the protection of imperiled neighborhoods.

- Goal 7.1.1. Improve bicycle trail design and construction.

  - ◊ Policy 7.1.1.3. Improve existing and new Class I bicycle trails with landscaping, rest stops and other amenities to add to the aesthetic values of adjoining neighborhoods, as well as the comfort and pleasure of cyclists using the trails.
- Goal 7.1.2. Safe pedestrian access throughout Rialto.

  - ◊ Policy 7.1.2.1. Require sidewalks on at least one side of all streets in newly developed areas.

  - ◊ Policy 7.1.2.2. Complete the system of sidewalks beside all arterials bordering commercial zones in the City.[20]

Applicable or potentially applicable transportation and circulation policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. As stipulated in Section 3.36.060 (Traffic Impact Mitigation Development Fee) in Chapter 3.36 (Traffic Impact Mitigation Development Fee) in the City Municipal Code: "There is imposed a traffic impact mitigation development fee on all new development and any substantial improvement which results in a new increase in the number of vehicle trips generated by a development as determined by a traffic study or by average trip estimates as published in the "Trip Generation," An Information Report (Current Edition) of the Institute of Transportation Engineers and accepted by the Director of Public Services/City Engineer."

  As indicated in Section 3.36.010 (Legislative Findings): "The imposition of impact fees is one of the preferred methods of ensuring that development bears a proportionate share of the cost of capital facilities necessary to accommodate such development. This must be done in order to promote and protect the public health, safety and welfare."

  As indicated in Section 18.59.010 (Purpose) in Chapter 18.59 (Transportation Control Measures) in Title 18 (Zoning) of the City Municipal Code, these regulations are established to: (A) protect the public safety expedite the smooth flow of traffic and

[20]/ *Ibid*., pp. V-13 through V-21.

reduce traffic congestion; (B) reduce vehicle trips, thereby reducing air congestion and pollutants and improving air quality; and (C) meet the requirements of the 1991 Air Quality Management Plan and the 1992 Federal Attainment Plan for Carbon Monoxide. As indicated in Section 18.59.020 (General Provisions), the requirements of this chapter apply to all new non-residential, new single-family residential developments of five hundred or more units, and multi-family residential developments of ten or more units.

Pursuant to Section 18.59.030 (Design Standards) of the City Municipal Code, the following transportation control measures (TCMs) shall be incorporated into all new and revised non-residential and multi-family developments of ten or more units, except as specifically provided below: (A) Bicycle parking facilities to include bicycle racks and/or secured bicycle lockers shall be provided at a rate of one bicycle space per 30 parking spaces with a minimum requirement of three bicycle spaces; (B) On-site pedestrian walkways and bicycle facilities shall be provided connecting each building in a development to public streets; (C) A minimum of one shower facility accessible to both men and women shall be provided for persons bicycling or walking to work for all new non-residential development meeting the City's adopted the County CMP thresholds of 250 or more peak hour trips; (D) Passenger loading areas shall be provided in locations close to building entrances (but not interfering with vehicle circulation) for developments containing at least 100 parking spaces (loading area is equivalent to a minimum of five parking spaces); (E) Preferred parking facilities at a rate of two parking spaces per 100 spaces shall be provided near building entrances for vanpools in all new non-residential development; (F) Provide transit improvements, such as bus pullouts, bus pads, and bus shelters for all new residential and non-residential development along existing or planned transit routes (the need for and nature of such improvements to be defined by the City Engineer in cooperation with Omnitrans); (G) New residential development of 500 or more units shall provide telecommuting facilities or contribute toward development of a telecommuting center; (H) New office park developments of 1,000 or more employees shall provide on-site video conferencing facilities; (I) The minimum parking space requirements for new non-residential development may be reduced in number up to a maximum of ten percent when linked to other actions that reduce trips to account for increased ridesharing and other modes of transportation; (J) The City will participate in the implementation of the adopted Countywide bicycle plan to conform with SCAG's Regional Mobility Element; and (K) Sidewalks shall be installed or widened when possible, as approved by the City Engineer, to accommodate pedestrians (Section 18.59.030). Since these are pre-existing requirements, unless otherwise excluded through the LCRSP, all on-site development must provide applicable TCMs.

4.6.3 Environmental Setting

4.6.3.1 Regional Setting

California Transportation Plan

Section 135 requirements and Section 65070 *et seq.* of the CGC (requiring the California Department of Transportation to develop a California Transportation Plan) requires the development of a comprehensive State long-range transportation plan. In accordance therewith, Caltrans prepared the "California Transportation Plan 2025"[21] (CTP 2025) and the "California

[21]/ California Department of Transportation, California Transportation Plan 2025, April 2006.

Transportation Plan 2030, Addendum to the CTP 2025"[22,23] (CTP 2030). As indicated therein, the Statewide plan "provides a vision for California's future transportation system and defines goals, policies, and strategies to achieve the vision. The CTP proposes a balanced approach to the projected increase in demand for mobility and accessibility. By providing a common framework for decision-makers at all levels of government and the private sector, the CTP seeks to guide transportation decisions and investments that will enhance our economy, support our communities, and safeguard our environment for the benefit of all."[24]

As further indicated therein: "The way communities are planned and designed has a profound impact on our travel behavior. Over the past several decades, three predominant land use practices have influenced urban design: [1] Lack of coordinated decision-making between cities and counties who made local land use decisions, and regional agencies and the State who make regional and interregional transportation decisions. [2] Single-use zoning ordinances isolating employment, shopping and services, and housing locations. [3] Low-density growth planning resulting in considerable land consumption and sprawl-type urban form, requiring higher infrastructure investments due to distances served. These land use practices have often resulted in increased traffic congestion and commute times, air pollution, greater reliance on fossil fuels, loss of habitat and open space, inequitable distribution of economic resources, and loss of a sense of community. These land use practices have contributed to the increase in vehicle miles traveled and vehicular non-work trips."[25]

Among the inventory of goals, policies, and strategies outlined in CTP 2025 are the following: (1) Increase densities and designs strategically to facilitate effective transit services; (2) Promote street and urban design to encourage walking and bicycling to destinations; (3) Encourage localities to foster "smart growth" development in areas where transportation infrastructure can readily support it; and (4) Promote the revision of zoning ordinances to provide for mixed-use development.[26]

Regional Mobility Element

Pending its revision, SCAG's "Regional Mobility Element" (RME) a component of the 1996 RCPG, is "the principal transportation policy, strategy, and objective statement of Southern California Association of Governments, proposing a comprehensive strategy for achieving mobility and air quality mandates. It describes the region's strategy for adjusting its transportation behavior and investments as it balances the constraints of government-mandated financial and environmental objectives and mobility demands."[27]

The RME strategy is to build on the 20-year local plans for each county. The plan proposes a three-tier approach to transit. Tier 1 involves longer distance line haul service (e.g., Metrolink), longer distance rail service, and express bus service. Tier 2 is the support of bus and paratransit service that provides service connections to Tier 1 service as well as medium-

[22]/ California Department of Transportation, California Transportation Plan 2030, Addendum to the CTP 2025, October 2007.

[23]/ The "California Transportation Plan – 2030 Addendum" updates the State's long-range transportation plan, the CTP 2025 to comply with the Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users (SAFETEA-LU). This legislation authorizes and funds federal transit and highway programs through 2009.

[24]/ *Op. Cit*., California Transportation Plan 2025, p. 1.

[25]/ *Ibid*., p. 12.

[26]/ *Ibid*., pp. 57-58.

[27]/ *Op. Cit*., Regional Comprehensive Plan and Guide, Regional Mobility, adopted June 1994, p. 4-1.

distance subregional-oriented service in and around communities. Tier 3 is localized, short-trip, community-oriented service, such as taxis and shuttles.

The RME utilizes TDM strategies which attempt to modify travel behavior. Historically, major TDM emphasis has been on reducing the single-occupancy vehicle (SOV) home-to-work commutes. In the short term, the region's TDM efforts will continue to focus on the promotion and support of ridesharing, ridematching, telecommuting, teleconferencing, the use of bus and rail transit, job site flex time, alternative work weeks, non-motorized travel, carpool subsidies, indirect market incentives, and land-use strategies. In addition, the RME covers transportation system management projects that include traffic signal synchronization and operation component improvements, such as closed-circuit television, ramp meter installation, traffic operations centers, and Smart Street operation. The plan also includes the use of transportation control measures (TCMs), strategies designed to reduce the amount of motor-vehicle based emissions by changing the way people make trips, by alleviating traffic congestion, and by facilitating infrastructure changes to promote alternatives to SOVs.

The RME seeks to integrate urban form as a mobility strategy, taking into consideration the relationship between land use and travel behavior. The plan promotes land-use development patterns, including job-housing balance, to enhance the efficiency of the region's transportation system.

Even with the implementation of the RME, SCAG predicts that the average daily speed for all vehicle trips within the SCAG region will decrease from 32.5 miles per hour (mph) in 1990 to 27.2 mph in 2015. The delay for drivers on the road will worsen by 106 percent in the morning peak hour and by 196 percent in daily trips.[28]

Regional Transportation Plan

SCAG is the federally designated MPO for Los Angeles, Imperial, Orange, San Bernardino, Riverside, and Ventura Counties[29] under Section 134(g)(1) in Title 23 of the United States Code for the six-county region that is comprised of the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG is required by federal and State mandates to update the long-range transportation plan for the region every four to five years.

The "Final 2008 Regional Transportation Plan: Making the Connection" (2008 RTP), as adopted on May 8, 2008, updates and replaces the "2004 Regional Transportation Plan – Community Link 21"[30] (2004 RTP) which itself updated and replaced the "2001 Regional Transportation Plan – Destination 2030"[31] (2001 RTP). The 2008 RTP "presents the transportation vision for this region through the year 2035 and provides a long-term investment framework for addressing the region's transportation and related changes." The identified goals of the 2008 RTP include: (1) Maximize mobility and accessibility for all people and goods in the region; (2)

[28]/ *Ibid*., p. 4-33.

[29]/ The federal Surface Transportation Assistance Act of 1973 required the formation of an MPO for any urbanized area with a population greater than 50,000 persons. The federal Intermodal Surface Transportation Efficiency Act (ISTEA) directed those organizations to develop transportation plans and programs for the urbanized areas of the State. MPOs were created in order to ensure that existing and future expenditures for transportation projects and programs were based on a "continuing, cooperative and comprehensive" planning process.

[30]/ Southern California Association of Governments, 2004 Regional Transportation Plan – Community Link 21, adopted April 2004.

[31]/ Southern California Association of Governments, 2001 Regional Transportation Plan – Destination 2030, adopted April 2001.

Ensure travel safety and reliability for all people and goods in the region; (3) Preserve and ensure a sustainable regional transportation system; (4) Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies; (5) Maximize the productivity of our transportation system; (6) Protect the environment, improve air quality and promote energy efficiency; and (7) Encourage land use and growth patterns that complement our transportation investments.

The following five policies serve to guide the development of the 2008 RTP, emphasizing the plan's performance through specific indicators: (1) Transportation investment shall be based on SCAG's adopted Regional Performance Indicators; (2) Ensuring safety, adequate maintenance, and efficiency of operations on the existing multi-modal transportation system will be RTP priorities and will be balanced against the need for system expansion investments; (3) RTP land-use and growth strategies that differ from currently expected trends will require a collaborative implementation program that identifies required actions and policies by all affected agencies and subregions; (4) HOV (high-occupancy vehicle) gap closures that significantly increase transit and ridership usage will be supported and encouraged, subject to Policy No. 1; and (5) Progress monitoring on all aspects of the plan, including timely implementation of projects, programs, and strategies, will be an important and integral component of the plan.[32]

Specific transportation-improvements projects are listed in the 2008 RTP. In the general project area, "financially constrained RTP projects" include adding one high-occupancy vehicle (HOV) lane in each direction (PM 0.0-16.0) along the I-15 Freeway between the Riverside County line and the I-215 Freeway (RTP ID 4H01004).[33]

San Bernardino County Congestion Management Plan

A key element of the County CMP is the traffic impact analysis (TIA) report. The TIA, prepared by local jurisdictions, serves to provide a basis for addressing the impacts of land-use decisions on the regional transportation system by providing a consistent format to identify and mitigate traffic impacts and quantify mitigation costs. As specified, TIA reports shall be prepared when a proposed change in land use or a development project will equal or exceed the County CMP threshold of 250 two-way peak-hour trips generated, based on trip generation rates published for the applicable land use in the Institute of Transportation Engineers' (ITE) "Trip Generation" or other approved Congestion Management Agency (CMA) approved data source.

The scope of the proposed LCRSP's TIA was developed in conjunction with the staffs of the City and SanBAG. Prior to the commencement of the TIA, coordination meetings were held with City and SanBAG staff to finalize the study parameters and methodology. The approach, assumptions, and methodology utilized is consistent with the 2005 update to the County's CMP.

Although presenting traffic information applicable to this CEQA review, the project's TIA is separately reviewed by SanBAG, acting in its role as CMA, and by other potentially impacted jurisdictions,[34] in concert with the permitting jurisdiction's project review schedule and prior to any approval or permitting activity. The 2005 Update to the County CMP indicates that TIA

[32]/ Southern California Association of Governments, Final 2008 Regional Transportation Plan: Making the Connection, December 6, 2007, adopted May 8, 2008, p. 11.

[33]/ Southern California Association of Governments, 2008 Regional Transportation Plan: Making the Connection, Supplemental Report, Project List, adopted May 8, 2008, p. 148.

[34]/ The study area for the traffic report includes roadways traversing the following jurisdictions: Cities of Rialto, Fontana, San Bernardino and the County of San Bernardino.

reports may be contained within other similar documents, including CEQA documentation.[35] In accordance therewith, the project's TIA is included in Appendix II-A (Traffic Impact Analysis).[36] This CEQA analysis should, therefore, be read in combination with the information presented therein.

Non-Motorized Transportation Plan

In 2001, SANBAG prepared a "Non-Motorized Transportation Plan" for the purpose of presenting a bicycle circulation strategy, promoting the development of a Countywide bikeway system, and providing recommendations to local agencies to integrate bicycle planning into the development process. The bicycle circulation strategy consisted of a system of primary routes, lanes, and paths connecting County residents to major regional destinations. The proposed bikeway system included common design elements, a signage plan, enhanced regional connections to bordering counties, new and improved pathways to major transit connections, new bicycle lanes, and new support facilities. Within the general project area, the plan identified a proposed "Class 2" bikeway along Riverside Avenue, extending from Sierra Avenue southward through the City to the Santa Ana River.[37]

Air Quality Management Plan

The air quality conformity requirements of the Federal Clean Air Act (CAA) establish a need to integrate air quality planning and regional transportation planning. As the federally-designated metropolitan planning organization (MPO) for the six-county southern California region, SCASG is required by law to ensure that transportation activities conform to and are supportive of the goals of regional and state air quality plans to attain National Ambient Air Quality Standards (NAAQS). In addition, SCAG, in combination with the South Coast Air Quality Management District (SCAQMD), is responsible for the preparation of the air quality management plan for the South Coast Air Basin (SCAB or Basin).

Transportation control measures (TCMs) are defined as strategies that adjust trip patterns or otherwise modify vehicle use in ways that reduce air pollutant emissions and which are specifically identified and committed to in the most recently approved Air Quality Management Plan/State Implementation Plan (AQMP/SIP). TCMs are included in the AQMP as part of the overall control strategy to demonstrate the region's ability to come into attainment with the NAAQS [38]

TCMs are further defined in the USEPA's Transportation Conformity Rule (40 CRF Parts 51 and 93). As defined therein: "Transportation control measure is any measure that is specifically identified and committed to in the applicable implementation plan that is either one of the types listed in Section 108 of the CAA [Federal Clean Air Act], or other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions." The USEPA and related court

[35]/ *Op. Cit*., Congestion Management Program for San Bernardino County, 2003 Update, Appendix C, December 3, 2003, pp. C-4 and C-11 and 12.

[36]/ Crain & Associates, Traffic Impact Analysis Report for the Lytle Creek Ranch Planned Development Project, City of Rialto, February 2008.

[37]/ San Bernardino Associated Governments (Alta Transportation Consulting), San Bernardino County Non-Motorized Transportation Plan, 2001 Update, June 6, 2001.

[38]/ South Coast Air Quality Management District, Final 2007 Air Quality Management Plan, Appendix IV-C, adopted June 1, 2007, p. 36.

decisions have maintained that TCMs considered reasonably available control measures[39] (RACM) must be measures that: (1) advance the attainment date, typically by at least one year; and (2) are technologically and economically feasible.

The USEPA's guidance documents provide help in identifying the type of measures to be considered. Section 108(f)(1)(A) of the CCA provides a list of sixteen categories of TCMs that are potential options that should be considered indicative types of control measures. That list includes: (1) programs for improved use of public transit; (2) restriction of certain road or lanes to, or construction of such roads or lands for use by, passenger buses or high occupancy vehicles; (3) employer-based transportation management plans, including incentives; (4) trip-reduction ordinances; (5) traffic flow improvement programs that achieve emission reductions; (6) fringe and transportation corridor parking facilities, serving multiple occupancy vehicle programs or transit service: (7) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentrations, particularly during periods of peak use; (8) programs for the provision of all forms of high-occupancy, shared-ride services, such as the pooled use of vans; (9) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to tome and place; (10) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas; (11) programs to control extended idling of vehicles; (12) programs to reduce motor vehicle emissions, consistent with Title II of the CAA, which are caused by extreme cold start conditions; (13) employer-sponsored programs to permit flexible work schedules; (14) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity; (15) programs for new construction and major reconstruction of paths, tracks, or areas solely for the use by pedestrians or other non-motorized means of transportation, when economically feasible in the public interest; and (16) programs to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.[40] TCMs listed in the 2007 AQMP include the "Rialto Metrolink Station – Increase parking spaces from 225 to 775."[41]

4.6.3.2 Local Setting

Streets and Highways

A network of streets and highways provides local circulation and access to the project site. Those nearby area streets and freeways most applicable to this traffic assessment are listed and described below. The specific street designation and their associated design standards, as extracted from each applicable community's general plan and/or master plan of highways, are unique to each jurisdiction.

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[39]/ Section 172(c)(1) of the Federal Clean Air Act (CAA) requires State Implementation Plans (SIPs) to provide for the implementation of all reasonably available control measures (RACM) as expeditiously as practicable. Guidance on interpreting RACM requirements in the context of the 1990 Amendment of the CCA was set forth in the General Preamble (57 FR 13498, 13560) in 1992. In the General Preamble, the USEPA interpreted Section 172(c)(1) as imposing a duty on States to consider all available control measures and to adopt and implement measures that are reasonably available for implementation in a specific nonattainment area (Source: South Coast Air Quality Management District, Final 2007 Air Quality Management Plan, Appendix IV-C, p. 49).

[40]/ *Op. Cit*., Final 2007 Air Quality Management Plan, Appendix IV-C, pp. 52-53.

[41]/ *Ibid*., p. A-14.

- **Arrowhead Boulevard**. Arrowhead Boulevard is a discontinuous local street located north of the I-215 Freeway in the unincorporated portion of the County. This roadway forms the west leg of the intersection of Devore Road and the I-215 Freeway northbound (NB) on/off ramps. It has one through lane in each direction west of Devore Road.

- **Cajon Boulevard**. Cajon Boulevard is part of historic State Route 66. In the project area, this roadway extends south of and parallel to the I-215 Freeway and is designated as a "Major Arterial" in the City of San Bernardino and a "Major Highway" in the unincorporated portion of the County from about one-quarter-mile northwest of Glen Helen Parkway to south of Highland Avenue where it becomes Mount Vernon Avenue in the City of San Bernardino. This roadway generally has one to two lanes in each direction and provides left-turn lanes at major intersections. No parking is allowed along the roadway.

- **Kendall Drive**. Kendall Drive is designated a "Secondary Arterial" in the City of San Bernardino and a "Secondary Highway" in the unincorporated portion of the County and is located south of the I-215 Freeway between Cajon Boulevard and Palm Avenue. Kendall Drive also extends east of Palm Avenue on the north of the I-215 Freeway as a "Major Arterial" in the City of San Bernardino. Generally, this arterial has one to two through lanes in each direction and contains a parallel bike lane.

- **University Parkway**. University Parkway is designated a "Major Arterial" in the City of San Bernardino and extends from Northpark Boulevard where it provides access to the California State University's San Bernardino Campus to Cajon Boulevard where it continues southerly as State Street. This arterial provides two to three through lanes in each direction, with left-turn channelization at major intersections.

- **Riverside Avenue**. Riverside Avenue is designated a "Major Arterial" in the City of Rialto and extends in the northwest direction near the project site. This roadway forms the southwestern boundary of most of the project site and intersects Sierra Avenue just south of the I-15 Freeway/Sierra Avenue interchange. The number of lanes in each direction varies from one to two lanes between Sierra Avenue and Country Club Drive. Left-turn pockets are provided at key intersections. Parking is not allowed along Riverside Avenue.

- **Duncan Canyon Road**. According to the City of Fontana's "Circulation Master Plan," Duncan Canyon Road is designated a "Primary Highway" between Citrus Avenue and Coyote Canyon Road and a "Secondary Highway" south of Coyote Canyon Road. This roadway provides one through lane in each direction.

- **Casa Grande Drive**. Casa Grande Drive is an east/west "Secondary Arterial" that extends from Locust Avenue to approximately one quarter-mile west of Palmetto Avenue in the City of Rialto. This roadway has one through lane in each direction and left turn channelization.

- **Summit Avenue**. In the City of Fontana, Summit Avenue is designated as a "Secondary Highway" between Sierra Avenue and Beech Avenue. This roadway also extends westerly as a "Primary Highway" from Beech Avenue to Cherry Avenue where it becomes Wilson Avenue. Summit Avenue provides a full interchange with the I-15

Freeway, provides two through lanes in each direction at the I-15 Freeway interchange, and is a two-lane roadway just west of Sierra Avenue.

- **Bohnert Avenue**. Bohnert Avenue is a continuation of Apple Avenue at Cactus Avenue where it extends westerly as a "Collector Street" and terminates at Locust Avenue. This roadway has one through lane in each direction and is located in the City of Rialto.

- **Sierra Lakes Parkway**. In the City of Fontana, Sierra Lakes Parkway is a designated "Primary Highway," extending from Cherry Avenue to Sierra Avenue where it continues as Casmalia Street. It has one to two through lanes in each direction and left-turn channelization at key intersections.

- **Casmalia Street**. Within the City of Fontana, Casmalia Street is designated a "Primary Highway" between Sierra Avenue and the corporate boundary defining the Cities of Fontana and Rialto. In the City of Rialto, Casmalia Street is designated a "Secondary Arterial" between the City limit and Ayala Drive and a "Collector Street" between Ayala Drive and Riverside Avenue. This roadway is a continuation of Sierra Lakes Parkway at Sierra Avenue and extends easterly until its termination at Riverside Avenue. Casmalia Street generally provides one through lane in each direction, plus left-turn channelization at major intersections. The east leg of Casmalia Street at Ayala Drive is currently closed to prohibit cut-through traffic due to the construction of the SR-210 Freeway.[42]

- **Highland Avenue**. Highland Avenue is a discontinuous roadway that parallels the SR-210 Freeway. Within the City of Fontana, it is designated a "Primary Highway" west of Palmetto Avenue. Within the City of Rialto, it is designated a "Major Arterial" that extends from the City of Fontana/City of Rialto limits to Alder Avenue where it becomes Easton Street. Due to the discontinuation of east-west through traffic on the SR-210 Freeway as a result of the freeway construction, the east leg of the Highland Avenue/Sierra Avenue intersection is currently closed.[43] Instead, the section of Highland Avenue east of Sierra Avenue is currently aligned across the SR-210 Freeway eastbound (EB) off-ramp. Further to the east, Highland Avenue extends from Easton Street just east of Riverside Avenue to the City of San Bernardino as State Route 30. The westbound (WB) approach of Highland Avenue, between State Street and California Street, was closed between January 26 and March 25, 2007 when traffic counts at study intersections along Highland Avenue was conducted. Connections to the I-215 Freeway and the SR-259 Freeway are available along this route. In the project area, Highland Avenue has two through lanes in each direction with left-turn channelization at major intersections.

- **Easton Street**. Easton Street is located in the City of Rialto and is designated a "Major Arterial" and a "Collector Street" west and east of Ayala Drive, respectively. This roadway is discontinuous between Ayala Drive and Spruce Avenue. East of Riverside Avenue, it connects to Highland Avenue which is parallel to and on the north side of the SR-210 Freeway. In the project area, Easton Street provides two through lanes in each direction and left-turn channelization at key intersections.

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[42]/ This closure reflects the conditions that existed at the time of this traffic analysis and likely constitutes a temporary condition which has since ceased.

[43]/ This closure reflects the conditions that existed at the time of this traffic analysis and likely constitutes a temporary condition which has since ceased.

- **Baseline Road**. Baseline Road is designated a "Major Arterial" in the Cities of Rialto and San Bernardino and a "Major Highway" in the City of Fontana, providing east/west access between the City of Highland to the City of Upland where it becomes 16th Street, and becomes Baseline Road again in the County of Los Angeles. In the study area, this roadway has one to two through lanes in each direction, plus left-turn channelization at major intersections.

- **Foothill Boulevard**. Foothill Boulevard, designated a "Major Arterial" in the Cities of Rialto and San Bernardino and a "Major Highway" in the City of Fontana, is part of Historic Route 66 and provides east/west access between the City of San Bernardino and Los Angeles County. It generally has two through lanes in each direction and left-turn channelization at key intersections.

- **Arrow Boulevard**. Arrow Boulevard, a "Primary Highway" in the City of Fontana, begins in the City of Upland and continues easterly, intermittently called Arrow Route and Arrow Highway until it reaches the City of Fontana. This roadway continues as Rialto Avenue east of the City of Fontana/City of Rialto boundary. Arrow Boulevard has one to two through lanes in each direction, plus left-turn channelization.

- **Rialto Avenue**. Within the City of Rialto, Rialto Avenue is designated a "Major Arterial" and a "Secondary Arterial" west and east of Willow Avenue, respectively. In the City of San Bernardino, it is designated a "Major Arterial" between the City of Rialto/City of San Bernardino limit and approximately one-third-mile west of Mount Vernon Avenue. Further to the east, this roadway is a "Secondary Arterial." Rialto Avenue is a continuation of Arrow Boulevard at the intersection with Cedar Avenue and extends easterly to Tippecanoe Avenue near the San Bernardino International Airport. At its intersections with Cedar Avenue and Cactus Avenue, Rialto Avenue has two through lanes in each direction and left-turn channelization.

- **Merrill Avenue**. Merrill Avenue is a "Secondary Highway" in the Cities of Rialto and Fontana. Merrill Avenue is a continuation of Back Straight Road at the intersection with Cherry Avenue and extends easterly, continuing as Mill Street east of Eucalyptus Avenue. At its intersections with Cedar Avenue and Cactus Avenue, Merrill Avenue has two through lanes in each direction, plus left-turn channelization.

- **Devore Road**. Devore Road, a "Secondary Highway" between Cajon Boulevard and Kenwood Avenue in the unincorporated portion of the County, is a continuation of Glen Helen Parkway at its intersection with Cajon Boulevard and extends northerly to Foothill Street. This roadway has one through lane in each direction at its intersection with Arrow Boulevard and the I-215 Freeway northbound ramps.

- **Palm Avenue**. Palm Avenue is designated a "Secondary Arterial" between Cajon Boulevard and Ohio Avenue, a "Collector Street" between Ohio Avenue and Verdemont Drive, and a "Local Street" north and south of those segments in the City of San Bernardino. It begins from the San Bernardino National Forest and extends to Cajon Boulevard, where it continues southwesterly as Institution Road. Palm Avenue has one northbound through lane and two southbound through lanes, plus left-turn channelization, at its intersection with Kendall Drive and the I-215 Freeway southbound (SB) ramps.

- **Glen Helen Parkway**. Glen Helen Parkway is a "Major Highway" in the unincorporated portion of the County that provides direct access to the project site. This roadway provides one to two through lanes in each direction, plus left-turn channelization at major intersections. No parking is allowed in either direction. It extends northerly from Lytle Creek Road/Sierra Avenue to Cajon Boulevard, where it becomes Devore Road. Currently, Glen Helen Parkway is closed to through traffic between Lytle Creek Road/Sierra Avenue and the I-15 Freeway southbound ramps, although a few vehicles do access this portion of the roadway from the Lytle Creek Road/I-15 Freeway interchange.[44]

- **Clearwater Parkway**. Clearwater Parkway extends through Neighborhood I, provides access to the adjoining LCNPD (Rosena Ranch), and provides access to Glen Helen Parkway near the northern end of the project site. Clearwater Parkway is comprised of a 104-foot wide right-of-way and includes four travel lanes within an 80-foot wide paved cross section. Within each half-width of that ROW is a 7-foot wide striped median, two 12-foot wide travel lanes, a 9-foot wide shoulder, and a 12-foot wide landscaped parkway. No additional improvements are planned as part of the proposed project.

- **Lytle Creek Road**. Lytle Creek Road extends northeasterly from Duncan Canyon Road west of the I-15 Freeway and extends southerly starting at Duncan Canyon Road east of the I-15 Freeway. In the City of Fontana, it is designated a "Secondary Highway" between Summit Avenue and Duncan Canyon Road and a "Collector Street" south of Summit Avenue. In the unincorporated portion of the County, this roadway is designated a "Secondary Highway" from Sierra Avenue to approximately one and one-third mile northwest of the I-15 Freeway and then continues northwesterly into the San Bernardino National Forest as a "Mountain Secondary Highway." Lytle Creek Road forms the western border of the project site and generally provides one lane in each direction, with left-turn channelization at key intersections.

- **Sierra Avenue**. Sierra Avenue is designated a "Major Highway" south of the I-15 Freeway in the City of Fontana. Between the I-15 Freeway and Lytle Creek Road, Sierra Avenue is designated a "Primary Highway" in the City of Fontana and a "Secondary Highway" in the unincorporated portion of the County. This roadway extends from Lytle Creek Road to the south pass the I-10 Freeway to the community of Rubidoux, just north of the SR-60 Freeway. This roadway generally provides two through lanes in each direction with left-turn channelization south of the SR-210 Freeway. Just north of the SR-210 Freeway, Sierra Avenue has three through lanes in each direction. Further north, it provides one to two through lanes in each direction.

- **Live Oak Avenue**. Live Oak Avenue, designated a "Major Arterial" between Riverside Avenue and Terra Vista Drive in the City of Rialto, begins at La Morada Drive and continues northerly to Riverside Avenue, where it will be aligned opposite of a proposed project roadway. Between Riverside Drive and Terra Vista Drive, Live Oak Avenue has two through lanes in each direction.

- **Alder Avenue**. Alder Avenue is a "Major Arterial" north of Baseline Avenue in the City of Rialto and a "Primary Highway" south of that roadway in the City of Fontana. Alder Avenue is unpaved south of Jurupa Avenue. It extends discontinuously northerly to

[44]/ This closure reflects the conditions that existed at the time of this traffic analysis and likely constitutes a temporary condition which has since ceased.

Riverside Avenue, where it will be aligned opposite of a proposed project roadway. Alder Avenue provides one to two through lanes in each direction, plus left-turn channelization at key intersections.

- **Locust Avenue**. Locust Avenue is designated a north/south "Secondary Arterial" between Riverside Avenue and south of Easton Street in the City of Rialto. South of Baseline Road, Locust Avenue is generally a "Secondary Highway," traversing intermittently through the City of Fontana and the County. Near the site of the former Rialto Municipal Airport, this roadway is discontinuous between Easton Street and Baseline Road. Further north, it forms a T-intersection with Riverside Avenue, aligning opposite of a proposed project roadway. In the project area, one to two through lanes in each direction are provided.

- **Linden Avenue**. Linden Avenue is a "Secondary Arterial" north of Baseline Avenue and a "Collector Street" south of that roadway in the City of Rialto. This roadway begins at 5th Street in Riverside County and extends discontinuously northerly to Riverside Avenue, where it will be aligned opposite of a proposed project roadway. Linden Avenue provides one through lane in each direction between Riverside Avenue and Summit Avenue.

- **Ayala Drive**. Ayala Drive is a north/south "Major Arterial" in the City of Rialto. In the project area, Ayala Drive begins at Riverside Avenue, extends southerly to the east of the site of the former Rialto Municipal Airport and continues as Cedar Avenue south of Baseline Road. Ayala Drive has two through lanes in each direction and left-turn channelization.

- **Knollwood Avenue**. Knollwood Avenue is a "Local Street" between Sycamore Avenue and Riverside Avenue in the unincorporated portion of the County. It has one through lane in each direction.

- **Country Club Drive**. Country Club Drive is designated a "Major Arterial" south of Riverside Avenue in the City of Rialto and a "Local Street" north of that roadway in the unincorporated portion of the County. Country Club Drive extends northerly from the intersection of Bohnert Avenue and Cactus Avenue and terminates at the El Racho Verde Royal Vista Golf Course. At its intersection with Riverside Avenue, Country Club Drive has one through lane in each direction and southbound left-turn channelization. Parking is allowed north of Riverside Avenue.

- **Cactus Avenue**. Cactus Avenue is designated a "Major Arterial" in the City of Rialto. In the study area, this roadway is a continuation of Country Club Drive at the intersection with Bohnert Avenue and extends discontinuously southerly to El Rivino Road. Cactus Avenue provides one to two through lanes per direction, plus left-turn channelization at major intersections.

- **Pepper Avenue**. Pepper Avenue, a "Major Arterial" in the Cities of Rialto and San Bernardino, is a continuation of Shirley Bright Road and extends southerly to the City of Colton. At Baseline Road, Pepper Avenue has two northbound through lanes and one southbound through lane, plus southbound left-turn channelization.

- **State Street**. State Street, designated a "Major Highway" between Cajon Boulevard and Highland Avenue in the unincorporated portion of the County, is a continuation of University Parkway. At Cajon Boulevard, State Street has two through lanes in each direction and left-turn channelization at its intersection with Highland Avenue.

- **California Street**. California Street is designated a north/south "Collector Street" in the City of San Bernardino. It begins at Cajon Boulevard and terminates at Baseline Street. This roadway has one through lane in each direction at Highland Avenue.

- **Medical Center Drive**. Medical Center Drive, a north/south "Secondary Arterial" in the City of San Bernardino, connects Cajon Boulevard and 5th Street. At its intersection with Highland Avenue, this roadway has two through lanes in each direction and left-turn channelization.

- **Mount Vernon Avenue**. Mount Vernon Avenue is designated a "Major Arterial" south of Highland Avenue in the City of San Bernardino. It begins at the intersection of Little Mountain Drive and 27th Street and extends discontinuously southerly to Riverside County. Mount Vernon Avenue has two through lanes in each direction and left-turn channelization at its intersection with Highland Avenue.

Freeways

- **Interstate 15 Freeway**. The I-15 (Ontario) Freeway generally operates in a north-south direction. It extends from San Diego to Barstow, and then turns northeasterly through Nevada and beyond. This freeway has three to four travel lanes in each direction near the project site. A full freeway-to-freeway interchange is provided at the SR-210 Freeway and at the I-10 Freeway (San Bernardino Freeway) to the south and the I-215 Freeway to the north of the project site. From the vicinity of the project site, access to the I-15 Freeway is provided at Sierra Avenue and Glen Helen Parkway.

- **Interstate 215 Freeway**. The I-215 (Barstow) Freeway, which provides north/south access, generally has two to three travel lanes in each direction in the project area. The I-215 Freeway begins at the I-15 Freeway interchange and continues through Riverside County, re-connecting with the I-15 Freeway in the City of Murrieta. A full freeway-to-freeway interchange is provided at the I-15 Freeway north of the project site.

- **State Route 210**. The SR-210 (Martin A. Matich Highway) Freeway provides east/west access between Los Angeles and San Bernardino Counties. SR-210 begins in the City of Rialto and extends westerly, merging with the I-210 Freeway in the City of Glendora (in Los Angeles County). To the east, the SR-210 Freeway connects to the SR-30 Freeway in the City of San Bernardino. During the time when the traffic counts used for this analysis was conducted, the SR-210 Freeway between Sierra Avenue and State Street was under construction and this section of the freeway was closed.[45] Construction of the freeway improvement was completed in June 2007. In the project vicinity, the SR-210 Freeway was constructed and improved with three mainline travel lanes plus a High-Occupancy-Vehicle (HOV) lane in each direction.

[45]/ The transportation model used for this study reflects the freeway closure for the existing condition.

In 2005, the SCAG, in cooperation with SANBAG and the Caltrans, released the "I-15 Comprehensive Corridor Study, Final Report," undertaken to study potential means of addressing current and forecast future travel needs along the I-15 Freeway corridor (between the State Route 60 Freeway in Mira Loma and the Mojave River in Victorville). The study was initiated to address three specific primary needs: (1) Caltrans identified future right-of-way needs through much of the high desert area and needed to finalize this delineation for the purpose of initiating steps toward right-of-way preservation; (2) SCAG identified the I-15 Freeway as a truck lane corridor in the RTP and needed to study the feasibility, options, and costs of implementing truck lanes in the corridor; and (3) SANBAG needed to conduct a comprehensive evaluation of all the transportation needs in the I-15 Freeway corridor for the purpose of developing a long-range improvement plan and implementation strategy for the corridor.[46]

The I-15 Freeway corridor is experiencing considerable performance problems due to a number of interrelated factors. These factors include higher than average truck volumes (10 to 15 percent of the total traffic), steep grades approaching six percent sustained for approximately five miles through the Cajon Pass, roadway design limitations (particularly at the I-15/I-215 Freeway interchange), heavy traffic demand on both weekends and weekdays, and lack of alternative travel options of sufficient quality. Travel demand for the I-15 Freeway corridor has been growing 2 to 2.5 percent per year on average over the last ten years and is expected to almost double by the year 2030.[47]

As indicated therein, that portion of the I-15 Freeway corridor located in proximity to the project site was identified as "Segment 5." Segment 5 extends between the I-215 Freeway and State Route 210. The northern end of this approximately eight-mile long segment begins in the community of Devore, passes through Glen Helen Regional Park and the San Bernardino National Forest, and then runs along the border of unincorporated San Bernardino County and the City of Rialto. It then runs along the border of unincorporated San Bernardino County and the City of Fontana, through the City of Fontana, and briefly along the border of the Cities of Fontana and Rancho Cucamonga before reaching its southern end at the SR-210 Freeway.

Existing Traffic Volumes and Levels of Service

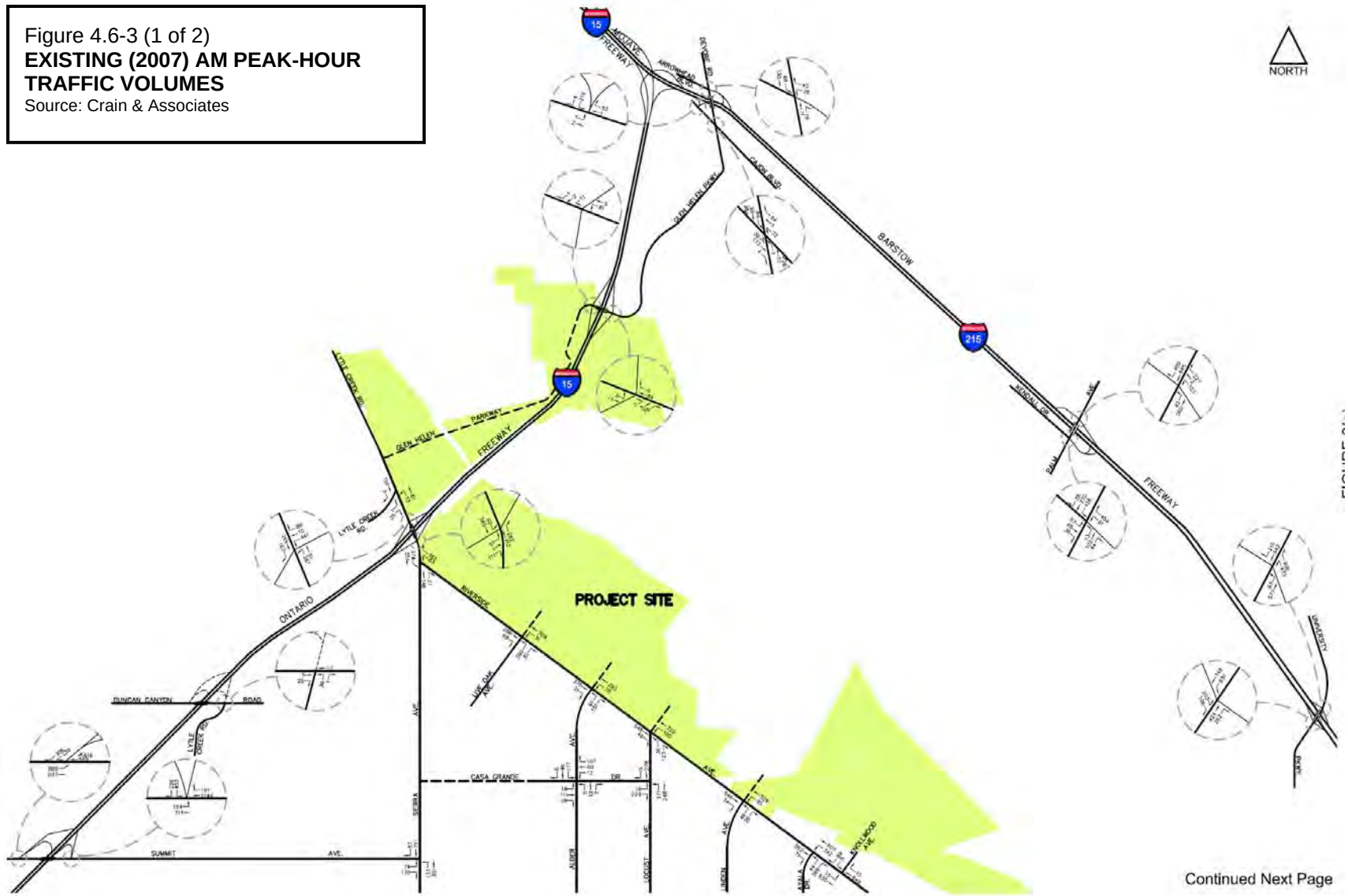
Traffic count data was collected during the morning (AM) and evening (PM) peak periods in January and March of 2007. The existing (2007) traffic volumes for the AM and PM peak-hour periods are shown in Figure 4.6-3 (Existing [2007] AM Peak-Hour Traffic Volumes) and Figure 4.6-4 (Existing [2007] PM Peak-Hour Traffic Volumes), respectively. Manual count sheets and intersection lane configurations are presented in Appendix II-A (Traffic Impact Analysis).

For this project, the study intersections and freeway segments were selected based on the identification of traffic volumes that would exceed County standards. According to the County CMP standards, the study area must include all major intersections with 50 or more peak-hour project trips (two-way) and freeway segments with 100 or more peak-hour project trips (two-way) within a five-mile radius from the project site.

[46]/ Southern California Association of Governments, San Bernardino Associated Governments, and California Department of Transportation (Parsons Brinckerhoff), I-15 Comprehensive Corridor Study, Final Report, December 20, 2005, p. 1.

[47]/ *Ibid*., p. 4.

Figure 4.6-3 (1 of 2)
EXISTING (2007) AM PEAK-HOUR TRAFFIC VOLUMES
Source: Crain & Associates



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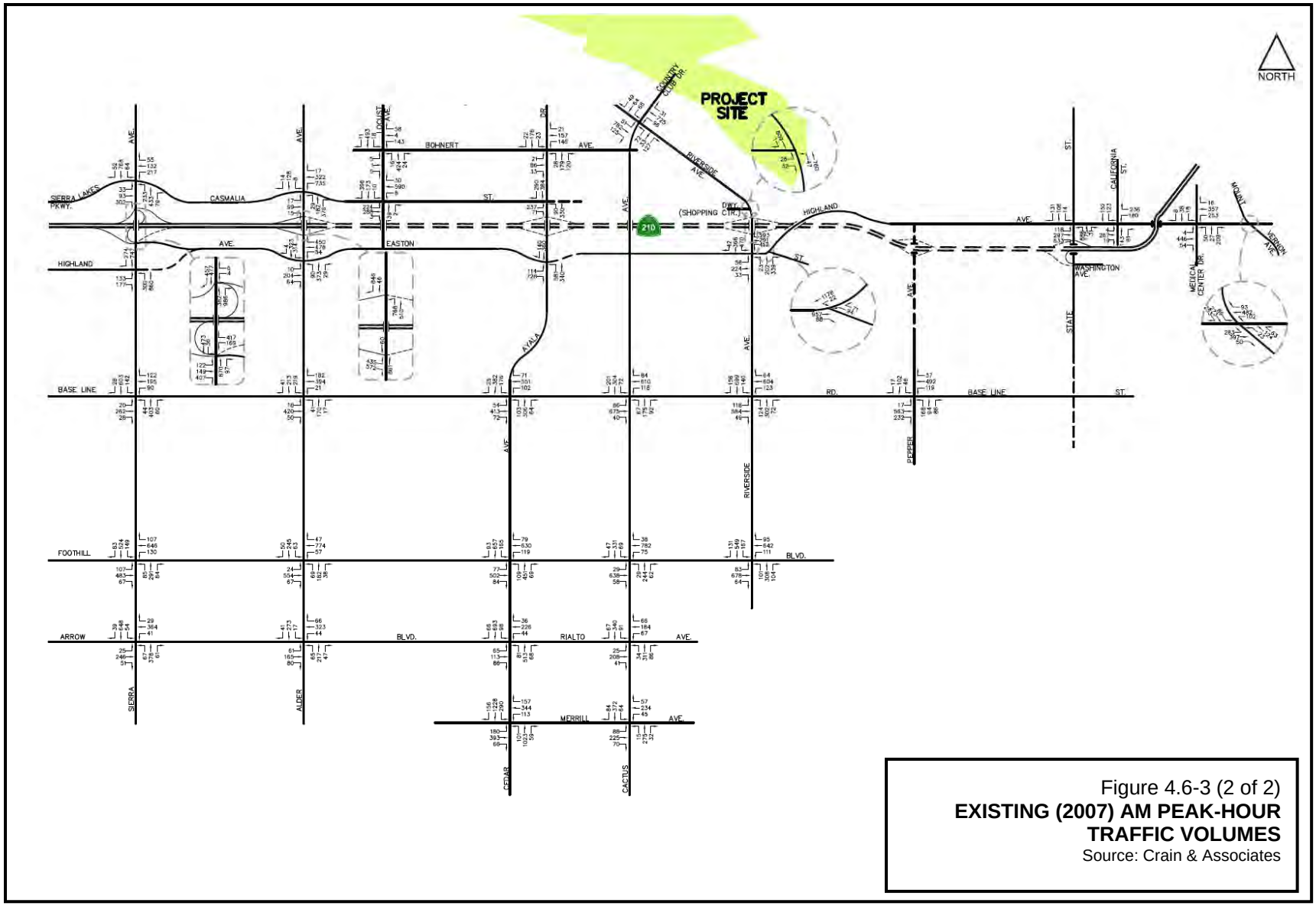
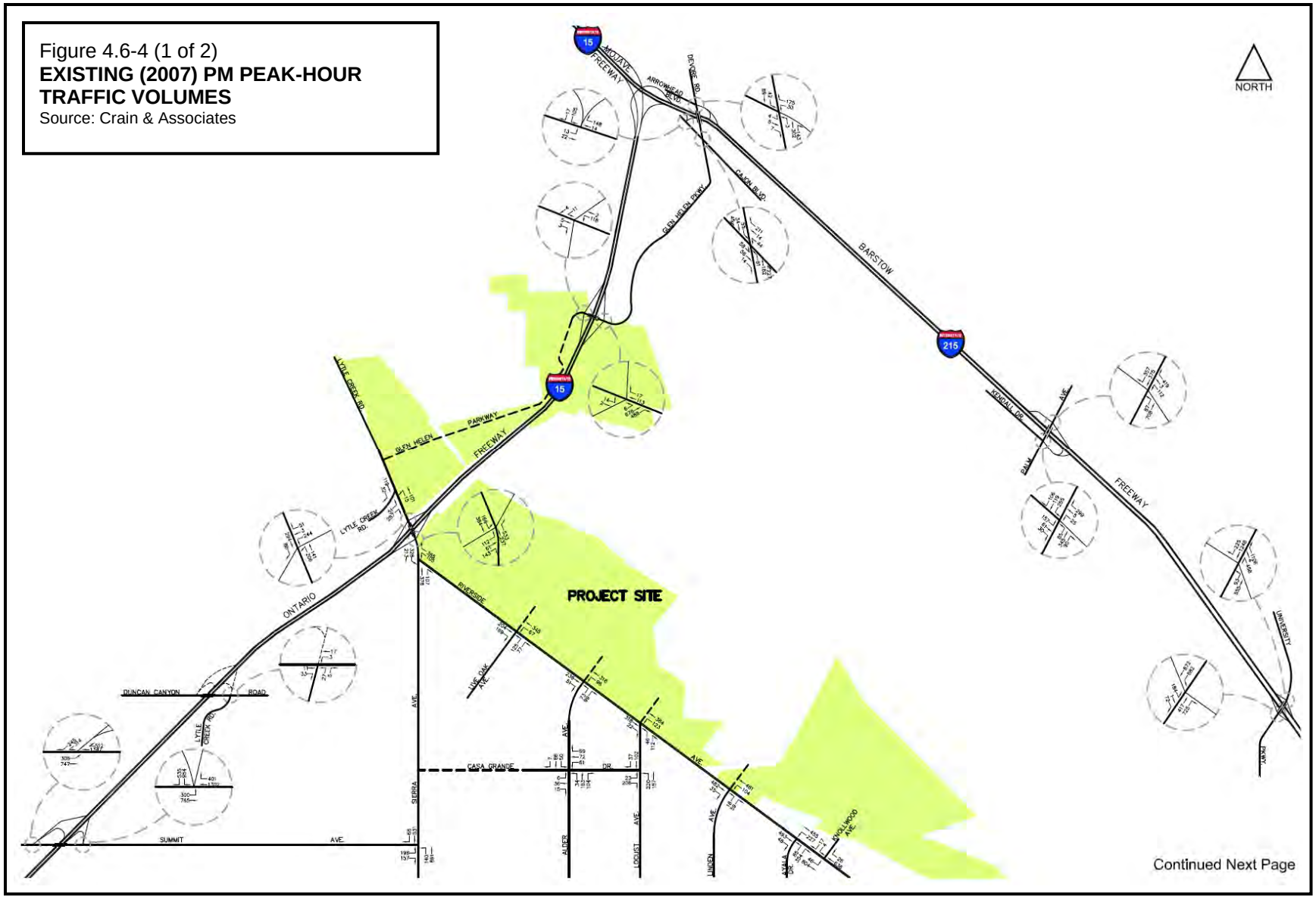


Figure 4.6-3 (2 of 2)
EXISTING (2007) AM PEAK-HOUR TRAFFIC VOLUMES
Source: Crain & Associates

Figure 4.6-4 (1 of 2)
EXISTING (2007) PM PEAK-HOUR TRAFFIC VOLUMES
Source: Crain & Associates



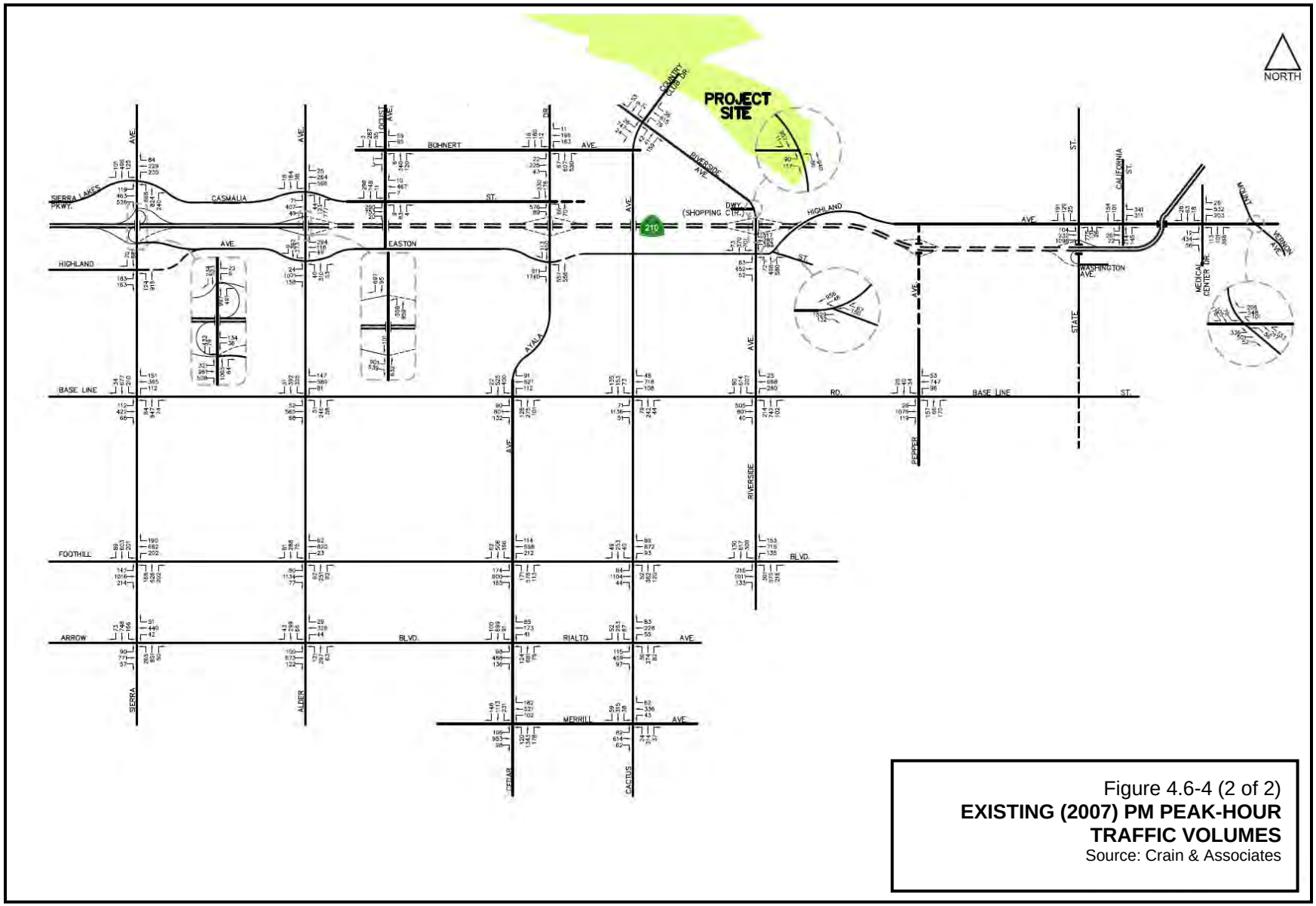


Figure 4.6-4 (2 of 2)
EXISTING (2007) PM PEAK-HOUR TRAFFIC VOLUMES
Source: Crain & Associates

Based on those standards, a total of 75 study intersections and 29 study freeway segments were selected for analyses. All traffic analyses were performed using traditional and well-established traffic engineering techniques. The traffic counts were conducted specifically for this study to ensure that any recent changes in traffic patterns would be reflected in this analysis. Other data (i.e., intersection geometrics, parking-related curb restrictions and traffic signal and stop-controlled operations) were obtained by field surveys at the study locations.

The methodology used in this analysis of traffic operations at each study intersection is based on procedures outlined in the HCM. This methodology determines the operating characteristics of an intersection in terms of the LOS provided for different levels of traffic volumes and other variables (such as lane configurations and type of control). LOS describes the quality of service. Intersections with a LOS "A," LOS "B," or LOS "C" operate quite well. Typically, LOS "D" is the design level of service for many metropolitan street systems. LOS "E" represents volumes at or near the capacity of the facility and might result in stoppages of momentary duration and fairly unstable flow. LOS "F" occurs when a facility is overloaded and is characterized by stop-and-go traffic with stoppages for a long duration. Table 4.6-3 (Level of Service as a Function of Delay) further explains the LOS types used in this study.

Table 4.6-3
LEVEL OF SERVICE AS A FUNCTION OF DELAY

LOS	Description of Operating Characteristics	Signalized Average Total Delay Per Vehicle[1] (seconds)	Two-Way and All-Way STOP Controlled Delay Per Vehicle[2,3] (seconds)
A	Uncongested operations; all vehicles clear in a single cycle.	≤ 10	0 - 10
B	Same as above.	> 10 - 20	> 10 - 15
C	Light congestion; occasional backups on critical approaches.	> 20 - 35	> 15 - 25
D	Congestion on critical approaches.	> 35 - 55	> 25 - 35
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide turning movements.	> 55 - 80	> 35 - 50
F	Forced flow with stoppages of long duration.	> 80	> 50

Notes:
1. From Exhibit 16-2 of the "Highway Capacity Manual" (Transportation Research Board, 2000).
2. From Exhibits 17-2 & 17-22 of the "Highway Capacity Manual" (Transportation Research Board, 2000).
3. Delay for all-way STOP controlled intersections is the average delay for all vehicles. Delay for two-way STOP controlled intersections is the worst delay for the critical minor approaches. Average delay for all vehicles at two-way STOP controlled intersections is less.

Source: Crain and Associates

By applying this analysis procedure to the signalized study intersections, the average vehicular delay and the corresponding LOS for existing traffic conditions were determined. HCM methodologies were used to analyze the all- and two-way STOP controlled study intersections. The delay for signalized and all-way STOP controlled intersections is the average delay for all vehicles entering the intersection during the specified peak-hour period, whereas the delay for two-way STOP controlled intersections is based on the worst-case approach delay for the minor

approaches. The average delay for all vehicles at two-way STOP controlled intersections is substantially less.

An analysis of traffic conditions at the 63 existing study area intersections shows that all but 12 intersections (seven County CMP intersections and five study area intersections) are operating at LOS "D" or better during the peak hours. Table 4.6-4 (Project Area and County CMP Intersections - Existing [2007] LOS Summary) shows existing Year 2007 peak-hour LOS values for study intersections. As indicated therein, the notation "Not Applicable" (N/A) identifies those intersections that do not currently exist but which are scheduled to be constructed by Year 2030.

Freeway segment volumes were obtained from Caltrans' traffic data. Peak-hour traffic counts for the segment of the SR-210 Freeway between Sierra Avenue and Alder Avenue were based on current manual intersection counts at the Alder Avenue freeway ramp. The daily volume for this freeway segment was estimated based on the peak-hour volumes multiplied by the daily-to-peak-hours ratio at an adjacent freeway segment. For the Caltrans' data, the peak-hour volumes are for both directions combined and no directional splits were available at these segments. As a result, where available, directional splits were derived from directional freeway volume data from the County CMP. Where directional splits were not available, a 55/45 percent split was assumed. Caltrans' sources do not indicate whether the peak-hour volume represent AM or PM peak-hour conditions. The peak-hour volumes used from the Caltrans' annual volume data were, therefore, assumed to be PM peak-hour volumes and the AM peak-hour volumes were assumed to be 90 percent of the PM peak-hour volumes, per County CMP guidelines.

Under County CMP methodologies, the LOS for freeway segments was determined by the volume-to-capacity (V/C) ratio, as summarized in Table 4.6-5 (Freeway Mainline LOS Definitions). Using the CMP methodologies, the previously determined peak-hour directional freeway segment volumes and the number of lanes for each freeway segment were used to calculate the existing (2007) freeway V/C ratios and LOS in the project vicinity. Existing freeway geometrics (e.g., number of mainline travel lanes) for each of the segments analyzed were determined from County CMP data, aerial photographs, and field surveys. Based on these criteria, the LOS values at the freeway study segments are shown in Table 4.6-6 (Regional Transportation System - Existing (2007) Freeway LOS Summary). As indicated therein, all study freeway segments analyzed currently operate at LOS "E" or better during one or both peak hours.[48]

The segments along the SR-210 Freeway between Alder Avenue and State Street do not have traffic volume data available due to the construction of the SR-210 Freeway when traffic count data were being collected. These segments are noted with "Not Applicable" (N/A) therein.

Future Traffic Forecasts

The anticipated horizon year's (2030) traffic volumes, as projected in the general project area, were forecasted by the City of San Bernardino, using their local refinement of the regional travel demand model, called the East Valley Transportation Model (EVTM). The Year 2030 was selected because the County CMP requires analysis of long-term horizon year conditions, which is currently 2030 based on the EVTM.

[48]/ The CMP LOS standard for freeway operations is LOS "E."

Table 4.6-4
PROJECT AREA AND COUNTY CMP INTERSECTIONS
EXISTING (2007) LOS SUMMARY

Intersection No.	Peak Hour	Existing		
		V/C	Delay	LOS
1. I-215 Freeway NB On/Off Ramps/Arrowhead Boulevard and Devore Road	AM PM	-[1] -[1]	10.2 14.2	B B
2. Cajon Boulevard/I-215 Freeway SB On/Off Ramps	AM PM	-[1] -[1]	9.6 9.4	A A
3. Cajon Boulevard/Glen Helen Parkway	AM PM	0.177 0.497	8.9 12.0	A B
4. I-215 Freeway NB On/Off Ramps/Palm Avenue	AM PM	-[1] -[1]	20.6 30.8	C D
5. I-215 Freeway SB On/Off Ramps/Palm Avenue	AM PM	1.091 0.865	46.7 26.3	E D
6. I-215 Freeway NB On/Off Ramps/University Parkway	AM PM	0.576 0.694	15.9 17.0	B B
7. I-215 Freeway SB On/Off Ramps/University Parkway	AM PM	0.810 1.162	20.3 72.3	C E
8. I-15 Freeway SB On/Off Ramps/Glen Helen Parkway	AM PM	-[1] -[1]	9.9 10.6	A B
9. I-15 Freeway NB On/Off Ramps/Glen Helen Parkway	AM PM	-[1] -[1]	8.7 37.1	A E
10. Lytle Creek Road/Glen Helen Parkway[2]	AM PM	N/A N/A	N/A N/A	N/A N/A
11. Lytle Creek Road/Sierra Avenue	AM PM	-[1] -[1]	9.0 11.9	A B
12. I-15 Freeway SB On/Off Ramps/Sierra Avenue	AM PM	0.991 0.664	43.8 15.5	E C
13. I-15 Freeway NB On/Off Ramps/Sierra Avenue	AM PM	0.984 0.907	30.3 25.6	D D
14. I-15 Freeway SB On/Off Ramps Duncan Canyon Road[3]	AM PM	N/A N/A	N/A N/A	N/A N/A
15. I-15 Freeway NB On/Off Ramps/Lytle Creek Road/ Duncan Canyon Road[3]	AM PM	-[1] -[1]	8.8 8.8	A A
16. I-15 Freeway SB On/Off Ramps/Summit Avenue	AM PM	1.288 0.864	114.6 21.2	F C
17. I-15 NB Freeway On/Off Ramps/Summit Avenue	AM PM	0.791 1.240	19.1 99.4	B F
18. Riverside Avenue/Sierra Avenue	AM PM	1.025 0.781	40.7 22.8	E C
19. Riverside Avenue/Live Oak Avenue	AM PM	0.336 0.253	16.1 14.7	B B
20. Riverside Avenue/Alder Avenue	AM PM	-[1] -[1]	12.6 12.6	B B
21. Riverside Avenue/Locust Avenue	AM PM	-[1] -[1]	16.4 12.8	C B
22. Riverside Avenue/Linden Avenue	AM PM	-[1] -[1]	35.3 15.3	E C
23. Riverside Avenue/Ayala Drive	AM PM	0.577 0.447	16.500 16.200	B B

Table 4.6-4 (Continued)
PROJECT AREA AND COUNTY CMP INTERSECTIONS
EXISTING (2007) LOS SUMMARY

Intersection No.	Peak Hour	Existing		
		V/C	Delay	LOS
24. Riverside Avenue/Knollwood Avenue	AM PM	0.307 0.250	7.300 5.600	A A
25. Riverside Avenue/Country Club Drive	AM PM	0.443 0.408	11.800 12.200	B B
26. Riverside Avenue/Driveway (for Shopping Center)	AM PM	0.308 0.436	6.800 9.600	A A
27. Casa Grande Drive/Sierra Avenue	AM PM	N/A N/A	N/A N/A	N/A N/A
28. Casa Grande Drive/Alder Avenue	AM PM	0.175 0.227	17.400 16.600	B B
29. Casa Grande Drive/Locust Avenue	AM PM	-[1] -[1]	12.500 10.700	B B
30. Summit Avenue/Sierra Avenue	AM PM	0.279 0.714	12.600 16.300	B B
31. Bohnert Avenue/Locust Avenue	AM PM	-[1] -[1]	75.2 24.6	F C
32. Bohnert Avenue/Ayala Drive	AM PM	0.315 0.624	14.2 15.5	B B
33. Sierra Lakes Parkway/Casmalia Street/Sierra Avenue	AM PM	0.474 0.701	18.1 19.8	B B
34. Casmalia Street/Alder Avenue	AM PM	0.836 1.187	33.3 124.2	C F
35. Casmalia Street/Locust Avenue	AM PM	0.814 0.711	35.5 28.0	D C
36. Casmalia Street/Ayala Drive	AM PM	0.437 0.624	14.9 18.3	B B
37. SR-210 Freeway WB On/Off Ramps/Sierra Avenue	AM PM	0.147 0.208	1.1 1.4	A A
38. SR-210 Freeway EB On/Off Ramps/Sierra Avenue	AM PM	0.747 0.903	23.5 40.0	C D
39. SR-210 Freeway WB On/Off Ramps/Alder Avenue	AM PM	1.029 0.807	42.7 10.8	D B
40. SR-210 Freeway EB On/Off Ramps/Alder Avenue	AM PM	0.628 0.796	12.6 13.6	B B
41. SR-210 Freeway WB On/Off Ramps/Ayala Drive	AM PM	N/A N/A	N/A N/A	N/A N/A
42. SR-210 Freeway EB On/Off Ramps/Ayala Drive	AM PM	N/A N/A	N/A N/A	N/A N/A
43. SR-210 Freeway WB On/Off Ramps/Riverside Avenue	AM PM	N/A N/A	N/A N/A	N/A N/A
44. SR-210 Freeway EB On/Off Ramps/Riverside Avenue	AM PM	N/A N/A	N/A N/A	N/A N/A
45. SR-210 Freeway WB On/Off Ramps/Pepper Avenue	AM PM	N/A N/A	N/A N/A	N/A N/A
46. SR-210 Freeway EB On/Off Ramps/Pepper Avenue	AM PM	N/A N/A	N/A N/A	N/A N/A
47. SR-210 Freeway WB On/Off Ramps/State Street	AM PM	N/A N/A	N/A N/A	N/A N/A

Table 4.6-4 (Continued)
PROJECT AREA AND COUNTY CMP INTERSECTIONS
EXISTING (2007) LOS SUMMARY

Intersection No.	Peak Hour	Existing		
		V/C	Delay	LOS
48. SR-210 Freeway EB On/Off Ramps/State Street	AM PM	N/A N/A	N/A N/A	N/A N/A
49. Highland Avenue/State Street	AM PM	0.683 0.764	18.2 19.6	B B
50. Highland Avenue/California Street	AM PM	0.325 0.439	10.2 10.7	B B
51. Highland Avenue/Medical Center Drive	AM PM	0.299 0.405	8.8 11.0	A B
52. Highland Avenue/Mount Vernon Avenue	AM PM	0.552 0.596	17.4 17.5	B B
53. Highland Avenue & Sierra Avenue	AM PM	0.467 0.398	9.5 8.4	A A
54. Highland Avenue/Easton Street/Alder Avenue	AM PM	0.787 0.885	30.2 38.0	C D
55. Easton Street/Ayala Drive	AM PM	0.753 1.120	19.5 65.5	B E
56/ Easton Street/Riverside Avenue	AM PM	0.956 1.202	46.9 101.5	D F
57. Easton Street/Highland Avenue	AM PM	0.431 0.620	3.5 4.5	A A
58. Baseline Road/Sierra Avenue	AM PM	0.381 0.695	17.8 22.0	B C
59. Baseline Road/Alder Avenue	AM PM	0.684 0.919	23.6 46.8	C D
60. Baseline Road/Cedar Avenue/ Ayala Drive	AM PM	0.459 0.671	19.0 21.2	B C
61. Baseline Road/Cactus Avenue	AM PM	0.579 0.693	19.6 18.8	B B
62. Baseline Road/Riverside Avenue	AM PM	0.647 0.792	21.4 25.8	C C
63. Baseline Road/Pepper Avenue	AM PM	0.288 0.441	8.2 6.6	A A
64. Baseline Road/State Street	AM PM	N/A N/A	N/A N/A	N/A N/A
65. Foothill Boulevard/Sierra Avenue	AM PM	0.532 0.910	19.1 29.4	B C
66. Foothill Boulevard/Alder Avenue	AM PM	0.449 0.639	13.4 15.1	B B
67. Foothill Boulevard/Cedar Avenue	AM PM	0.598 0.807	20.0 25.0	B C
68. Foothill Boulevard/Cactus Avenue	AM PM	0.473 0.749	14.3 17.8	B B
69. Foothill Boulevard/Riverside Avenue	AM PM	0.610 0.905	20.0 32.2	C C
70. Arrow Boulevard/Sierra Avenue	AM PM	0.430 0.776	17.7 26.0	B C
71. Arrow Boulevard/Alder Avenue	AM PM	0.305 0.647	18.5 19.8	B B

Table 4.6-4 (Continued)
PROJECT AREA AND COUNTY CMP INTERSECTIONS
EXISTING (2007) LOS SUMMARY

Intersection No.	Peak Hour	Existing		
		V/C	Delay	LOS
72. Rialto Avenue/Cedar Avenue	AM PM	0.449 0.598	16.2 19.7	B B
73. Rialto Avenue/Cactus Avenue	AM PM	0.206 0.317	8.9 9.7	A A
74. Merrill Avenue/Cedar Avenue	AM PM	0.714 0.986	17.6 32.2	B C
75. Merrill Avenue/Cactus Avenue	AM PM	0.254 0.358	14.0 13.1	B B

Notes:
1. Volume-to-capacity (V/C) ratio is not provided for two-way STOP controlled intersections.
2. Glen Helen Parkway is currently closed at Lytle Creek Road.
3. I-15 Freeway On/Off Ramps at Duncan Canyon Road do not currently exist but are scheduled to be constructed by Year 2030.

Source: Crain & Associates

Table 4.6-5
FREEWAY MAINLINE LOS DEFINITIONS

Volume/Capacity (V/C)	**Level of Service** (LOS)
≤0.6	A
>0.6 and ≤0.7	B
>0.7 and ≤0.8	C
>0.8 and ≤0.9	D
>0.9 and ≤1.0	E
>1.0	F

Source: Crain & Associates

In discussions with SanBAG, County, and City of San Bernardino, the EVTM was determined to be the most appropriate long-range transportation-planning tool for this analysis.[49] The EVTM uses a regional land-use database that was developed in close consultation with the relevant local jurisdictions that regulate land-use and acceptable levels of development.[50]

[49]/ The EVTM is based on SCAG's "San Bernardino/Riverside Comprehensive Transportation Planning" (CTP) model. The CTP model is a refinement of the SCAG regional model and was developed jointly by SCAG and SanBAG. The County CMP was developed using CTP model output. The EVTM contains somewhat more disaggregate land-use data in the study area than the CTP and the SCAG regional models and contains additional roadways (links) in the study area that are not replicated in the CTP and SCAG regional models. The EVTM was also developed using similar modeling procedures that were used in the CTP and SCAG modeling procedures, so it has a high level of consistency with the original CTP and SCAG regional travel demand models.

[50]/ The SCAG EVTM, which is used for the San Bernardino/Riverside County comprehensive transportation plans (CTPs), takes into account all growth in the five County southern California region (including the County of San Bernardino and County of Riverside). Thus, expected growth including growth from other related projects which are not cited in the traffic study are considered in the EVTM traffic volume projection. Note that the related projects located within the City were separately called out. The higher of the growth from these related projects versus the EVTM model growth projection for each traffic analysis zone (TAZ) was used as the incremental growth for that zone. Furthermore, the growth from 10 related projects (which were identified to be of areawide significance) were considered in the traffic study, assuming the growth from the EVTM did not include the growth from these related projects. Although the EVTM accounts for all regional growth in the area, these related projects were considered in the traffic analysis in order to be conservative. Thus, all foreseeable growth was considered at least once.

Table 4.6-6
REGIONAL TRANSPORTATION SYSTEM - EXISTING (2007) FREEWAY LOS SUMMARY

Segment No. Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Daily Volume	Peak-Hour Volume	V/C	LOS
1. Ontario (I-15) Freeway between Barstow (I-215) Freeway and Glen Helen Parkway	AM	NB	3	6900	133,600	3,600	0.52	A
		SB	3	6900		5,400	0.78	C
	PM	NB	3	6900		6,000	0.87	D
		SB	3	6900		4,000	0.58	A
2. Ontario (I-15) Freeway between Glen Helen Parkway and Sierra Avenue	AM	NB	3	6900	134,700	3,600	0.52	A
		SB	3	6900		5,500	0.80	C
	PM	NB	3	6900		6,100	0.88	D
		SB	3	6900		4,000	0.58	A
3. Ontario (I-15) Freeway between Sierra Avenue and Duncan Canyon Road	AM	NB	4	9200	134,700	3,600	0.39	A
		SB	4	9200		5,500	0.60	A
	PM	NB	4	9200		6,100	0.66	B
		SB	4	9200		4,000	0.43	A
4. Ontario (I-15) Freeway between Duncan Canyon Road and Summit Avenue	AM	NB	4	9200	134,700	3,600	0.39	A
		SB	4	9200		5,500	0.60	A
	PM	NB	4	9200		6,100	0.66	B
		SB	4	9200		4,000	0.43	A
5. Ontario (I-15) Freeway between Summit Ave and SR-210 Freeway	AM	NB	4	9200	142,800	3,800	0.41	A
		SB	4	9200		5,700	0.62	B
	PM	NB	4	9200		6,400	0.70	B
		SB	4	9200		4,200	0.46	A
6. Barstow (I-215) Freeway between Ontario (I-15) Freeway and Devore Road	AM	NB	2	4600	52,000	1,600	0.35	A
		SB	2	4600		2,400	0.52	A
	PM	NB	2	4600		3,200	0.59	A
		SB	2	4600		2,100	0.39	A
7. Barstow (I-215) Freeway between Devore Road and Palm Avenue	AM	NB	2	4600	62,200	1,900	0.41	A
		SB	2	4600		2,900	0.63	B
	PM	NB	2	4600		3,200	0.70	B
		SB	2	4600		2,100	0.46	A
8. Barstow (I-215) Freeway between Palm Avenue and University Parkway	AM	NB	2	4600	61,200	1,900	0.41	A
		SB	2	4600		2,800	0.61	B
	PM	NB	2	4600		3,100	0.67	B
		SB	2	4600		2,100	0.46	A
9. Barstow (I-215) Freeway between University Parkway and SR-30	AM	NB	3	6900	86.700	2,800	0.41	A
		SB	3	6900		4,200	0.61	B
	PM	NB	3	6900		4,700	0.68	B
		SB	3	6900		3,100	0.45	A
10. Barstow (I-215) Freeway between SR-30 Freeway and Mt Vernon Avenue/27th Street	AM	NB	2	4600	61,200	2,100	0.46	A
		SB	2	4600		2,900	0.63	B
	PM	NB	2	4600		3,200	0.70	B
		SB	2	4600		2,300	0.50	A
11. Barstow (I-215) Freeway between Mt Vernon Ave/27th Street and Highland Avenue	AM	NB	2	4600	68,300	2,200	0.48	A
		SB	2	4600		3,000	0.65	B
	PM	NB	2	4600		3,400	0.74	C
		SB	2	4600		2,400	0.52	A
12. I-215 Freeway between Highland Avenue and Massachusetts Avenue	AM	NB	2	4600	72,400	2,200	0.48	A
		SB	2	4600		3,100	0.67	B
	PM	NB	2	4600		3,400	0.74	C
		SB	2	4600		2,500	0.54	A

Table 4.6-6 (Continued)
REGIONAL TRANSPORTATION SYSTEM - EXISTING (2007) FREEWAY LOS SUMMARY

Segment No. Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Daily Volume	Peak-Hour Volume	V/C	LOS
13. I-215 Freeway between Massachusetts Avenue and SR-259 Freeway	AM	NB	2	4600	74,500	2,200	0.48	A
		SB	2	4600		3,100	0.67	B
	PM	NB	2	4600		3,400	0.74	C
		SB	2	4600		2,500	0.54	A
14. I-215 Freeway between SR-259 Freeway and Baseline Street	AM	NB	3	6900	138,700	4,400	0.64	B
		SB	3	6900		5,400	0.78	C
	PM	NB	3	6900		5,900	0.86	D
		SB	3	6900		4,900	0.71	C
15. I-215 Freeway between Baseline Street and 5th Street	AM	NB	3	6900	154,000	4,900	0.71	C
		SB	3	6900		6,000	0.87	D
	PM	NB	3	6900		6,600	0.96	E
		SB	3	6900		5,400	0.78	C
16. I-215 Freeway between 5th Street and 2nd Street	AM	NB	3	6900	155,100	5,500	0.80	C
		SB	3	6900		5,500	0.80	C
	PM	NB	3	6900		6,100	0.88	D
		SB	3	6900		6,100	0.88	D
17. I-215 Freeway between 2nd Street and Mill Street	AM	NB	4	9200	170,400	6,100	0.66	B
		SB	4	9200		6,100	0.66	B
	PM	NB	4	9200		6,700	0.73	C
		SB	4	9200		6,700	0.73	C
18. SR-210 Freeway between Ontario Freeway (I-15) and Cherry Avenue	AM	WB	3	6900	64,300	2,500	0.36	A
		EB	3	6900		2,000	0.29	A
	PM	WB	3	6900		2,300	0.33	A
		EB	3	6900		2,800	0.41	A
19. SR-210 Freeway between Cherry Avenue and Citrus Avenue	AM	WB	3	6900	57,100	2,200	0.32	A
		EB	3	6900		1,800	0.26	A
	PM	WB	3	6900		2,000	0.29	A
		EB	3	6900		2,500	0.36	A
20. SR-210 Freeway between Citrus Avenue and Sierra Avenue	AM	WB	2	4600	51,000	2,000	0.43	A
		EB	2	4600		1,600	0.35	A
	PM	WB	2	4600		1,800	0.39	A
		EB	2	4600		2,000	0.48	A
21. SR-210 Freeway between Sierra Avenue and Alder Avenue	AM	WB	2	4600	35,800	1,600	0.35	A
		EB	2	4600		1,000	0.22	A
	PM	WB	2	4600		1,300	0.28	A
		EB	2	4600		1,500	0.33	A
22. SR-210 Freeway between Alder Avenue and Ayala Drive	AM	WB	NA	NA	NA	NA	NA	NA
		EB						
	PM	WB						
		EB						
23. SR-210 Freeway between Ayala Drive and Riverside Avenue	AM	WB	NA	NA	NA	NA	NA	NA
		EB						
	PM	WB						
		EB						
24. SR-210 Freeway between Riverside Avenue and Pepper Avenue	AM	WB	NA	NA	NA	NA	NA	NA
		EB						
	PM	WB						
		EB						
25. SR-210 Freeway between Pepper Avenue and State Street	AM	WB	NA	NA	NA	NA	NA	NA
		EB						
	PM	WB						
		EB						

Table 4.6-6 (Continued)
REGIONAL TRANSPORTATION SYSTEM - EXISTING (2007) FREEWAY LOS SUMMARY

Freeway Segment No. Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Daily Volume	Peak-Hour Volume	V/C	LOS
26. SR-210 Freeway between State Street and Barstow (I-215) Freeway	AM	WB	2	4600	30,600	1,400	0.30	A
		EB	2	4600		1,100	0.24	A
	PM	WB	2	4600		1,200	0.26	A
		EB	2	4600		1,500	0.33	A
27. SR-30 Freeway between Barstow (I-215) Freeway and H Street	AM	WB	2	4600	53,000	2,400	0.52	A
		EB	2	4600		1,900	0.41	A
	PM	WB	2	4600		2,200	0.48	A
		EB	2	4600		2,600	0.57	A
28. SR-30 Freeway between H Street and SR-259 Freeway	AM	WB	2	4600	56,100	2,500	0.54	A
		EB	2	4600		2,000	0.43	A
	PM	WB	2	4600		2,300	0.50	A
		EB	2	4600		2,800	0.61	B
29. SR-30 Freeway between SR-259 Freeway and Waterman Avenue	AM	WB	3	6900	115,300	4,800	0.70	B
		EB	3	6900		4,000	0.58	A
	PM	WB	3	6900		4,400	0.64	B
		EB	3	6900		5,400	0.78	C

Notes:
N/A Caltrans traffic volume data is not available due to the construction of SR-210 Freeway.

Source: Crain & Associates

The future year street and highway networks assumed for this model were also developed based on input from jurisdictions throughout the region. The parameters within the model (e.g., trip generation rates, roadway capacities) have been calibrated for more than a 20-year period to closely replicate the particular transportation patterns and characteristics specifically for the City of San Bernardino and surrounding areas, including the general project vicinity.

For this study, the EVTM was further refined in consultation with the City of San Bernardino to more accurately replicate local traffic patterns and to better reflect local street capacities and constraints within the study area, thus allowing a more detailed study. The modeling scenarios developed for this study include the following:

- **Existing (2007) conditions**. This scenario replicates existing traffic conditions based on Year 2007 socioeconomic data and existing roadway network conditions. Future growth estimates are determined by comparing traffic model volumes from the future "without project" conditions and existing (2007) conditions.

- **Future (2030) "without project" conditions**. The combined effect of future regional growth in vehicle trips (based on the greater of the EVTM growth projections and the growth from known, proposed, or potential projects in the study area), excluding the land-use changes due to the project itself, establish the future conditions that would occur without the development of the proposed project through Year 2030.

- **Future (2030) "with project" conditions**. The combined effect of future regional growth in vehicle trips (including EVTM forecasts and information on known, proposed, or potential projects in the study area), including the land-use changes due to the project itself, establish the future conditions that would occur with the development of the proposed project through Year 2030.

These scenarios are also adjusted for ambient growth[51] and cumulative growth factors.[52]

Project Traffic

The following section describes the projected vehicular trip generating characteristics of the proposed project and presents the methodology used to estimate the project's trip generation, distribution, and assignment. Parking and site access are also discussed.

- **Trip Generation**. ITE trip generation rates are presented in Table 4.6-7 (ITE Trip Generation Rates). Based on those rates, the AM and PM peak-hour trip generation for the proposed project are shown in Table 4.6-8 (Project Trip Generation Summary).[53]

Table 4.6-7
ITE TRIP GENERATION RATES

Land Use Description	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single-Family Detached Homes	DU	9.57	25%	75%	0.75	63%	37%	1.01
Multi-Family Attached Homes	DU	5.86	17%	83%	0.44	67%	33%	0.52
Retail Development	1,000 SF	42.94	61%	39%	1.03	48%	52%	3.75
Elementary School	SF	1.29	55%	45%	0.42	45%	55%	0.28
Park	Acre	2.28	80%	20%	0.01	41%	59%	0.06
Golf Course	Acre	5.04	74%	26%	0.21	34%	66%	0.30

Source: Crain and Associates

[51]/ Ambient growth is the background growth in traffic that comes from a multitude of regional projects. This growth generally is viewed as inevitable since much of the traffic in any area is passing through rather than being locally generated. In the methodology of projecting traffic volumes, an ambient growth factor of approximately one to two percent per annum is usually applied globally to the existing traffic volumes to obtain an estimate of future traffic volumes. The EVTM explicitly takes into account all growth in the five-county SCAG region, including the project study area. A generalized ambient growth factor on traffic volumes was, therefore, not considered appropriate. Calculated growth, on a zone-by-zone basis, for future baseline projections was taken into account within the land-use databases provided by the City of San Bernardino. The land-use databases were used to calculate trip generations for each zone in the model for the existing and future scenarios. This methodology of using land-use growth projections within a computerized model to replicate changes in travel demand and traffic behavior patterns better replicates real life changes in the transportation element of urban developments.

[52]/ The EVTM socioeconomic data were augmented by a search for specific development projects within the City of Rialto. The search identified 104 "related projects," included projects that are completed but not fully occupied, projects that are currently under construction or beginning construction, and projects that are presently only proposed but which could become operational within the time frame examined in this study. The related projects' descriptions and locations of the 104 projects have been included in the TIA (Table 6). The higher socioeconomic data value for each zone, based on a comparison of the EVTM growth projections data and the sum of the known related projects proposed for each zone, was used as the incremental growth for that zone. This incremental growth was then added to the existing data contained in the "existing conditions" model. Growth from 10 other recently proposed related projects of areawide significance were also considered in the EVTM for the future Year 2030 base ("without project") scenario. To be conservative, it was assumed that the growth from the EVTM did not include the growth from these related projects. As a result, the related projects growth was added in addition to the EVTM growth. To replicate the related projects, 10 new zones were added into the model. A summary of these additional related projects and their socioeconomic characteristics is included in the TIA (Table 7). The combination of the local refinements to the traffic model transportation network, the growth projections from EVTM, and the related projects formed the basis for the forecasts of future "without project" conditions in the study area.

[53]/ The demographic assumptions used as inputs into the SCAG model to determine project trip generation are shown in the TIA (Table 8[a]).

Table 4.6-8
PROJECT TRIP GENERATION SUMMARY

Description	AM Peak Hour		PM Peak Hour	
	Inbound	Outbound	Inbound	Outbound
Neighborhood I	149	561	582	317
Neighborhood II	461	1,379	1,602	1,009
Neighborhood III	1,177	2,023	2,736	2,194
Neighborhood IV	178	390	628	503
Total	1,968	4,353	5,548	4,023

Source: Crain and Associates

- **Trip Distribution**. Each trip to and from the project will be linked to another site somewhere within the region. For example, each commute trip to the project in the morning will have started at an employee's residence. The procedure utilized to estimate the location to which each of the project-generated trips will be linked was the computerized transportation gravity model of trip linkages for the uses within the proposed project. This model also considers the land-use patterns throughout the southern California area to estimate current trip making patterns. Additionally, it considers future growth patterns to determine how trip linkages will change over time. For example, it considers the amount of housing and shopping growth in each zone to determine how far residents will decide to travel to find items they wish to purchase. The computerized model was also used to project trip linkages for commute trips (such as those made by project site employees). For these trips, the locations of housing and employment sites were taken into account in relation to competing employment sites.

- **Trip Assignment**. Using the trip distribution described above, the computerized traffic model was utilized to help assign traffic to individual roadways within the study area. The computer model assumes drivers follow the most rational, direct path. This model accounts for the level of congestion on each roadway and determines which path results in the shortest travel time for each trip. This has been shown to produce the most reliable overall traffic projections. This procedure concentrates volumes and improvements on the preferred (major) routes rather than encouraging use of minor routes. The model reflects the approximate location of project driveways. Because the project site has several proposed roadways and driveways (e.g., along Riverside Avenue), some adjustments were made to better reflect likely travel paths. Figure 4.6-5 (Total Project Only Traffic Volumes AM Peak Hour) and Figure 4.6-6 (Total Project Only Traffic Volumes PM Peak Hour) show the traffic volumes for the proposed project.

  In addition, the proposed project would result in the relocation of vehicular access for the Cemex USA's Lytle Creek Plant (3221 North Riverside Drive, Rialto) and Monier Lifetile (3511 North Riverside Avenue, Rialto). Currently, vehicular access for those facilities is provided via a driveway located on the north side of Riverside Avenue between Linden Avenue and Ashford Avenue. Vehicular access would be relocated to the proposed project roadway on the north side of Riverside Avenue across from Locust Avenue. As a result, a traffic shift was made to account for the driveway access relocation.

- **Project Parking**. The project will contain a mix of land uses. Due to the potential variation within the final approved elements, parking levels cannot be established at this time. Parking will, however, be provided to meet City parking codes and other requirements. This will ensure that adequate parking is provided on the project site.

- **Site Access**. The four neighborhoods will be served by a new roadway system.

  - ◊ **Neighborhood I**. Neighborhood I will have access via Glen Helen Parkway. On the west side of the I-15 Freeway, project driveways will connect to Glen Helen Parkway between Lytle Creek Road on the south and the I-15 Freeway SB ramps along Glen Helen Parkway. On the east side of the freeway, a new roadway will extend northerly and connect to Glen Helen Parkway about 1,200 feet east of the I-15 Freeway interchange. The new roadway will also extend southerly, continue west under the freeway and connect to Glen Helen Parkway about 0.5 mile north of Lytle Creek Road.

  - ◊ **Neighborhood II**. Neighborhood II is located north of Riverside Avenue. This neighborhood will have a new loop roadway, extending northeasterly beginning at Riverside Avenue across from Linden Avenue, bend southeasterly through the neighborhood and connect to Country Club Drive. The SR-210 Freeway interchanges are located to the south at Ayala Drive and Riverside Avenue.

  - ◊ **Neighborhood III**. Neighborhood III is located north of Riverside Avenue and east of the I-15 Freeway. An internal roadway system will extend through this neighborhood and connect to Riverside Avenue at four access locations across from Redwood, Live Oak, Alder, and Locust Avenues. Regional access to this neighborhood will be available at the I-15 Freeway/Sierra Avenue interchange and interchanges along the SR-210 Freeway from Sierra and Alder Avenues.

  - ◊ **Neighborhood IV**. Neighborhood IV will have primary access off of Lytle Creek Road. Regional access will be provided at the Sierra Avenue interchange with the I-15 Freeway. Access is also available from Glen Helen Parkway.

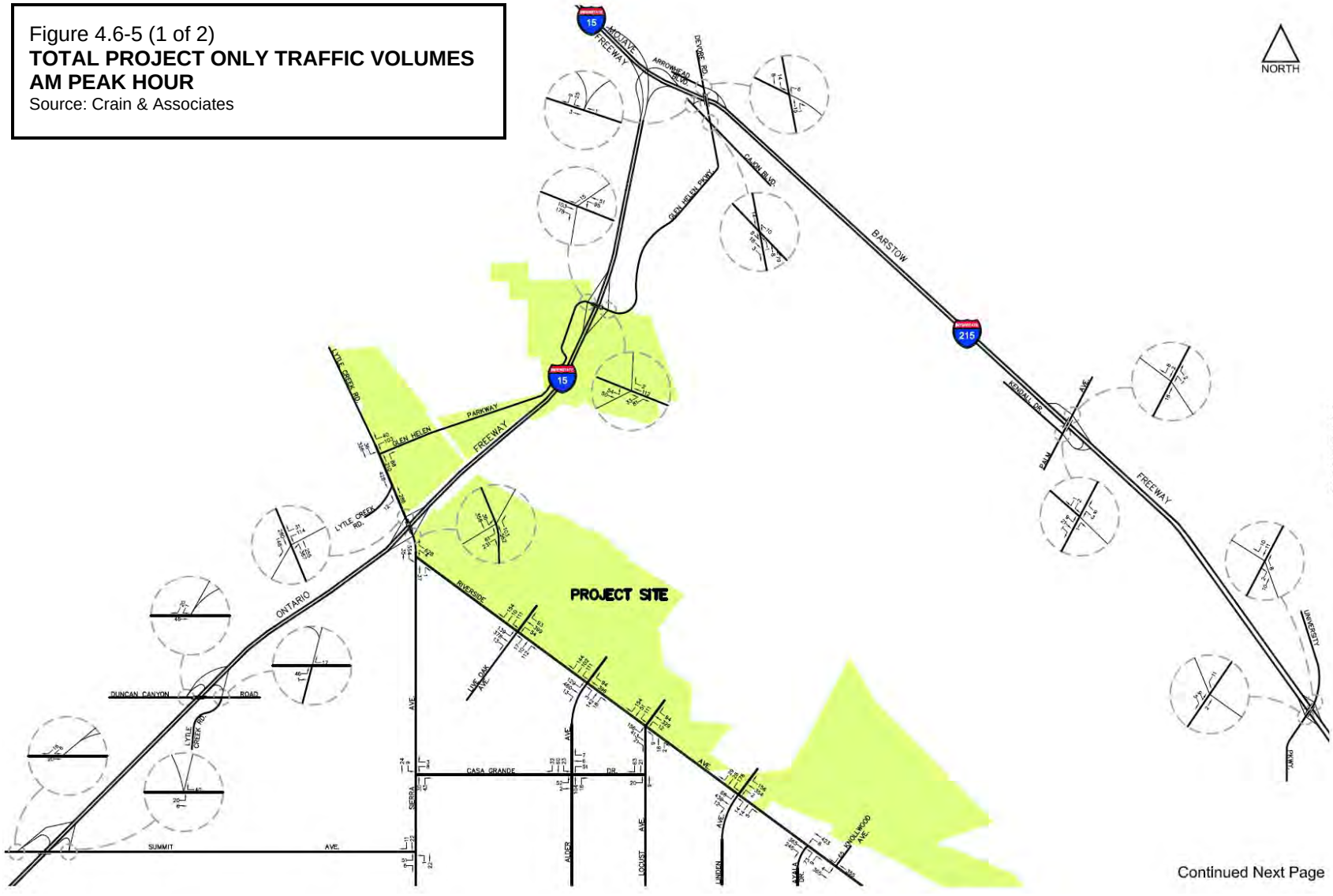
Public Transportation

Several public transportation options are provided within walking distance of the project site.

- **Omnitrans**. Route 22 connects northern and southern portions of the City and provides access to the Rialto Metrolink Station. Near the project site, Route 22 travels on Riverside Avenue, with stops at Live Oak and Linden Avenues. Major destinations along this route include the Rialto Civic Center and the Arrowhead Regional Medical Center. Service is provided on headways of about 20 minutes Monday through Friday. Saturday and Sunday service is less frequent, with 30 minutes and hourly headways, respectively.

- **Metrolink**. Metrolink's San Bernardino Line provides daily rail service between San Bernardino County, the San Gabriel Valley, and Downtown Los Angeles. In the project vicinity, the San Bernardino Line serves the Rialto Station (261 South Palm Avenue, Rialto) and the Fontana Station (16777 Orange Way, Fontana), both of which are located to the south of the project site. When used in conjunction with Omnitrans' Route 22, the San Bernardino Line is accessible to and from the project site. The San Bernardino Line operates during weekdays and on Saturdays and Sundays. Weekday WB service operates on headways of approximately 20 minutes during AM peak hours and weekday EB service operates on headways of approximately 20 minutes during PM peak hours. Saturday and Sunday service is less frequent.

Figure 4.6-5 (1 of 2)
TOTAL PROJECT ONLY TRAFFIC VOLUMES
AM PEAK HOUR
Source: Crain & Associates



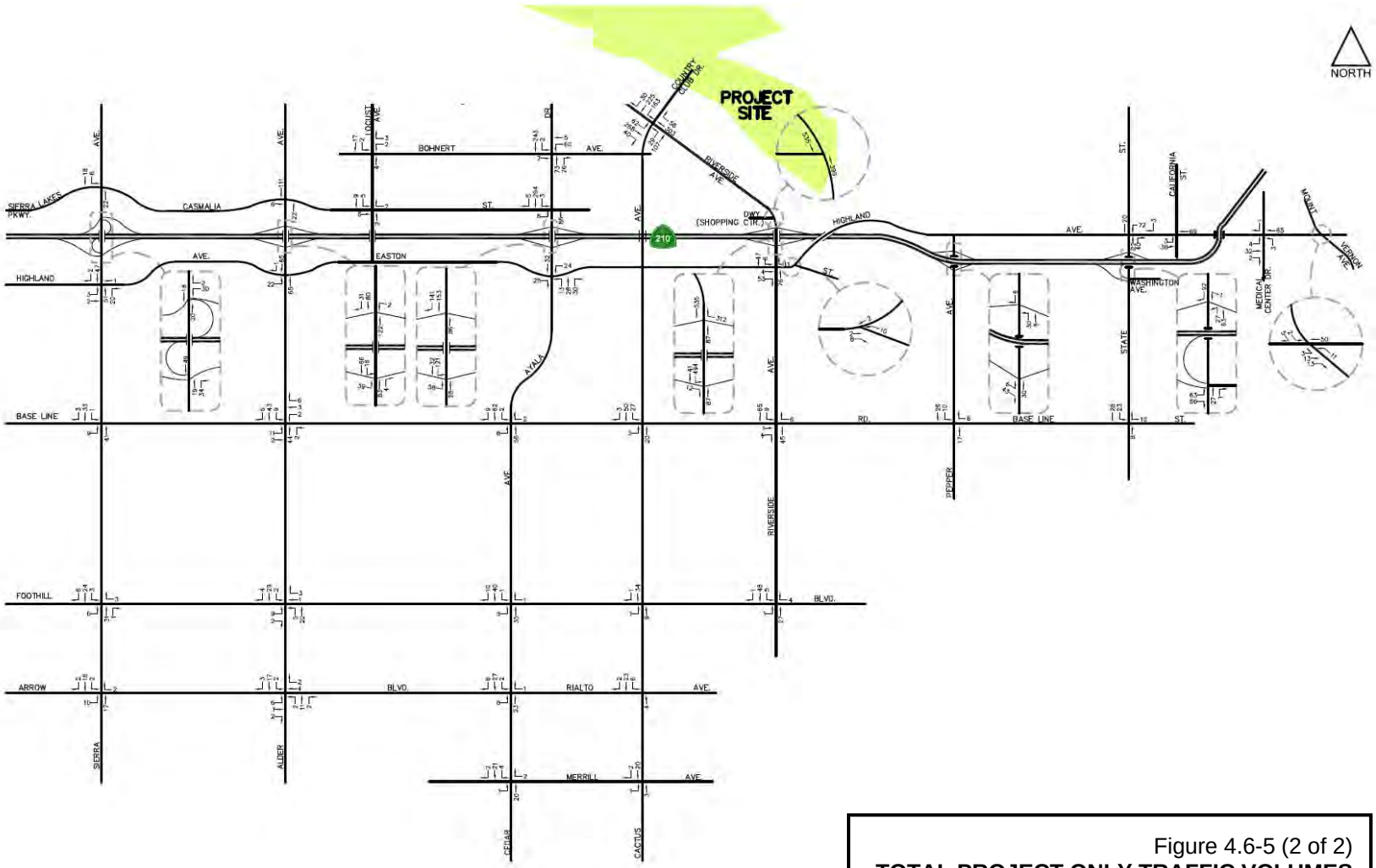
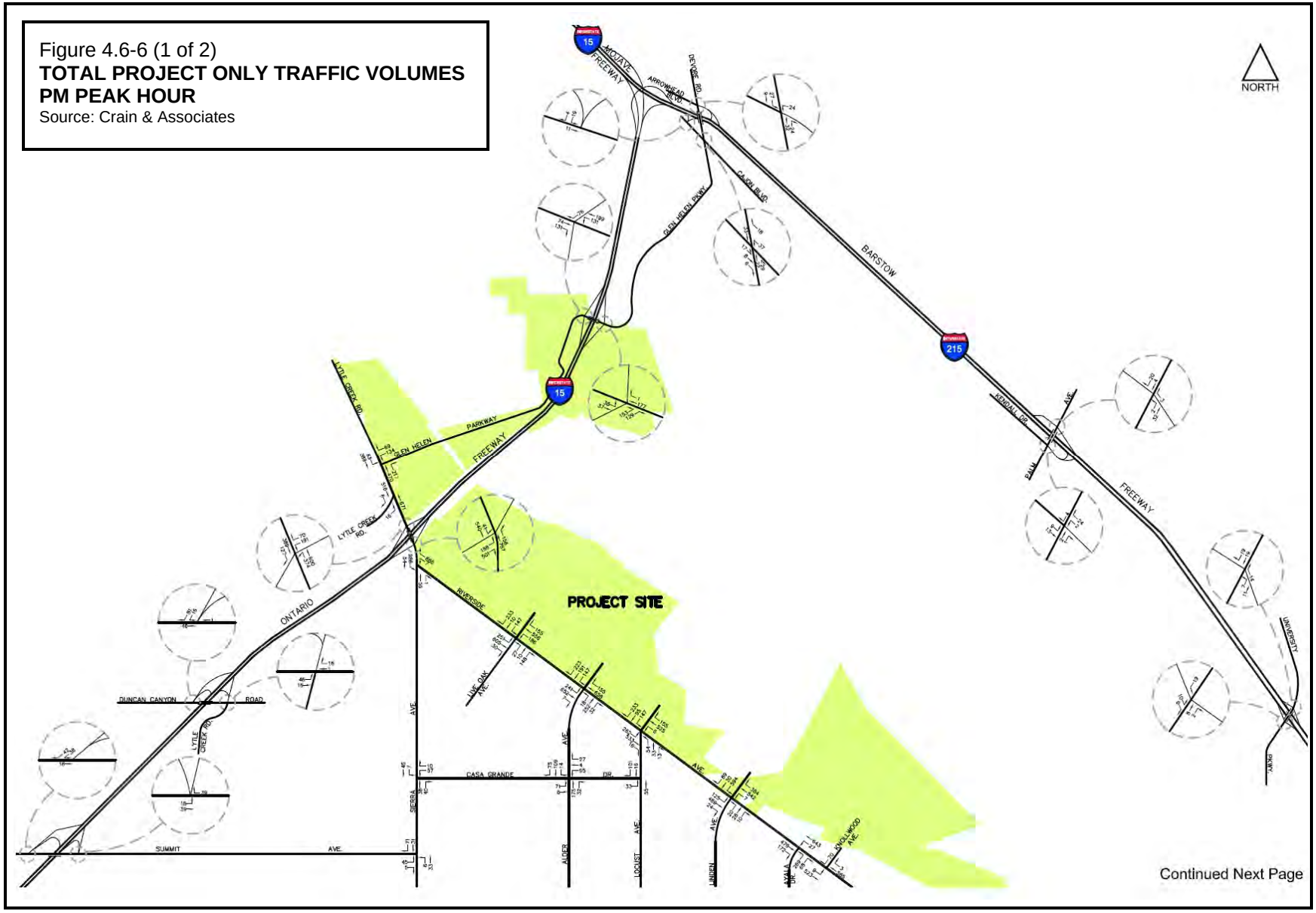


Figure 4.6-5 (2 of 2)
TOTAL PROJECT ONLY TRAFFIC VOLUMES
AM PEAK HOUR
Source: Crain & Associates

Figure 4.6-6 (1 of 2)
TOTAL PROJECT ONLY TRAFFIC VOLUMES
PM PEAK HOUR
Source: Crain & Associates



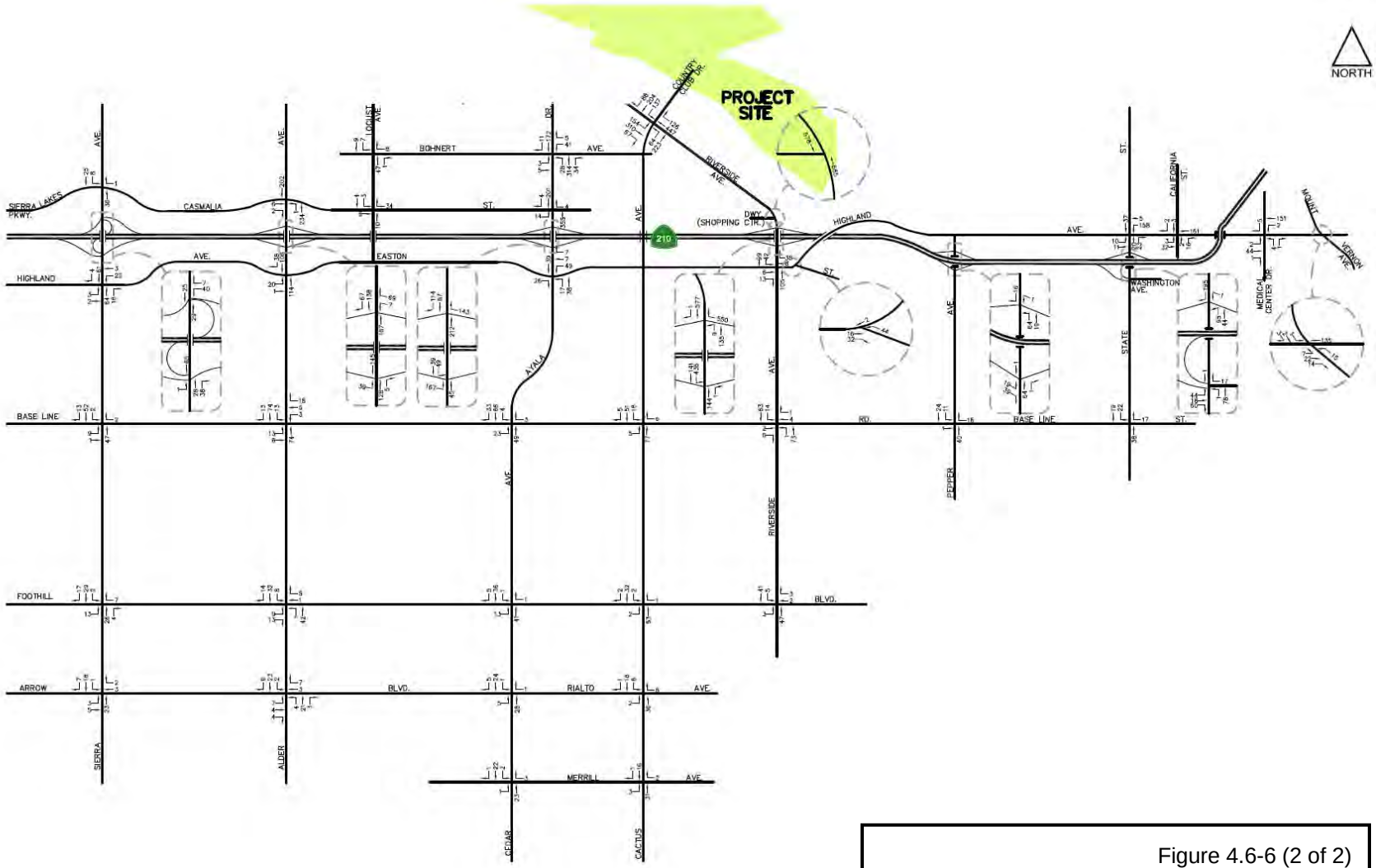


Figure 4.6-6 (2 of 2)
TOTAL PROJECT ONLY TRAFFIC VOLUMES
PM PEAK HOUR
Source: Crain & Associates

Future Roadway Network

Several important roadway improvements have recently been or will be made in this portion of the County within the study time-period. The most prominent of these will be freeway improvements, including the extension of the SR-210 and SR-30 Freeways. At the completion of this project (2030), the SR-210 and SR-30 Freeways will extend from the I-10 Freeway in the City of Redlands to the I-210 Freeway in the City of Glendora (Los Angeles County).[54] Other freeway improvements were identified in the County CMP.

The County CMP improvements that have been approved and are reasonably assured to be implemented by 2030 were also assumed. These other freeway improvements include: (1) the addition of a high-occupancy-vehicle (HOV) lane in the NB and SB directions on the I-15 Freeway between the I-215 and I-10 Freeways; (2) the addition of a mainline lane in the NB and SB directions on I-215 Freeway between the I-15 and SR-259 Freeways; (3) four mainline and one HOV lane in the NB and SB directions on the I-215 Freeway between the SR-259 and I-10 Freeways; (4) three mainline lanes and one HOV lane in the WB and EB directions on the SR-210 Freeway between the I-15 Freeway and Highland Avenue; and (5) the addition of a mainline lane on the SR-30 Freeway between Highland Avenue and the I-10 Freeway in the WB and EB directions. These improvements have has been included in all future condition scenarios analyzed for the proposed project.

In addition, the construction of several new freeway ramps was included in all future scenarios. These new freeway ramps are located at Sierra Avenue, Alder Avenue, Ayala Drive, Riverside Drive, Pepper Avenue and State Street along the I-30 Freeway and at Duncan Canyon Road along the I-15 Freeway.[55] Likely future lane configurations at these ramps have been assumed for the LOS calculations.

The travel demand model[56] (EVTM) takes into account several factors that reflect the expected changes in traffic distributions and route-choice (assignment) due to these and other improvements to the roadway system. For example, with the completion of the SR-30/SR-210 Freeway improvements, many drivers (vehicles) will choose to use the newly completed freeway instead of traveling on the existing parallel arterial routes. This shift in route choice may actually result in a reduction in future traffic volumes on the arterial streets that are adjacent (and parallel) to the newly constructed SR-30/SR-210 Freeway.

Other local roadway improvements that are reflected in the travel demand model have also been assumed to accompany local land-use development patterns. One example is the Alder Avenue extension between the SR-210 Freeway and Casa Grande Drive. Also, Casa Grande Drive was assumed to extend westward and connect to Sierra Avenue. Further to the south, it was assumed that Easton Street would be continuous between Ayala Drive and Arrowhead Avenue. To the east in the City of San Bernardino, State Street would extend southerly from south of Hanford Street to Foothill Boulevard. Should the local land-use development patterns not occur, these proposed roadway improvements may not be built.

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[54]/ This infrastructure improvement was under construction when the traffic count data was collected and was completed in June 2007. The traffic analysis for the existing condition is based on the traffic count data which reflects traffic conditions before the completion of the SR-210/SR-30 Freeway extensions.

[55]/ The freeway interchanges at Sierra Avenue and Alder Avenue was partially completed when the traffic count data was collected and is currently in operation.

[56]/ All roadway improvements assumed in this analysis are reflected in the EVTM and are considered reasonably assured for the level of development assumed.

4.6.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant transportation and/or traffic impact if the project or if project-related activities were to:

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.[57]
- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections).
- Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designed roads or highways.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Result in inadequate parking capacity.
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.[58]

As indicated in the City General Plan, it is the goal of the City to "[m]aintain Level of Service D or better on all Rialto arterial roadways."[59] As such, intersection operations at LOS "D" or better during the peak hour are generally acceptable. Any intersection operating at LOS "E" or LOS "F" is considered deficient. Under CEQA, a traffic impact is considered significant if the project were to both contributes measurable traffic to and substantially and adversely change the LOS at any location projected to experience deficient operations under foreseeable cumulative conditions. For this study, a significant project traffic impact is defined to be those locations (intersections and/or roadway segments) where the project would contribute 50 or more peak-hour vehicle trips along the roadway and where cumulative traffic would cause conditions to degrade below the General Plan goal of LOS "D."

It should be noted that the Cities of Fontana and San Bernardino have also adopted LOS "D" as their standard. The County of San Bernardino's standard is LOS "C." An intersection operating below the standard of the responsible jurisdiction is considered deficient from a traffic engineering perspective.

In accordance with the County CMP, significant traffic impacts within the County were defined to be those locations (intersections or roadway segments) where the project would contribute 80 or more peak-hour vehicle trips and where cumulative traffic would cause conditions to degrade below the County General Plan's goal of LOS "C" (i.e., an average stopped delay of more than 25 seconds per vehicle). For purposes of the County CMP, only the subset of intersections

[57]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section VII (Hazards and Hazardous Materials).
[58]/ *Ibid*., Section XV (Transportation/Traffic).
[59]/ *Op. Cit*., City of Rialto General Plan, Circulation Element, p. V-13.

where the average stopped delay exceeds 60 seconds or the V/C ratio equals or exceeds 1.0 are considered, requiring contributions to cumulative improvement programs. This CMP standard was applied to those intersections within the Cities of Fontana and San Bernardino and the County of San Bernardino jurisdiction. When more severe that the City of Rialto's standard, this criteria was applied to the CMP study intersections in that jurisdiction as well.

As further indicated in the County CMP, the adopted LOS standards for the CMP system are the minimum standards allowed under Section 65089(b)(1)(B) of the CGC, defined as LOS "E" for all segments and intersections except those designated as LOS "F" in the County CMP. In addition, a provision is made for any LOS "F" facility not to deteriorate greater than 10 percent below its LOS value at the time of initial County CMP adoption.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or other environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative transportation and/or traffic impacts.

4.6.5 Impact Analysis

The transportation analysis methodology and scope was determined at the on-set by the Lead Agency. The City, the County, and the County CMP serve to define both the methodology and the scope of this analysis. Prior to its initiation, both the City and the County approved the list of CMP intersections, other project specific intersections, and CMP-dictated freeway segments to be included in the analysis.[60]

[60]/ The technical analysis was conducted using a computerized transportation model, which models (replicates) travel demand and traffic volumes. As directed by SanBAG, the EVTM, as developed by the City of San Bernardino, was used for this study. The EVTM, in comparison to the SanBAG model, was developed with greater detail in the study area, including additional links and zones that better replicate area traffic patterns. The study team provided the City of San Bernardino with the specific details for the project site so that they could incorporate this site-specific data into their regional traffic model, thus producing forecasts for the "with project" and "without project" scenarios. That is, the City of San Bernardino staff ran their regional travel demand model twice using these site-specific data, once to produce the "Study Year 2030 Without Project" traffic volumes and once to produce the "Study Year 2030 With Project" traffic volumes. The project volumes were also determined based on runs of the project select zones. The EVTM produced future-year forecasted traffic volume conditions on street segments surrounding the project site. Turning movement traffic volumes at study intersections were determined using procedures developed for SanBAG that are included in a program named B-Turns. B-Turns, a pivot point model, estimates future turning movement volumes at an intersection based on existing turning movement volumes (e.g., intersection turning movement counts) and future street segment volumes (e.g., link volumes from the EVTM). The SanBAG provided this B-Turns program to the City's traffic consultant (Crain & Associates) and the City of San Bernardino refined the EVTM and provided the necessary model output.

Traffix 7.8 was the software package used to conduct the intersection LOS analysis. The HCM methodology was used to calculate the LOS at the study intersections. Based on guidelines from the County CMP, the LOS analysis for signalized intersections has been performed using optimized signal timing. A lost time of two seconds per phase was assumed. For existing conditions, saturation flow rates of 1,800 vehicles per hour of green per lane (vphgpl) was assumed for exclusive through lanes and exclusive right-turn lanes, 1,700 vphgpl for exclusive single left-turn lanes, and 1,600 vphgpl for exclusive double left-turn lanes. For future conditions, saturation flow rates of 1,900 vphgpl was assumed for exclusive through lanes and exclusive right-turn lanes, 1,800 vphgpl for exclusive single left-turn lanes and double right-turn lanes, and 1,700 vphgpl for exclusive double left-turn lanes.

The EVTM's results and intersection count data, along with intersection geometrics and traffic signal and control data, were combined in Traffix 7.8 to determine the LOS and traffic delays at the signalized and STOP controlled study intersections for both existing and future traffic conditions. For the study freeway segments, the LOS was determined based on a calculation of the V/C ratio according to CMP methodologies.

4.6.5.1 Construction Impacts

***Environmental Impact 6-1**. Based on the construction of new roadways and other infrastructure improvements, the project could substantially increase hazards due to a traffic-related design features.*

***Preliminary Determination 6-1**. Potentially significant unless mitigation incorporated.*[61]

The project's construction will require the importation of building materials to the project site and the exportation of organic materials, waste, and other surplus products brought to the site but not consumed during the construction process. Since grading will be balanced on the project site and since the project's build-out period may extend over a 20-year period, no substantial short-term increase in heavy equipment traffic is anticipated along area roadways. Since peak construction hours are typically off-set from typical peak hours for street traffic, project-induced construction traffic will not significantly add to congestion during AM or PM peak-hour periods. In the vicinity of the CEMEX USA quarry and Vulcan Materials Company plant, along Riverside Avenue, cement trucks will continue to operate throughout the project's extended construction term. Since portions of the project site will be developed and occupied prior to other portions, project-related construction traffic will remain evident following the initial commencement of occupancy and the operation of proposed on-site land uses. In addition, since non-project-related industrial facilities current access Riverside Avenue and will continue to utilize that roadway following the project's approval and since Riverside Avenue is the major arterial fronting Neighborhoods II and III, industrial traffic will commingle with the project's construction traffic and other traffic associated with the project's use and operation.

Short-term lane closures may occur along major arterial, freeway ramps, and other affected roadways as a direct result of the project's development and as a result of the project-induced and regional need to improve the area's street and utility systems. Trenching, street widening, and other related activities may result in short-term street and lane closures and/or impede turning movements into and out of adjoining properties. Similarly, those streets that now provide access to the project site, such as Country Club Drive, will be modified and will see an increased volume of construction and non-construction traffic.

During construction, there is a potential for the heavy trucks to pose a danger to traffic and pedestrians as a result of the increased volume of heavy- and medium-duty trucks, turning movements required along the major arterials leading to and from the project site, and shared use of internal roadways during concurrent construction, operation, and occupancy.

Caltrans' "Manual of Traffic Controls for Construction and Maintenance Work Zones" provides useful guidance to both the Lead Agency and to the Applicant and certain provisions contained therein could be reasonably imposed by the City and/or by the Applicant in order to ensure appropriate and continuing vehicular access to and across the project site. As indicated therein: "During any time the normal function of a roadway is suspended, temporary traffic control planning must provide for continuity of function (movement of traffic, pedestrians, bicyclists, transit operations, and access to property/utilities). The location where the normal function of the roadway is suspended is defined as the work space. The work space is that portion of the

[61]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) substantially increase hazards due to a design feature or incompatible uses; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

roadway closed to traffic and set aside for workers, equipment, and material. Sometimes there may be several work spaces within the project limits. This can be confusing to drivers because the work spaces may be separated by several miles. Each work space should be signed to inform drivers of what to expect. Effective temporary traffic control enhances traffic operations and efficiency, regardless of whether street construction, maintenance, utility work, or roadway incidents are taking place in the work space. Effective temporary traffic control must provide for the workers, road users, and pedestrians. At the same time, it must provide for the efficient completion of whatever activity suspended normal use of the roadway. . .Traffic control plans may be adopted by the authority of a public body or official having jurisdiction for guiding traffic. The plans and devices should follow the principles set forth in this Manual but may deviate from the typical drawings to allow for conditions and requirements of a particular site or jurisdiction as determined by the engineer."[62]

As further described in the Federal Highway Administration's (FHWA) "Part VI Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations," a component of the "Manual on Uniform Traffic Control Devices"[63] (MUTCD), to the extent interruptions in normal flow are necessary for temporary traffic control operations or other events that must temporarily disrupt normal traffic flow, traffic control plans (TCPs) can play an important role in providing continuity of safe and efficient traffic flow. TCPs describe those traffic controls to be used for facilitating vehicle and pedestrian traffic through a temporary traffic control zone.[64]

Compliance with Caltrans and FHWA traffic standards for construction and implementation of standard construction practices and permit conditions, as established by the City and County, have been demonstrated to ensure the safe movement of traffic and pedestrians and the safety of construction workers during those periods. Nevertheless, construction activities, even when performed in accordance with an approved TCP, can result in a short-term impedance of traffic, produce a temporary nuisance to those motorists affected by those activities, and result in damage to travel surfaces. Because of the potential for the short-term disruptions to traffic and impedance of site access during project construction, a number of mitigation measures (Mitigation Measure 6-1 and Mitigation Measure 6-2) have been formulated imposing an obligation upon the Applicant to repair any construction-related damage to affected roadways and requiring the preparation of a detailed TCP for new major development projects (defined herein as 50 new dwelling units or more and/or 50,000 square feet or greater of new non-residential use) prior to the approval of final grading permits. Incorporation of those measures will reduce potential construction-term impacts to a less-than-significant level.

***Environmental Impact 6-2**. Based on individual project-level schedules formulated by the developers of each planning area, construction activities may be occurring adjacent to occupied properties. Construction vehicles may, therefore, transport equipment, building materials, and hauling debris along local and collector streets within and adjacent to established residential areas and other areas where people congregate. In addition, project construction will result in the introduction of construction vehicles and equipment and could result in the release of soil and other debris onto public roadways.*

[62]/ California Department of Transportation, Manual of Traffic Controls for Construction and Maintenance Work Zones, Revision 2, December 1996, Section 5-01.1 (Introduction).

[63]/ United States Department of Transportation, Federal Highway Administration, Manual on Uniform Traffic Control Devices for Streets and Highways, 2003 Edition.

[64]/ United States Department of Transportation, Federal Highway Administration, Part VI Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations, September 3, 1993, Section C (Temporary Traffic Control Element).

Preliminary Determination 6-2*. Potentially significant unless mitigation incorporated* [65]

Heavy equipment, including trucks transportation construction materials and debris, will access and depart from the project site throughout the construction period. Large trucks often have reduced visibility based on the loads those vehicles carry and the generally elevated location of the drivers. Children residing in the existing residential neighborhoods located adjacent to the project site, playing on or near neighborhood streets, or traveling to and from proximal school sites may be unaware of approaching construction traffic. Operators of large trucks and trucks hauling construction equipment and building materials may be unaware of the presence of children, bicyclists, and household pets.

Compliance with and enforcement of speed laws and other provisions of the California Vehicle Code (CVC) and the safe use and operation of vehicles by their drivers would be expected to keep public safety issues at a less-than-significant level. In addition, to best ensure the safety of pedestrians and residences and enhance the protection of children and others residing in adjoining neighborhoods, a mitigation measure (Mitigation Measure 6-3) has been formulated requiring the Applicant's preparation of a construction traffic management plan (CTMP) prior to the approval of final grading permits for new major development projects.[66] The CTMP, which can be combined with the TCP as a single work product or prepared as a separate document, shall, at a minimum, include:

- Traffic control for any street closure, detour, or other disruption to traffic circulation.
- Identify the routes that construction vehicles will utilize for the delivery of construction materials to and construction debris from the site.
- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent residents or other sensitive land uses.
- Require the Applicant to keep all haul routes reasonably clean and free of spilled debris including, but not limited to, gravel and dirt as a result of project construction. The Applicant shall clean adjacent streets, as directed by the City Engineer, of any material which may have been spilled, tracked, or blown onto adjacent streets or areas as a result of the project's construction.
- Hauling or transport of oversize loads will be allowed between the hours of 9:00 AM and 5:00 PM only, Monday through Saturday, unless otherwise approved by the City Engineer. Within the City, no hauling or transport activities shall be authorized during nighttime hours, on Sunday, or on federal holidays.
- Within the City, use of local streets by construction vehicles shall be limited only to those streets that provide direct access to the destination or as otherwise approved by the City Engineer.
- Except when flagmen or other traffic control devices are being utilized, haul trucks entering or exiting public streets shall at all times yield to public traffic.
- If hauling operations cause any damage to existing pavement, street, curb, and/or gutter along the haul route, the Applicant will be fully responsible for facility repairs, completed to the satisfaction of the City Engineer.

[65]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) substantially increase hazards due to a design feature or incompatible uses; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

[66]/ As a component of individual grading permits, the Applicant will be responsible for the incorporation of measures to reduce construction-related traffic congestion. Subject to the approval and verification by the City Engineer, measures shall include configuration of construction parking to minimize traffic interferences, measures to minimize obstruction of through traffic lanes, and the use of a flagman to guide traffic when deemed necessary.

Most workers would be expected to arrive at the construction site in automobiles and in small trucks. To the extent operated in accordance with applicable speed limits and reasonable care, since those vehicles are already common place in residential areas and easily maneuvered by their operators, those vehicles can be safely operated and do not impose any unique risks or special hazards to existing residents. However, heavy trucks exiting unimproved (dirt) roads have the potential to release soil and debris onto public roadways. Similarly, overloaded vehicles, vehicles with loads insufficiently secured, trucks with incompletely closed gates, trucks traveling along uneven surfaces, and other vehicles may spill material along off-site travel routes and adjoining roadways. Adjacent to the project site, because spilled debris may also contribute to fugitive dust, the provisions of SCAQMD Rule 403 would apply. As required therein, no person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. All track-out from an active operation shall be removed at the conclusion of each workday.[67] Track-out is defined as any material that adheres to and agglomerates on vehicle tires or exterior surfaces and is deposited on a public paved surface. Typically, street sweepers are used to remove track-out deposited on public roadways.

Spilled debris may become a nuisance or a hazard to motorists and pedestrians alike. As outlined above, the minimum provisions of the CTMP (e.g., keep all haul routes clean and free of spilled debris) will effectively reduce potential impacts to a less-than-significant level.

4.6.5.2 Operational Impacts[68]

Environmental Impact 6-3*. Project operations could cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.*

Preliminary Determination 6-3*. Potentially significant unless mitigation incorporated.*[69]

Surface Street Impacts

Figure 4.6-7 (Future [2030] Traffic Volumes without Project AM Peak Hour) and Figure 4.6-8 (Future [2030] Traffic Volumes without Project PM Peak Hour) present Year 2030 AM and PM

[67]/ As required in Section (d)(5) therein: "No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraph (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a pave road. (A) Install a pad consisting of washed gravel maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long. (B) Pave the surface extending at least 100 feet and at least 20 feet wide. (C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. (D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. (E) Any other control measure approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraph (d)(5)(A) through (d)(5)(D)."

[68] The following impact analysis is based, in part, on the information and analysis presented in the "Traffic Impact Analysis Report for the Lytle Creek Ranch Planned Development Project, City of Rialto" (Crain & Associates, February 2008). A number of City departments and entities have submitted comments on that TIA. Upon receipt of comments on this EIR, those comments, in combination with any additional traffic-related comments that may be submitted by other stakeholders, will be reviewed and, as applicable, the traffic analysis (including the mitigation measures identified herein) may be modified in response thereto.

[69]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system; (2) exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designed roads or highways and (3) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

peak-hour traffic volumes for the "without project condition." Figure 4.6-9 (Future [2030] Traffic Volumes with Project AM Peak Hour) and Figure 4.6-10 (Future [2030] Traffic Volumes with Project PM Peak Hour) present the Year 2030 condition "with project" traffic volumes that would be expected at full build-out. For consistency and compatibility, except at the project access locations along Riverside Avenue where new project roadways will be constructed as part of the LCRSP, the same lane configurations were assumed for both the "without project" and the "with project" scenarios. The new project roadways will be located on the north side of Riverside Avenue at Redwood Avenue, Live Oak Avenue, Alder Avenue, Locust Avenue, and Linden Avenue. The already programmed roadway improvements, as discussed above, have been included in both the "without project" and the "with project" scenarios.

Using these assumptions, Table 4.6-9 (Project Area and County CMP Intersections LOS Summary - Future [2030] Traffic Volumes) presents the results of the AM and PM peak-hour analysis of Year 2030 traffic conditions, including the "without project" and "with project" scenarios at each of the CMP study area intersections and other project area intersections. The notation "Not Applicable" (N/A) is applied to those intersections that do not currently exist but which are scheduled to be constructed by 2030. Those intersections denoted in double asterisk (**) exceed the identified threshold criteria from the responsible jurisdiction and are significant prior to mitigation.

As indicated, based on the analysis of Year 2030 conditions, a significant traffic impact would result at 22 study intersections under the "with project" condition prior to mitigation. A significant traffic impact would also occur at the 22 study intersections under the "without project" condition, except at the SR-210 Freeway westbound on/off ramps at Riverside Avenue intersection.

Feasible roadway improvements and traffic reduction measures designed to mitigate significant traffic impacts of the project at these intersections have been identified and are described later in this section. These mitigation measures include project area and CMP intersection improvements (Mitigation Measure 6-4 and Mitigation Measure 6-5) and other regional transportation system improvements (Mitigation Measure 6-6). Some of these improvements have already been made requirements of previously approved projects and/or are a part of adopted regional traffic improvement plans. Although plans are being or have already been approved for some of these improvements, independent of their inclusion as mitigation measures and/or obligations applicable to other projects, these improvements have been assumed to not have been previously completed and, where appropriate, are included as mitigation measures herein.

The anticipated effectiveness of the identified mitigation measures at the study area intersections is listed in Table 4.6-12 (Project Area and County CMP Intersections LOS Summary - Future [2030] Traffic Conditions with Project plus Mitigation). Implementation of those measures will bring all significantly impacted project area and CMP intersections to an acceptable level of service. Impacts after mitigation will, therefore, be less than significant.

Regional Transportation System Impacts

In order to analyze the impact of the project on the regional transportation system, the output from the transportation model was used and analyzed. The model forecasted total volumes on all links (roadway segments), including the I-15, I-215, SR-210, and SR-30 Freeways for Year 2007 and 2030 conditions. A total of 29 freeway segments near the project site were selected

based on the probable routes that would be followed by project-related traffic. These segments included those most likely to be significantly impacted by the project's implementation.

As shown in Table 4.6-10 (Regional Transportation System - Future [2030] LOS Summary), the proposed project would have a significant traffic impact at eight freeway segments. In addition, without substantial capacity improvements, the congested conditions on the SR-210 and I-215 Freeways will worsen under both the "without project" and "with project" conditions.

Freeway segment improvements are identified within the County CMP, which contains a list of approved traffic improvements to be implemented pursuant to an approved implementation program. These CMP freeway improvements were assumed in the analysis of future traffic conditions. Those CMP freeway improvements that are located in the study area include: (1) add a high-occupancy-vehicle (HOV) lane in the NB and SB directions on the I-15 Freeway between the I-215 and the I-10 Freeways; (2) add a mainline lane in the NB and SB directions on the I-215 Freeway between the I-15 and the SR-259 Freeway; (3) improve the I-215 Freeway between the SR-259 and the I-10 Freeways to provide four mainline and one HOV lane in the NB and SB directions; (4) improve the SR-210 Freeway between the I-15 Freeway and Highland Avenue to provide a total of three mainline lanes and one HOV lane in the WB and EB directions; and (5) add a mainline lane on the SR-30 Freeway between Highland Avenue and the I-10 Freeway in the WB and EB directions. In addition to those freeway improvements, other physical improvements to address the cumulative impact of overall regional growth could include the addition of one freeway lane on the following segments: (1) I-215 Freeway between Highland Avenue and Massachusetts Avenue (NB and SB); (2) I-215 Freeway between Massachusetts Avenue and SR-259 Freeway (NB and SB); (3) I-215 Freeway between SR-259 Freeway and Baseline Street (NB only); (4) I-215 Freeway between Baseline Street and 5th Street (NB and SB); (5) I-215 Freeway between 2nd Street and Mill Street (NB and SB); (6) SR-210 Freeway between Riverside Avenue and Pepper Avenue (EB only); (7) SR-210 Freeway between Pepper Avenue and State Street (WB and EB); and (8) SR-210 Freeway between State Street and I-215 Freeway (WB and EB). With regards to freeway improvements, a mitigation measure (Mitigation Measure 6-6) has been formulated which imposes an obligation upon the Applicant to make a "fair-share" contribution to the cost of those improvements.

The anticipated effectiveness of those mitigation measures identified herein is presented later in this analysis (see Table 4.6-13 [Regional Transportation System Future (2030) Traffic Conditions with Project plus Mitigation]). As indicated therein, with the exception of the I-215 Freeway between Baseline Street and 5th Street in the NB direction, those measures are projected to reduce the LOS of all study area freeway segments to an acceptable level of service (i.e., LOS "E" or better). This freeway segment is currently operating at LOS "E" and is expected to operate at LOS "F" under both "without project" and "with project" conditions.

With regards to the I-215 Freeway between Baseline Street and 5th Street in the NB direction, the cumulative traffic impact at this location is, nonetheless, considered less than significant in accordance with the County CMP.[70] In order to further improve the level of service at this location, so as to reduce the cumulative traffic impact to LOS "E" or better, local jurisdictions in the surrounding area would need to collectively implement trip reduction programs (e.g. TDM

[70]/ As indicated in the County CMP, the adopted LOS standards for the CMP system are the minimum standards allowed under Section 65089(b)(1)(B) of the CGC, defined as LOS "E" for all segments and intersections except those designated as LOS "F" in the CMP. In addition, a provision is made for any LOS "F" facility not to deteriorate greater than 10 percent below its LOS value at the time of initial CMP adoption.

programs[71]) for all existing and cumulative developments. Alternatively, attempts could be made to increase the existing freeway ROW, through additional ROW acquisition (Mitigation Measure 6-6), in order to increase the existing freeway capacity. While these measures could potentially improve the LOS along this freeway segment, the implementation of a regional or subregional TDM program and the expansion of existing freeway capacity through unplanned ROW acquisition are outside the ability of the proposed project to effectuate.

Although a regional or subregional TDM program cannot feasibly be implemented at the project level, consistent with the TDM provisions of the County CMP, the proposed project will, nonetheless, be required to incorporate and implement, to the extent feasible, those TDM measures promoting alternative transportation methods, carpooling and vanpooling, and the use of transit, bicycles, and walking.

Non-Motorized Transportation

Transportation demand management measures include techniques to reduce the use of motor vehicles or shift their use to uncongested times of day. As defined in the County's "Non-Motorized Transportation Plan," TDM measures refer "to policies, programs, and actions that are directed toward increasing the use of high occupancy vehicles (transit, carpooling, and vanpooling) and the use of bicycling and walking with the express purpose of reducing or limiting vehicle cold starts and miles traveled for congestion and air quality purposes."[72]

As required under Section 65089(b)(3)(A) of the CGC, the CMP shall contain "a travel demand element that promotes alternative transportation methods, including but not limited to, carpools, vanpools, transit, bicycles, and park-and-ride lots; improvements in the balance between jobs and housing; and other strategies, including, but not limited to, flexible work hours, telecommuting, and parking management programs." As further indicated in the CMP, TDM can provide the following benefits: (1) increasing mobility of people and goods at a minimum capital cost by improving system efficiency and maximizing system utility; (2) increasing the integrated modal options by ensuring that actions are supportive of alternative methods; (3) encouraging use of alternatives to the single occupant vehicle to reduce vehicle trips and vehicle miles traveled; (4) improving overall system performance by maintaining mobility for people and goods while reducing vehicle demand; and (5) integrating air quality planning requirements with transportation planning and programming functions.[73]

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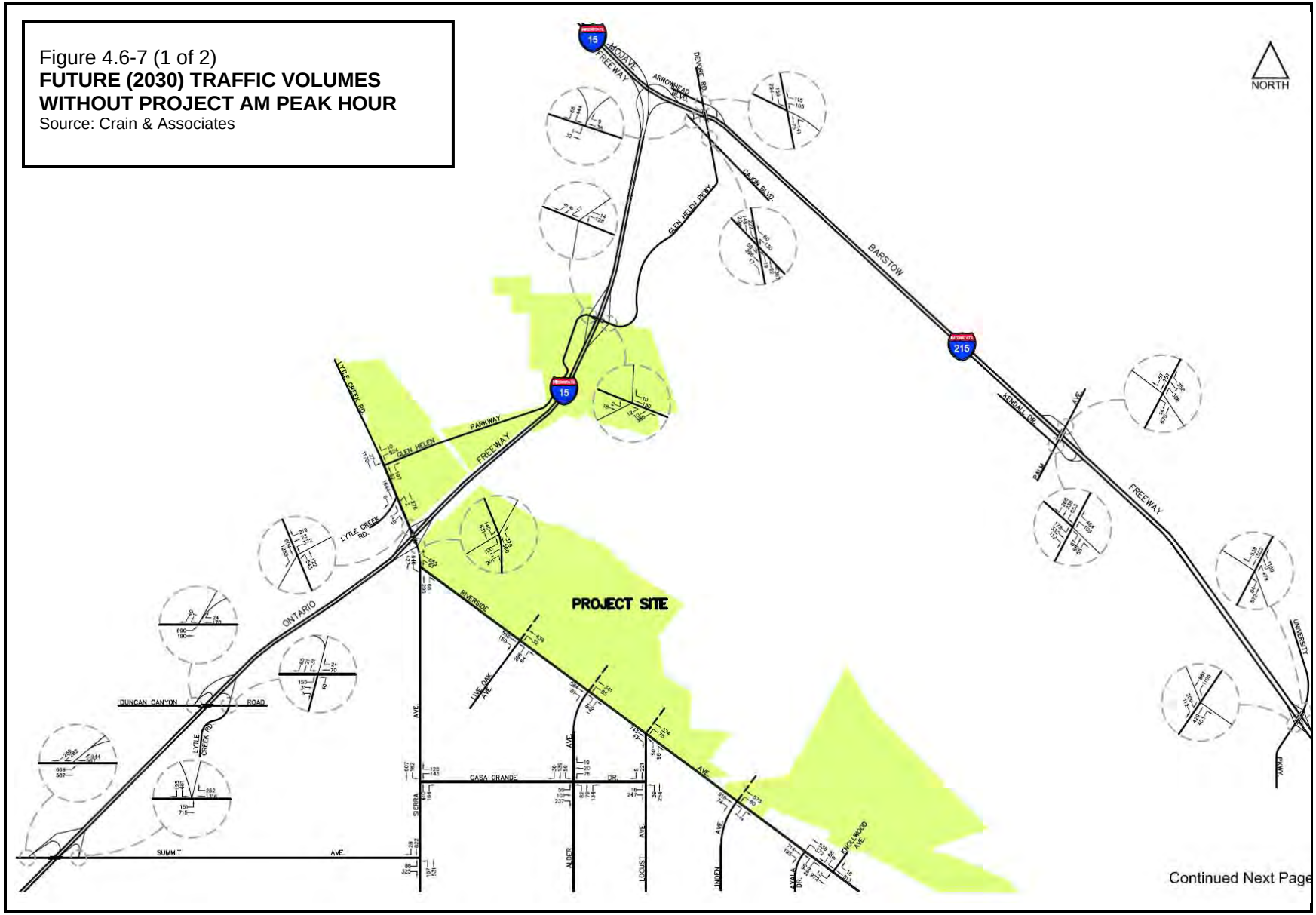
[71]/ Researchers have noted that the "two main types of land use measures for TDM are jobs-housing balance and density increases near to transit facilities. The general opinion is that jobs-housing balance (land use mix) will not reduce motorized trip and VMT much, because theoretically one expects workers to search for jobs within a certain (say, 30-minute) commute radius, not a shorter one, and therefore they end up with 25-minute average commutes, because the bulk of the jobs are in the outer area of their circular search pattern. A comparative study using models from several urban regions in developed countries to test the same TDM policies found that jobs-housing balance alone reduced VMT by only a few percent, because of this phenomenon. A Southern California agency [SCAG] simulated a regional jobs-housing balance policy and found that it could reduce VMT by 11% and vehicle hours of delay (VHD) by 63% over 20 years, however. Unfortunately, the modeling was apparently done incorrectly, without the feedback of assigned travel times to the trip distribution modeling step, and one would expect this to cause the over projection of changes in VMT and especially in VHD. Moreover, research by Giuliano and Small showed that actual commute distances in Southern California were shorted for workers who worked in areas with poor-housing balances. So the large reduction in VMT found by SCAG probably is largely an artifact of the model or of its operation" (Source: Johnston, Robert A. and Ceerla, Raju, Effects of Land Use Intensification and Auto Pricing Policies on Regional Travel, Emissions, and Fuel Use, University of California at Davis Transportation Center, 1995, unpaginated).

[72]/ *Op. Cit*., San Bernardino County Non-Motorized Transportation Plan, 2001 Update, p. 8.

[73]/ San Bernardino Associated Governments, Congestion Management Program for San Bernardino County, 2003 Update, December 3, 2003, p. 5-1.

Figure 4.6-7 (1 of 2)
FUTURE (2030) TRAFFIC VOLUMES WITHOUT PROJECT AM PEAK HOUR
Source: Crain & Associates



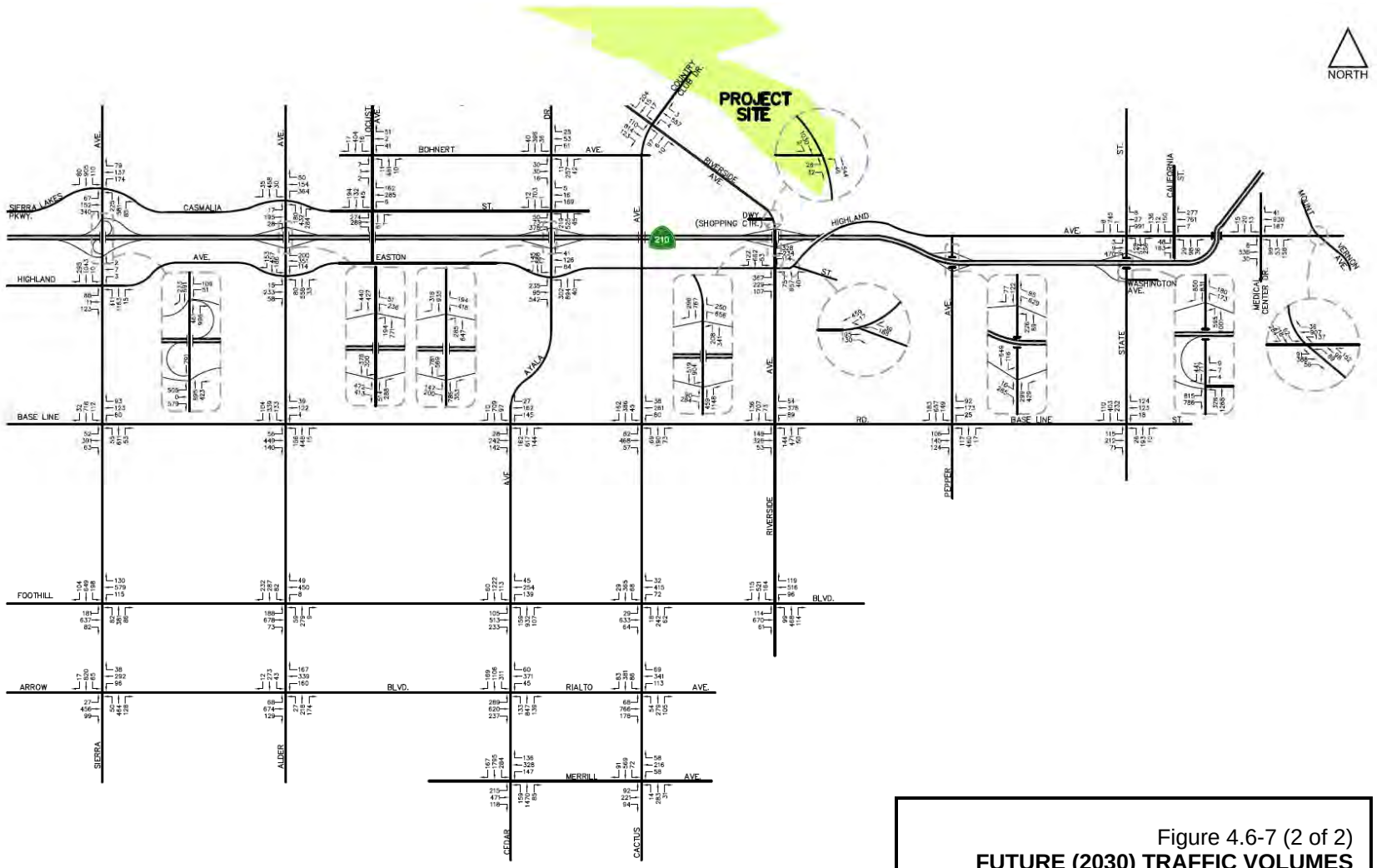
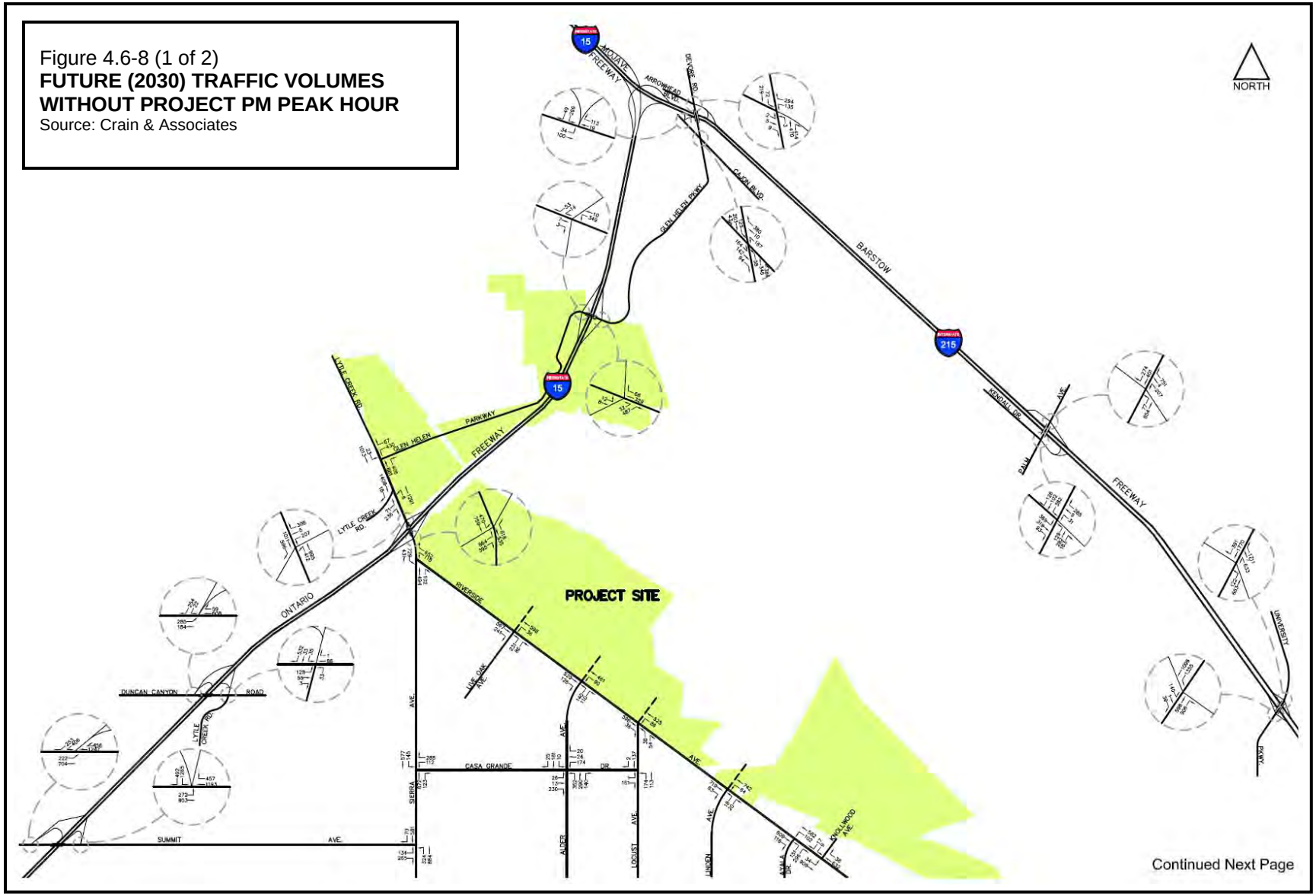


Figure 4.6-7 (2 of 2)
FUTURE (2030) TRAFFIC VOLUMES WITHOUT PROJECT AM PEAK HOUR
Source: Crain & Associates

Figure 4.6-8 (1 of 2)
FUTURE (2030) TRAFFIC VOLUMES WITHOUT PROJECT PM PEAK HOUR
Source: Crain & Associates



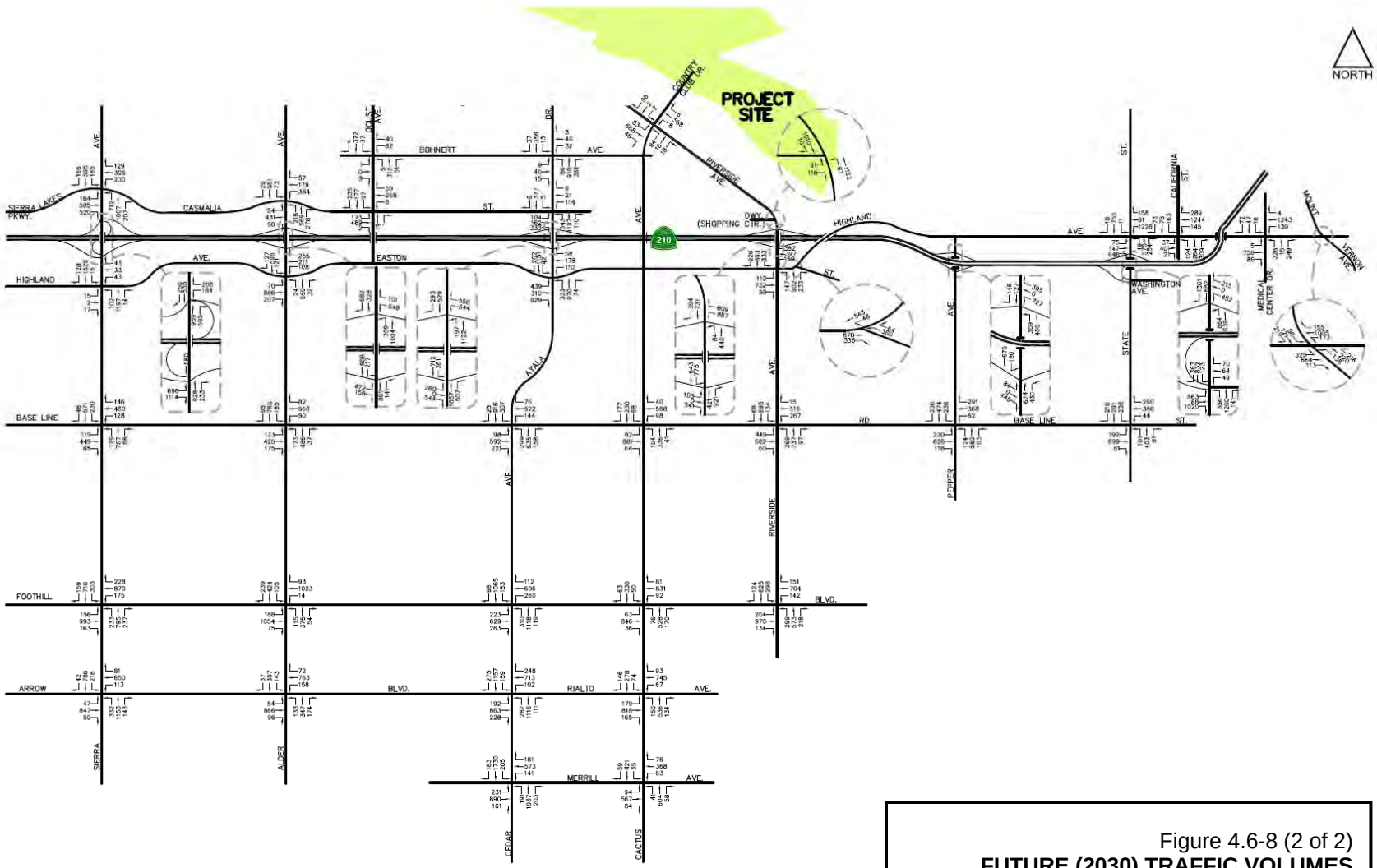
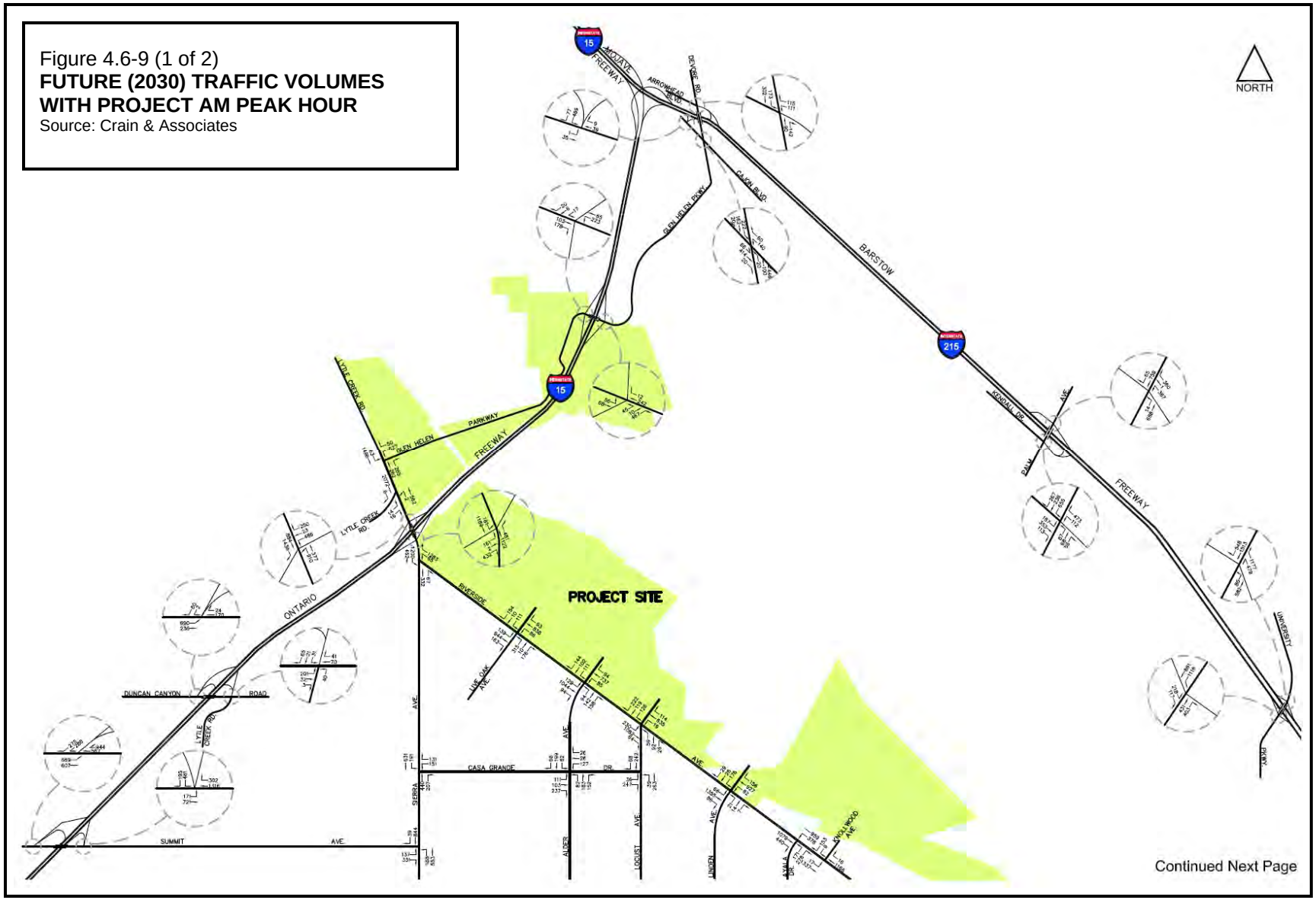


Figure 4.6-8 (2 of 2)
FUTURE (2030) TRAFFIC VOLUMES WITHOUT PROJECT PM PEAK HOUR
Source: Crain & Associates

Figure 4.6-9 (1 of 2)
FUTURE (2030) TRAFFIC VOLUMES WITH PROJECT AM PEAK HOUR
Source: Crain & Associates



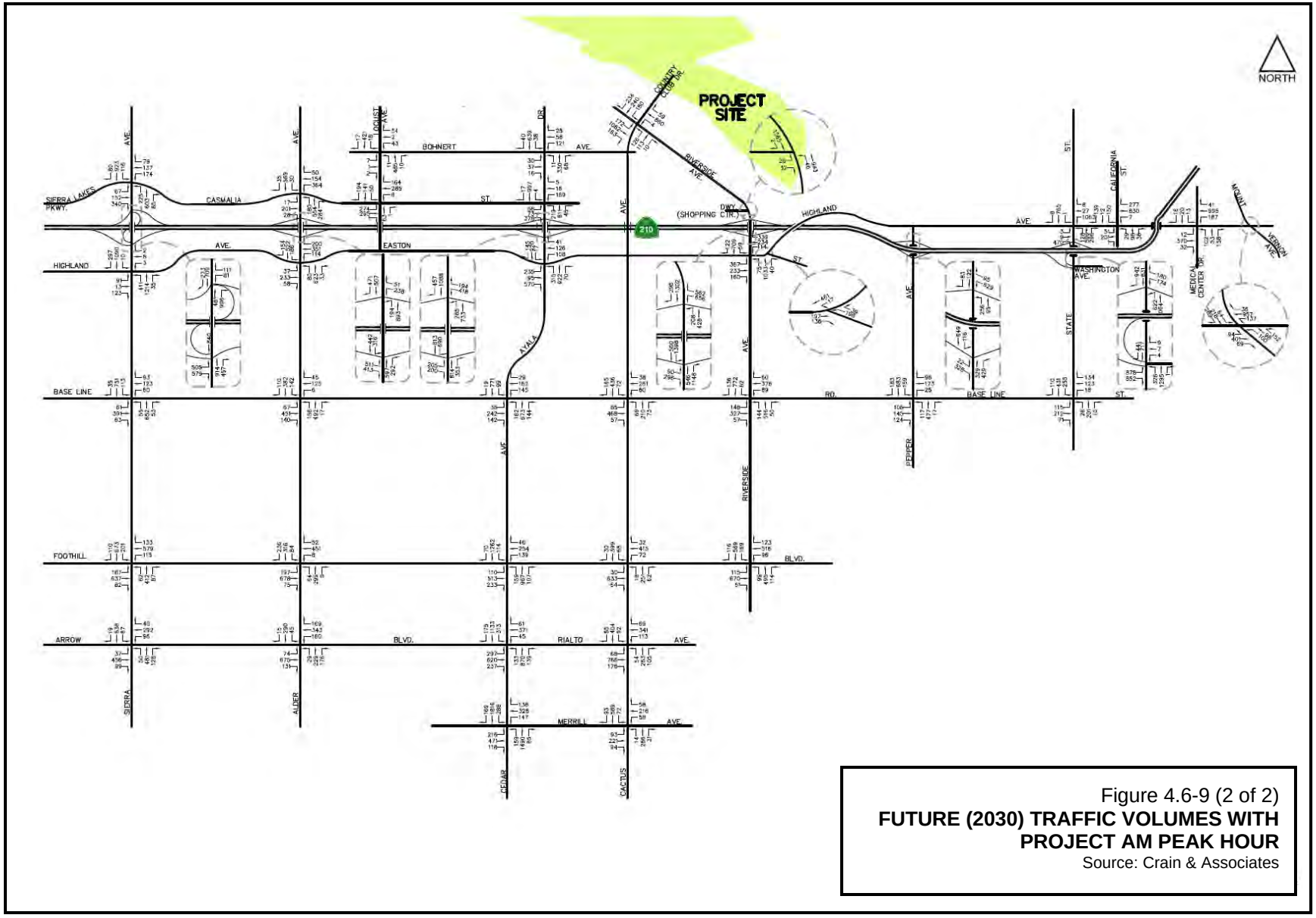
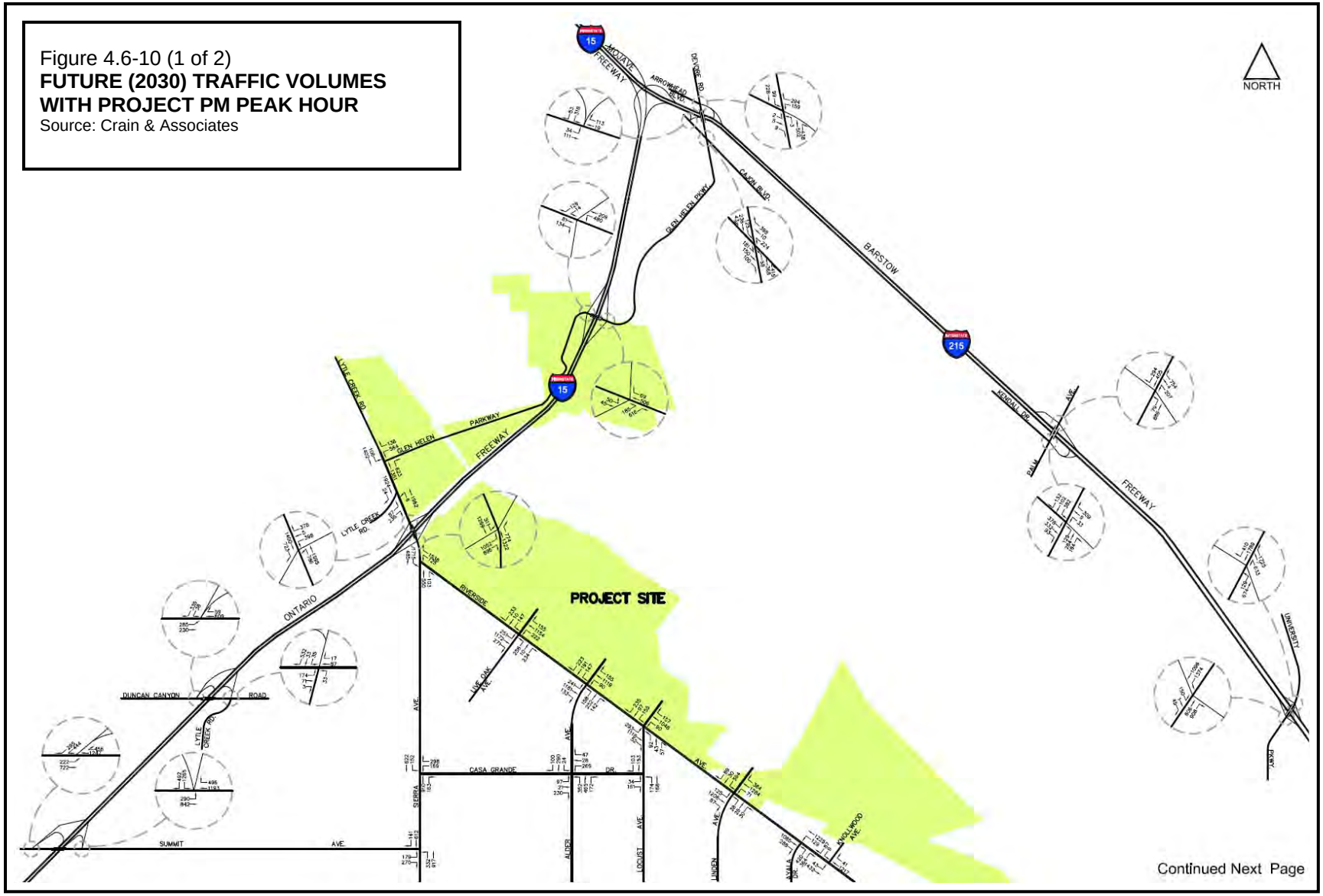


Figure 4.6-9 (2 of 2)
FUTURE (2030) TRAFFIC VOLUMES WITH PROJECT AM PEAK HOUR
Source: Crain & Associates

Figure 4.6-10 (1 of 2)
FUTURE (2030) TRAFFIC VOLUMES WITH PROJECT PM PEAK HOUR
Source: Crain & Associates



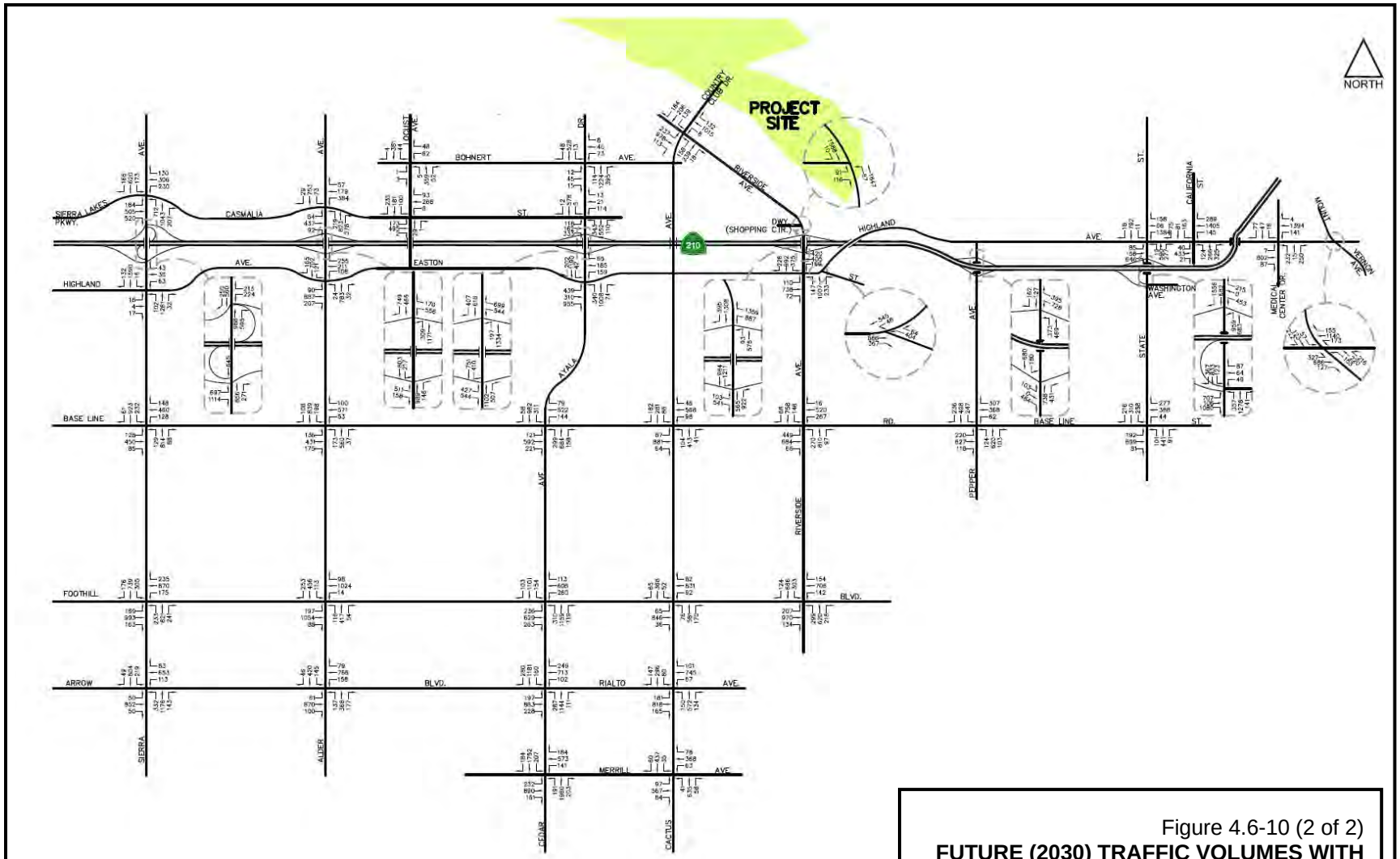


Figure 4.6-10 (2 of 2)
FUTURE (2030) TRAFFIC VOLUMES WITH PROJECT PM PEAK HOUR
Source: Crain & Associates

Table 4.6-9
PROJECT AREA AND COUNTY CMP INTERSECTIONS LOS SUMMARY
FUTURE (2030) TRAFFIC VOLUMES

Intersection No.	Peak Hour	Existing (2007)			Without Project (2030)			With Project (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
1. I-215 Freeway NB On/Off Ramps/ Arrowhead Boulevard/Devore Road	AM PM	-[1] -[1]	10.2 14.2	B B	-[1] -[1]	19.1 **302.6**	C **F***	-[1] -[1]	22.0 **507.3**	C **F*'****
2. Cajon Boulevard/I-215 Freeway SB On/Off Ramps	AM PM	-[1] -[1]	9.6 9.4	A A	-[1] -[1]	13.7 13.0	B B	-[1] -[1]	14.6 13.7	B B
3. Cajon Boulevard/Glen Helen Parkway[4]	AM PM	0.177 0.497	8.9 12.0	A B	0.766 1.076	20.4 51.7	C F	0.957 1.181	29.9 **71.4**	D **F****
4. I-215 Freeway NB On/Off Ramps/ Palm Avenue	AM PM	-[1] -[1]	20.6 30.8	C D	-[1] -[1]	**289.3** **245.9**	**F*** **F***	-[1] -[1]	**305.5** **260.2**	**F*'**** **F*'****
5. I-215 Freeway SB On/Off Ramps/ Palm Avenue	AM PM	1.091 0.865	46.7 26.3	E D	**1.884** **1.899**	**181.4** **167.6**	**F*** **F***	**1.892** **1.985**	**191.1** **182.2**	**F*'**** **F*'****
6. I-215 Freeway NB On/Off Ramps/ University Parkway	AM PM	0.576 0.694	15.9 17.0	B B	0.766 0.971	18.6 34.1	B C	0.776 0.984	18.8 36.1	B D
7. I-215 Freeway SB On/Off Ramps/ University Parkway	AM PM	0.810 1.162	20.3 72.3	C E	**1.070** **1.453**	58.5 **150.6**	E* **F***	**1.083** **1.472**	**61.8** **156.7**	**E*'**** **F*'****
8. I-15 Freeway SB On/Off Ramps/ Glen Helen Parkway	AM PM	-[1] -[1]	9.9 10.6	A B	-[1] -[1]	10.8 10.5	B B	-[1] -[1]	12.7 12.6	B B
9. I-15 Freeway NB On/Off Ramps/ Glen Helen Parkway	AM PM	-[1] -[1]	8.7 37.1	A E	-[1] -[1]	10.3 11.2	B B	-[1] -[1]	1.6 13.6	B B
10. Lytle Creek Road/Glen Helen Parkway[2,4]	AM PM	N/A N/A	N/A N/A	N/A N/A	N/A N/A	OVRFL OVRFL	**F** **F**	-[1] -[1]	**OVRFL** **OVRFL**	**F*'**** **F*'****
11. Lytle Creek Road/Sierra Avenue	AM PM	-[1] -[1]	9.0 11.9	A B	-[1] -[1]	48.3 **OVRFL**	E **F***	-[1] -[1]	**336.6** **OVRFL**	**F*'**** **F*'****
12. I-15 SB Freeway On/Off Ramps/ Sierra Avenue	AM PM	0.991 0.664	43.8 15.5	E C	**3.832** **3.270**	**806.2** **506.5**	**F*** **F***	**4.801** **4.502**	**OVRFL** **826.8**	**F*'**** **F*'****
13. I-15 NB Freeway On/Off Ramps/ Sierra Avenue	AM PM	0.984 0.907	30.3 25.6	D D	**1.697** **1.962**	**146.9** **307.6**	**F*** **F***	**2.827** **3.357**	**460.8** **770.7**	**F*'**** **F*'****
14. I-15 SB Freeway On/Off Ramps/ Duncan Canyon Road[3]	AM PM	N/A N/A	N/A N/A	N/A N/A	0.578 0.716	10.4 18.4	B B	0.590 0.766	10.4 20.6	B C
15. I-15 NB Freeway On/Off Ramps/ Lytle Creek Road/Duncan Canyon Road[3]	AM PM	-[1] -[1]	8.8 8.8	A A	0.184 0.464	15.4 11.5	B B	0.214 0.494	15.0 13.0	B B

Table 4.6-9 (Continued)
PROJECT AREA AND COUNTY CMP INTERSECTIONS LOS SUMMARY
FUTURE (2030) TRAFFIC VOLUMES

Intersection No.	Peak Hour	Existing (2007)			Without Project (2030)			With Project (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
16. I-15 Freeway SB On/Off Ramps/ Summit Avenue	AM	1.288	114.6	F	**1.156**	78.9	E	**1.160**	**80.4**	**F*'****
	PM	0.864	21.2	C	0.792	18.7	B	0.817	19.7	B
17. I-15 NB Freeway On/Off Ramps/ Summit Avenue	AM	0.791	19.1	B	0.816	19.2	B	0.829	198.0	B
	PM	1.240	99.4	F	**1.312**	**124.6**	**F***	**1.319**	**129.9**	**F*'****
18. Riverside Avenue/Sierra Avenue	AM	1.025	40.7	E	**1.457**	**136.2**	**F***	**2.739**	**570.2**	**F*'****
	PM	0.781	22.8	C	**1.728**	**186.2**	**F***	**4.067**	**906.9**	**F*'****
19. Riverside Avenue/Live Oak Avenue	AM	0.336	16.1	B	0.435	14.6	B	0.729	21.4	C
	PM	0.253	14.7	B	0.422	13.0	B	0.929	35.3	D
20. Riverside Avenue/Alder Avenue	AM	-[1]	12.6	B	-[1]	20.5	C	0.590	14.3	B
	PM	-[1]	12.6	B	-[1]	37.0	E	0.804	29.8	B
21. Riverside Avenue/Locust Avenue	AM	-[1]	16.4	C	-[1]	19.5	C	0.575	15.3	B
	PM	-[1]	12.8	B	-[1]	18.1	C	0.766	17.7	B
22. Riverside Avenue/Linden Avenue	AM	-[1]	35.3	E	-[1]	40.4	E	**1.193**	**100.5**	**F*'****
	PM	-[1]	15.3	C	-[1]	32.1	D	**1.663**	**270.7**	**F*'****
23. Riverside Avenue/Ayala Drive	AM	0.577	16.500	B	0.585	16.0	B	0.824	17.9	B
	PM	0.447	16.200	B	0.388	13.5	B	0.779	17.6	B
24. Riverside Avenue/Knollwood Avenue	AM	0.307	7.300	A	0.305	7.2	A	0.417	8.4	A
	PM	0.250	5.600	A	0.270	5.3	A	0.440	6.5	A
25. Riverside Avenue/Country Club Drive	AM	0.443	11.800	B	0.426	12.3	B	0.678	17.2	B
	PM	0.408	12.200	B	0.296	10.8	B	0.757	18.8	B
26. Riverside Avenue/Driveway (for Shopping Center)	AM	0.308	6.800	A	0.355	6.9	A	0.502	5.6	A
	PM	0.436	9.600	A	0.417	8.5	A	0.622	8.5	A
27. Casa Grande Drive/Sierra Avenue	AM	N/A	N/A	N/A	0.450	11.2	B	0.469	11.3	B
	PM	N/A	N/A	N/A	0.779	16.2	B	0.812	17.4	B
28. Casa Grande Drive/Alder Avenue[4]	AM	0.175	17.400	B	0.314	18.9	B	0.410	19.6	B
	PM	0.227	16.600	B	0.568	20.8	C	0.642	23.0	C
29. Casa Grande Drive/Locust Avenue[4]	AM	-[1]	12.500	B	-[1]	11.6	B	0.000	12.5	B
	PM	-[1]	10.700	B	-[1]	9.9	A	0.000	11.6	B
30. Summit Avenue/Sierra Avenue	AM	0.279	12.600	B	0.527	15.4	B	0.544	15.5	B
	PM	0.714	16.300	B	0.707	17.3	B	0.731	18.2	B
31. Bohnert Avenue/Locust Avenue[4]	AM	-[1]	75.2	F	-[1]	21.6	C	0.000	22.5	C
	PM	-[1]	24.6	C	-[1]	19.0	C	0.000	21.1	C

Table 4.6-9 (Continued)
PROJECT AREA AND COUNTY CMP INTERSECTION LOS SUMMARY
FUTURE (2030) TRAFFIC VOLUMES

Intersection No.	Peak Hour	Existing (2007)			Without Project (2030)			With Project (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
32. Bohnert Avenue/Ayala Drive[4]	AM	0.315	14.2	B	0.214	12.5	B	0.330	12.6	B
	PM	0.624	15.5	B	0.445	7.9	A	0.579	8.8	A
33. Sierra Lakes Parkway/Casmalia Street/Sierra Avenue	AM	0.474	18.1	B	0.553	19,5	B	0.557	19.5	B
	PM	0.701	19.8	B	0.796	23.5	C	0.801	23.6	C
34. Casmalia Street/Alder Avenue[4]	AM	0.836	33.3	C	0.637	22.9	C	0.680	23.6	C
	PM	1.187	124.2	F	0.899	41.8	D	0.955	52.7	D
35. Casmalia Street/Locust Avenue	AM	0.814	35.5	D	0.595	20..8	C	0.596	20.9	C
	PM	0.711	28.0	C	0.468	18.2	B	0.472	18.3	B
36. Casmalia Street/Ayala Drive	AM	0.437	14.9	B	0.595	17.1	B	0.687	17.4	B
	PM	0.624	18.3	B	0.611	15.2	B	0.609	17.5	B
37. SR-210 Freeway WB On/Off Ramps/Sierra Avenue	AM	0.147	1.1	A	0.229	4.2	A	0.246	4.6	A
	PM	0.208	1.4	A	0.267	6.9	A	0.287	7.4	A
38. SR-210 Freeway EB On/Off Ramps/Sierra Avenue	AM	0.747	23.5	C	0.492	10.9	B	0.497	10.9	B
	PM	0.903	40.0	D	0.658	12.1	B	0.667	12.3	B
39. SR-210 Freeway WB On/Off Ramps/Alder Avenue	AM	1.029	42.7	D	0.542	11.9	B	0.582	11.5	B
	PM	0.807	10.8	B	0.977	30.3	C*	1.014	34.0	C
40. SR-210 Freeway EB On/Off Ramps/Alder Avenue	AM	0.628	12.6	B	0.748	19,5	B	0.811	21.3	C
	PM	0.796	13.6	B	0.756	17.6	B	0.822	19.3	B
41. SR-210 Freeway WB On/Off Ramps/Ayala Drive	AM	N/A	N/A	N/A	0.842	20.3	C	0.932	25.8	C
	PM	N/A	N/A	N/A	0.734	17.9	B	0.873	22.8	C
42. SR-210 Freeway EB On/Off Ramps/Ayala Drive	AM	N/A	N/A	N/A	0.735	16.5	B	0.832	20.4	C
	PM	N/A	N/A	N/A	0.895	25.6	C	0.940	30.0	C
43. SR-210 Freeway WB On/Off Ramps/Riverside Avenue	AM	N/A	N/A	N/A	0.708	16.9	B	0.902	22.8	C
	PM	N/A	N/A	N/A	0.776	17.3	B	1.057	56.4	E*'**
44. SR-210 Freeway EB On/Off Ramps/Riverside Avenue	AM	N/A	N/A	N/A	**1.398**	**157.2**	**F***	**1.703**	**258.3**	**F*'****
	PM	N/A	N/A	N/A	**1.344**	**128.6**	**F***	**1.606**	**210.7**	**F*'****
45. SR-210 Freeway WB On/Off Ramps/Pepper Avenue	AM	N/A	N/A	N/A	0.617	15.1	B	0.638	15.8	B
	PM	N/A	N/A	N/A	0.751	17.8	B	0.794	20.2	C
46. SR-210 Freeway EB On/Off Ramps/Pepper Avenue	AM	N/A	N/A	N/A	0.515	11.3	B	0.541	12.1	B
	PM	N/A	N/A	N/A	0.656	15.3	B	0.680	16.1	B
47. SR-210 Freeway WB On/Off Ramps/State Street	AM	N/A	N/A	N/A	0.969	26.8	C	1.031	35.6	D
	PM	N/A	N/A	N/A	**1.497**	**174.5**	**F***	**1.667**	**229.0**	**F*'****

Table 4.6-9 (Continued)
PROJECT AREA AND COUNTY CMP INTERSECTION LOS SUMMARY
FUTURE (2030) TRAFFIC VOLUMES

Intersection No.	Peak Hour	Existing (2007)			Without Project (2030)			With Project (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
48. SR-210 Freeway EB On/Off Ramps/State Street	AM	N/A	N/A	N/A	0.745	33.5	C	0.861	36.6	D
	PM	N/A	N/A	N/A	**1.116**	71.7	E	**1.184**	**88.7**	**F*'****
49. Highland Avenue/State Street	AM	0.683	18.2	B	**1.163**	**115.9**	**F***	**1.208**	**133.9**	**F*'****
	PM	0.764	19.6	B	**1.374**	**195.1**	**F***	**1.484**	**234.1**	**F*'****
50. Highland Avenue/California Street	AM	0.325	10.2	B	0.490	9.3	A	0.512	9.1	A
	PM	0.439	10.7	B	0.873	17.5	B	0.931	21.3	C
51. Highland Avenue/Medical Center Drive	AM	0.299	8.8	A	0.382	6.4	A	0.401	6.2	A
	PM	0.405	11.0	B	0.518	7.9	A	0.560	7.8	A
52. Highland Avenue/Mount Vernon Avenue	AM	0.552	17.4	B	0.524	14.7	B	0.545	14.7	B
	PM	0.596	17.5	B	0.700	17.7	B	0.748	18.3	B
53. Highland Avenue/Sierra Avenue	AM	0.467	9.5	A	0.409	12.7	B	0.422	12.8	B
	PM	0.398	8.4	A	0.523	10.1	B	0.543	10.4	B
54. Highland Avenue/Easton Street/ Alder Avenue	AM	0.787	30.2	C	0.668	21.8	C	0.725	22.8	C
	PM	0.885	38.0	D	0.904	34.2	C	0.961	42.6	D
55. Easton Street/Ayala Drive[4]	AM	0.753	19.5	B	0858	31.7	C	0.916	34.6	C
	PM	1.120	65.5	E	1.176	83.9	**F**	1.256	100.2	**F**
56. Easton Street/Riverside Avenue	AM	0.956	46.9	D	0.812	27.4	C	0.837	29.2	C
	PM	1.202	101.5	F	0.895	31.3	C	0.962	38.6	D
57. Easton Street/Highland Avenue	AM	0.431	3.5	A	0.254	9.0	A	0.261	9.2	A
	PM	0.620	4.5	A	0.583	9.5	A	0.625	10.3	B
58. Baseline Road/Sierra Avenue	AM	0.381	17.8	B	0.452	17.5	B	0.463	17.4	B
	PM	0.695	22.0	C	0.775	23.9	C	0.797	24.5	C
59. Baseline Road/Alder Avenue	AM	0.684	23.6	C	0.756	29.5	C	0.786	32.3	C
	PM	0.919	46.8	D	**1.044**	66.2	E*	**1.106**	**80.5**	**F*'**0**
60. Baseline Road/Cedar Avenue/Ayala Drive	AM	0.459	19.0	B	0.498	18.7	B	0.517	18.5	B
	PM	0.671	21.2	C	0.860	27.0	C	0.891	28.8	C
61. Baseline Road/Cactus Avenue	AM	0.579	19.6	B	0.515	18.8	B	0.547	18.9	B
	PM	0.693	18.8	B	0.629	19.7	B	0.690	20.9	C
62. Baseline Road/Riverside Avenue	AM	0.647	21.4	C	0.557	19.5	B	0.580	19.4	B
	PM	0.792	25.8	C	0.843	27.6	C	0.866	28.9	C
63. Baseline Road/Pepper Avenue	AM	0.288	8.2	A	0.464	8.4	A	0.479	8.3	A
	PM	0.441	6.6	A	0.467	10.6	B	0.482	10.7	B

Table 4.6-9 (Continued)
PROJECT AREA AND COUNTY CMP INTERSECTION LOS SUMMARY
FUTURE (2030) TRAFFIC VOLUMES

Intersection No.	Peak Hour	Existing (2007)			Without Project (2030)			With Project (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
64. Baseline Road/State Street	AM	N/A	N/A	N/A	0.323	9.7	A	0.340	9.6	A
	PM	N/A	N/A	N/A	0.471	10.6	B	0.493	10.8	B
65. Foothill Boulevard/Sierra Avenue	AM	0.532	19.1	B	0.544	19.9	B	0.552	20.1	C
	PM	0.910	29.4	C	0.970	36.2	D	0.969	37.9	D
66. Foothill Boulevard/Alder Avenue	AM	0.449	13.4	B	0.412	14.8	B	0.425	15.0	B
	PM	0.639	15.1	B	0.768	18.2	B	0.803	19.2	B
67. Foothill Boulevard/Cedar Avenue	AM	0.598	20.0	B	0.775	21.3	C	0.791	21.6	C
	PM	0.807	25.0	C	0.957	37.1	D	0.959	39.2	D
68. Foothill Boulevard/Cactus Avenue	AM	0.473	14.3	B	0.429	14.5	B	0.434	14.6	B
	PM	0.749	17.8	B	0.750	19.6	B	0.782	20.7	C
69. Foothill Boulevard/Riverside Avenue	AM	0.610	20.0	C	0.549	19.4	B	0.565	19.5	B
	PM	0.905	32.2	C	0.847	27.5	C	0.860	28.3	C
70. Arrow Boulevard/Sierra Avenue	AM	0.430	17.7	B	0.543	18.5	B	0.550	18.5	B
	PM	0.776	26.0	C	0.904	33.6	C	0.914	34.5	C
71. Arrow Boulevard/Alder Avenue	AM	0.305	18.5	B	0.693	21.2	C	0.699	21.6	C
	PM	0.647	19.8	B	0.912	32.0	C	0.914	33.3	C
72. Rialto Avenue/Cedar Avenue	AM	0.449	16.2	B	0.811	30.7	C	0.828	31.4	C
	PM	0.598	19.7	B	**1.030**	59,1	E*	**1.042**	61.3	E*,**
73. Rialto Avenue/Cactus Avenue[4]	AM	0.206	8.9	A	0.418	9.7	A	0.425	9.8	A
	PM	0.317	9.7	A	0.491	10.2	B	0.501	10.4	B
74. Merrill Avenue/Cedar Avenue	AM	0.714	17.6	B	0.888	21.8	C	0.896	22.1	C
	PM	0.986	32.2	C	**1.080**	55.1	E*	**1.088**	57.1	E*,**
75. Merrill Avenue/Cactus Avenue[4]	AM	0.254	14.0	B	0.309	13.7	B	0.316	13.7	B
	PM	0.358	13.1	B	0.427	14.3	B	0.436	14.3	B

Notes:
* Denotes a CMP deficiency (i.e., LOS "F" and/or V/C ≥1). ** Denotes a significant project CEQA traffic impact, prior to mitigation.
N/A Intersection does not currently exist but is scheduled to be constructed by the 2030 horizon year. Bold Indicates unsatisfactory conditions.

1. V/C ratio not provided for two-way, STOP controlled intersections.
2. Glen Helen Parkway is currently closed at Lytle Creek Road.
3. I-15 Freeway on/off ramps at Duncan Canyon Road do not currently exist but are scheduled to be constructed by the 2030 horizon year.
4. Non-CMP-Network intersection.

Source: Crain and Associates

Table 4.6-10
REGIONAL TRANSPORTATION SYSTEM
FUTURE (2030) FREEWAY LOS SUMMARY

Segment No. Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Without Project Conditions				With Project Conditions			
					Daily Volume	Peak Hour Volume	V/C	LOS	Daily Volume	Peak Hour Volume	V/C	LOS
1. Ontario (I-15) Freeway between Barstow Freeway (I-215) and Glen Helen Parkway	AM	NB	3+1HOV	8500	142,900	3,900	0.46	A	146,500	4,030	0.47	A
		SB	3+1HOV	8500		5,700	0.67	B		5,770	0.68	B
	PM	NB	3+1HOV	8500		6,000	0.71	C		6,130	0.72	D
		SB	3+1HOV	8500		4,500	0.53	A		4,680	0.55	A
2. Ontario (I-15) Freeway between Glen Helen Parkway and Sierra Avenue	AM	NB	3+1HOV	8500	150,500	4,200	0.49	A	159,500	4,380	0.52	A
		SB	3+1HOV	8500		5,900	0.69	B		6,230	0.73	C
	PM	NB	3+1HOV	8500		6,300	0.74	C		6,670	0.78	C
		SB	3+1HOV	8500		4,600	0.54	A		4,970	0.58	A
3. Ontario (I-15) Freeway between Sierra Avenue and Duncan Canyon Road	AM	NB	4+1HOV	10800	162,200	4,200	0.39	A	179,700	4,540	0.42	A
		SB	4+1HOV	10800		7,100	0.66	B		7,800	0.72	C
	PM	NB	4+1HOV	10800		6,900	0.64	B		7,760	0.72	C
		SB	4+1HOV	10800		5,100	0.47	A		5,710	0.53	A
4. Ontario (I-15) Freeway between Duncan Canyon Road and Summit Avenue	AM	NB	4+1HOV	10800	169,600	4,100	0.38	A	185,200	4,370	0.40	A
		SB	4+1HOV	10800		7,800	0.72	C		8,480	0.79	C
	PM	NB	4+1HOV	10800		7,400	0.69	B		8,200	0.76	C
		SB	4+1HOV	10800		5,200	0.48	A		5,710	0.53	A
5. Ontario (I-15) Freeway between Summit Avenue and SR-210 Freeway	AM	NB	4+1HOV	10800	175,300	4,200	0.39	A	189,400	4,410	0.41	A
		SB	4+1HOV	10800		7,900	0.73	C		8,560	0.70	C
	PM	NB	4+1HOV	10800		8,000	0.74	C		8,740	0.81	D
		SB	4+1HOV	10800		5,200	0.48	A		5,630	0.52	A
6. Barstow (I-215) Freeway between Ontario Freeway (I-15) and Devore Road	AM	NB	3	6900	64,100	1,600	0.23	A	65,300	1,650	0.24	A
		SB	3	6900		3,600	0.52	A		3,600	0.52	A
	PM	NB	3	6900		4,300	0.62	B		3,370	0.65	B
		SB	3	6900		2,200	0.32	A		2,200	0.32	A
7. Barstow (I-215) Freeway between Devore Road and Palm Avenue	AM	NB	3	6900	699,300	1,900	0.28	A	71,100	1,940	0.28	A
		SB	3	6900		4,000	0.58	A		4,080	0.59	A
	PM	NB	3	6900		4,800	0.70	B		4,940	0.72	C
		SB	3	6900		2,100	0.30	A		2,170	0.31	A
8. Barstow (I-215) Freeway between Palm Avenue and University Parkway	AM	NB	3	6900	81,100	2,600	0.38	A	82,800	2,640	0.38	A
		SB	3	6900		4,300	0.62	B		4,390	0.64	B
	PM	NB	3	6900		5,200	0.75	C		5,320	0.77	C
		SB	3	6900		2,300	0.33	A		2,360	0.34	A

Table 4.6-10 (Continued)
REGIONAL TRANSPORTATION SYSTEM
FUTURE (2030) FREEWAY LOS SUMMARY

Segment No. Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Without Project Conditions				With Project Conditions			
					Daily Volume	Peak Hour Volume	V/C	LOS	Daily Volume	Peak Hour Volume	V/C	LOS
9. Barstow (I-215) Freeway between University Parkway and SR-30 Freeway	AM	NB	4	9200	121,300	3,400	0,37	A	123,000	3,430	0.37	A
		SB	4	9200		6,300	0.68	B		6,390	0.69	B
	PM	NB	4	9200		7,400	0.80	C		7,510	0.82	D
		SB	4	9200		4,000	0.43	A		4,070	0.44	A
10. Barstow (I-215) Freeway between SR-30 Freeway and Mt Vernon Ave/27th Street	AM	NB	3	6900	85,800	2,400	0.35	A	86,700	2,410	0.35	A
		SB	3	6900		4,800	0.70	B		4,860	0.70	B
	PM	NB	3	6900		5,300	0.77	C		5,370	0.78	D
		SB	3	6900		3,300	0.48	A		3,330	0.48	A
11. Barstow (I-215) Freewy between Mt Vernon Avenue/27th Street and Highland Avenue	AM	NB	3	6900	118,500	2,700	0.39	A	123,000	2,750	0.40	A
		SB	3	6900		6,500	0.94	E		6,830	0.99	E
	PM	NB	3	6900		6,500	0.94	E		6,720	0.97	E
		SB	3	6900		4,300	0.62	B		4,460	0.65	B
12. I-215 Freeway between Highland Avenue and Massachusetts Avenue	AM	NB	3	6900	129,400	2,900	0.42	A	134,900	2,980	0.43	A
		SB	3	6900		6,900	1.00	E		7,230	1.05	**F**
	PM	NB	3	6900		7,400	1.07	**F**		7,750	1.12	**F**
		SB	3	6900		4,600	0.67	B		4,760	0.69	B
13. I-215 Freeway between Massachusetts Avenue and SR-259 Freeway	AM	NB	3	6900	131,500	3,000	0.43	A	137,000	3,080	0.45	A
		SB	3	6900		6,900	1.00	E		7,230	1.05	**F**
	PM	NB	3	6900		7,600	1.10	**F**		7,950	1.15	**F**
		SB	3	6900		4,600	0.67	B		4,760	0.69	B
14. I-215 Freeway between SR-259 Freeway and Baseline Street	AM	NB	4+1HOV	10800	156,600	5,400	0.50	A	160,700	5,480	0.51	A
		SB	4+1HOV	10800		9,900	0.92	E		10,230	0.95	E
	PM	NB	4+1HOV	10800		10,600	0.98	E		10,920	1.01	**F**
		SB	4+1HOV	10800		7,700	0.71	C		7,860	0.73	C
15. I-215 Freeway between Baseline Street and 5th Street	AM	NB	4+1HOV	10800	257,100	6,600	0.61	B	262,800	6,680	0.62	B
		SB	4+1HOV	10800		11,600	1.07	**F**		11,930	1.10	**F**
	PM	NB	4+1HOV	10800		13,100	1.21	**F**		13,420	1.24	**F**
		SB	4+1HOV	10800		9,100	0.84	D		9,260	0.86	D
16. I-215 Freeway between 5th Street and 2nd Street	AM	NB	4+1HOV	10800	223,500	6,100	0.56	A	227,700	6,160	0.57	A
		SB	4+1HOV	10800		10,100	0.94	E		10,340	0.96	E
	PM	NB	4+1HOV	10800		9,900	0.92	E		10,130	0.94	E
		SB	4+1HOV	10800		9,300	0.86	D		9,430	0.87	D

Table 4.6-10 (Continued)
REGIONAL TRANSPORTATION SYSTEM
FUTURE (2030) FREEWAY LOS SUMMARY

Segment No. Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Without Project Conditions				With Project Conditions			
					Daily Volume	Peak Hour Volume	V/C	LOS	Daily Volume	Peak Hour Volume	V/C	LOS
17. I-215 Freeway between 2nd Street and Mill Street	AM	NB	4+1HOV	10800	263,900	7,800	0.72	C	268,100	7,860	0.73	C
		SB	4+1HOV	10800		10,800	1.00	E		11,040	1.02	**F**
	PM	NB	4+1HOV	10800		12,400	1.15	**F**		12,630	1.17	**F**
		SB	4+1HOV	10800		10,400	0.96	E		10,530	0.98	E
18. State Route 210 Freeway between Ontario (I-15) Freeway and Cherry Avenue	AM	WB	3+1HOV	8500	125,600	4,700	0.55	A	126,600	4,750	0.56	A
		EB	3+1HOV	8500		2,900	0.34	A		2,910	0.34	A
	PM	WB	3+1HOV	8500		4,700	0.55	A		4,730	0.56	A
		EB	3+1HOV	8500		5,600	0.66	B		5,650	0.66	B
19. State Route 210 Freeway between Cherry Avenue and Citrus Avenue	AM	WB	3+1HOV	8500	166,800	6,900	0.81	D	169,400	7,030	0.83	D
		EB	3+1HOV	8500		4,000	0.47	A		4,040	0.48	A
	PM	WB	3+1HOV	8500		6,200	0.73	C		6,280	0.74	C
		EB	3+1HOV	8500		7,900	0.93	E		8,040	0.95	E
20. SR-210 Freeway between Citrus Avenue and Sierra Avenue	AM	WB	3+1HOV	8500	165,400	6,400	0.75	C	168,600	6,540	0.77	C
		EB	3+1HOV	8500		4,300	0.51	A		4,360	0.51	A
	PM	WB	3+1HOV	8500		6,200	0.73	C		6,320	0.74	C
		EB	3+1HOV	8500		8,000	0.94	E		8,160	0.96	E
21. SR-210 Freeway between Sierra Avenue and Alder Avenue	AM	WB	3+1HOV	8500	153,200	6,300	0.74	C	157,300	6,470	0.76	C
		EB	3+1HOV	8500		4,000	0.47	A		4,090	0.48	A
	PM	WB	3+1HOV	8500		6,000	0.71	C		6,170	0.73	C
		EB	3+1HOV	8500		7,200	0.85	D		7,400	0.87	D
22. SR-210 Freeway between Alder Avenue and Ayala Drive	AM	WB	3+1HOV	8500	145,400	6,000	0.71	C	149,100	6,040	0,72	C
		EB	3+1HOV	8500		3,700	0.44	A		3,770	0,44	A
	PM	WB	3+1HOV	8500		5,600	0.66	B		5,780	0,68	B
		EB	3+1HOV	8500		7,000	0.82	D		7,170	0,84	C
23. SR-210 Freeway between Ayala Drive and Riverside Avenue	AM	WB	3+1HOV	8500	153,200	6,000	0.71	C	155,800	6,000	0.71	C
		EB	3+1HOV	8500		4,300	0.51	A		4,440	0.52	A
	PM	WB	3+1HOV	8500		6,200	0.73	C		6,410	0.75	C
		EB	3+1HOV	8500		7,000	0.82	D		7,050	0.83	D

Table 4.6-10 (Continued)
REGIONAL TRANSPORTATION SYSTEM
FUTURE (2030) FREEWAY LOS SUMMARY

Segment No. Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Without Project Conditions				With Project Conditions			
					Daily Volume	Peak Hour Volume	V/C	LOS	Daily Volume	Peak Hour Volume	V/C	LOS
24. SR-210 Freeway between Riverside Avenue and Pepper Avenue	AM	WB	3+1HOV	8500	181,900	6,400	0.75	C	196,000	6,710	0.79	C
		EB	3+1HOV	8500		6,000	0.71	C		6,620	0.78	C
	PM	WB	3+1HOV	8500		7,400	0.87	D		8,150	0.96	E
		EB	3+1HOV	8500		8,100	0.95	E		8,590	1.01	**F**
25. SR-210 Freeway between Pepper Avenue and State Street	AM	WB	3+1HOV	8500	191,000	6,800	0.80	C	203,700	7,080	0.83	D
		EB	3+1HOV	8500		6,200	0.73	C		6,770	0.80	C
	PM	WB	3+1HOV	8500		8,100	0.95	E		8,770	1.03	**F**
		EB	3+1HOV	8500		8,200	0.96	E		8,630	1.02	**F**
26. SR-210 Freeway between State Street and Barstow (I-215) Freeway	AM	WB	3	6900	171,600	6,100	0.88	D	180,000	6,260	0.91	E
		EB	3	6900		5,900	0.86	D		6,340	0.92	E
	PM	WB	3	6900		6,700	0.97	E		7,080	1.03	**F**
		EB	3	6900		7,800	1.13	**F**		8,110	1.18	**F**
27. SR-30 Freeway between Barstow (I-215) Freeway and H Street	AM	WB	3	6900	148,100	6,500	0.94	E	152,400	6,620	0.96	E
		EB	3	6900		4,100	0.59	A		4,270	0.62	B
	PM	WB	3	6900		6,100	0.88	D		6,320	0.92	E
		EB	3	6900		6,600	0.96	E		6,760	0.98	E
28. SR-30 Freeway between H Street and SR-259 Freeway	AM	WB	3	6900	126,600	5,500	0.80	C	129,800	5,590	0.81	D
		EB	3	6900		3,700	0.54	A		3,830	0.56	A
	PM	WB	3	6900		5,300	0.77	C		5,460	0.79	C
		EB	3	6900		5,500	0.80	C		5,620	0.81	D
29. SR-30 Freeway between SR-259 Freeway and Waterman Avenue	AM	WB	4	9200	190,400	7,900	0.86	D	193,600	7,990	0.87	D
		EB	4	9200		5,800	0.63	B		5,930	0.64	B
	PM	WB	4	9200		7,400	0.80	C		7,650	0.82	D
		EB	4	9200		8,500	0.92	E		8,620	0.94	E

Notes:
Bold denotes study freeway segments that are deficient (LOS "F")

Source: Crain and Associates

The primary objective of TDM measures is to reduce roadway congestion by encouraging motorists to switch to alternative modes of transportation (such as transit or walking), traveling during non-peak hours, creating opportunities to combine diverse trips, and/or by not leaving home at all. The primary means of alternative transportation include ridesharing, taking transit, biking or walking.

Ridesharing occurs when two or more people share a vehicle for a trip and can be in the form of carpools or vanpools. The advantages of ridesharing include reducing commuting costs for travelers, reducing highway congestion, and improving air quality by reducing the number of vehicle miles traveled (VMT). According to the ITE's "A Toolbox for Alleviating Traffic Congestion and Enhancing Mobility,"[74] carpool programs can reduce commute VMT on average by 0 to 3 percent. Because TDMs have the potential to reduce VMT, implementation will produce both traffic-related and air quality benefits. A number of traffic control measures strategies (Mitigation Measure 7-11 and Mitigation Measure 7-13) are identified in Section 4.7 (Air Quality) herein.

4.6.5.3 Cumulative Impacts

Environmental Impact 6-4*. As a result of both ambient growth and other areawide development activities, the project's operations could cumulatively exceed the LOS standard established by the County Congestion Management Agency for designed roads and highways.*

Preliminary Determination 6-4*. Potentially significant unless mitigation incorporated.*[75]

The traffic models utilized in the above analysis incorporated forecasted traffic increases due to ambient growth and related projects through Year 2030 (the build-out year of the proposed project). Furthermore, the County CMP analysis presented above evaluates traffic impacts on a larger, regional scale. Cumulative impacts on study area intersections, freeway segments, and the regional transportation system as a result of the proposed project have been analyzed.

Specifically, through a search of the City's database, a large inventory of "related projects" were identified which included projects that are completed but not fully occupied, under construction or beginning construction, or are presently only proposed but which could become operational within the time frame examined in this study. Those related projects' are identified in Table 3-4 (Related Projects Summary) and their locations illustrated in Figure 3-1 (Related Projects Location Map).

The contribution of those related projects to future traffic volumes along the roadway network are included in the Table 4.6-9 (Project Area and County CMP Intersections LOS Summary - Future [2030] Traffic Volumes). As indicated therein, based on the CMP threshold criteria, significant traffic impacts are projected at 20 study intersections under the "with project" condition. Significant impacts would occur at all 20 study intersections under the "without

[74]/ Meyer, Michael, D., A Toolbox for Alleviating Traffic Congestion and Enhancing Mobility, Institute of Transportation Engineers, 1997.

[75]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system; (2) exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designed roads or highways and (3) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

project" scenario due to non-project cumulative traffic impacts, except at the three study area intersections located at Riverside Avenue and Linden Avenue, SR-210 Freeway westbound ramps and Alder Avenue, and SR-210 Freeway, westbound ramps and Riverside Avenue.

A number of measures have been formulated to mitigate traffic impacts attributable to both the LCRSP and the cumulative impacts attributable to ambient growth and areawide development. These mitigation measures include project area and CMP intersection improvements (Mitigation Measure 6-4 and Mitigation Measure 6-5) and regional transportation system improvements (Mitigation Measure 6-6). In addition, the mitigation measures presented in Table 4.6-11 (Project Study Area and County CMP Intersections - Mitigation Measure Improvements)[76] are recommended to increase arterial capacity in the study area. The measures identified therein are intended to accommodate the additional traffic generated by the proposed project as well as other cumulative area developments. These proposed improvements are designed to reduce project-related traffic impacts to less than significant levels and to ensure that sufficient roadway capacity exists to accommodate all anticipated area growth. As such, other developments may install some of these improvements, especially those improvements that are relatively remote with respect to the project site. Should other related projects implement any of the improvements identified therein no further measures will be required of the proposed project at the locations cited.

The anticipated effectiveness of the identified mitigation measures at the study area intersections is listed in Table 4.6-12 (Project Study Area and County CMP Intersections LOS Summary - Future [2030] Traffic Conditions with Project plus Mitigation). Implementation of those measures will bring all significantly impacted project area and CMP intersections to an acceptable level of service (LOS "D" or better).

As indicated in Table 4.6-13 (Regional Transportation System - Future [2030] Traffic Conditions with Project plus Mitigation), the implementation of the freeway improvements identified therein would reduce the LOS of all study freeway segments to an acceptable level (i.e., LOS "E" or better), except for the I-215 Freeway between Baseline and 5th Streets in the NB direction (Segment 15). This segment is currently operating at LOS "E" and is expected to operate at LOS "F" under both "without" and "with" project conditions. The cumulative traffic impact at this location is, nonetheless, considered less than significant in accordance with the County CMP.[77]

4.6.6 Recommended Mitigation Measures

- **Mitigation Measure 6-1**. As a condition to the issuance of final grading permits, the Applicant shall be responsible for the repair of any damage to roads resulting from the delivery of heavy equipment and building materials and the import and export of soil and other materials to and from the project site. Any resulting roadway repairs shall be to the satisfaction of the City, if within the City, or the County, if located in an unincorporated County area.

[76]/ The project's TIA, included in Appendix II-A (Traffic Impact Analysis) herein, contains graphics showing the existing intersection lane configurations, as well as that which will exist in Year 2030 without the project, with the project, and with the above mitigation measures.

[77]/ As indicated in the County CMP, the adopted LOS standards for the CMP system are the minimum standards allowed under Section 65089(b)(1)(B) of the CGC, defined as LOS "E" for all segments and intersections except those designated as LOS "F" in the County CMP. A provision is made for any LOS "F" facility not to deteriorate greater than 10 percent below its LOS value at the time of initial CMP adoption.

Table 4.6-11
PROJECT STUDY AREA AND COUNTY CMP INTERSECTIONS MITIGATION MEASURE IMPROVEMENTS

Intersection No.	Improvements
1. I-215 Freeway NB On/Off Ramps/ Arrowhead Boulevard/Devore Road	Install traffic signal.
3. Cajon Boulevard/Glen Helen Parkway	Install traffic signal.
4. I-215 Freeway NB On/Off Ramps/Palm Avenue	Install traffic signal.
5. I-215 Freeway SB On/Off Ramps/Palm Avenue	Install traffic signal
7. I-215 Freeway SB On/Off Ramps/ University Parkway	Improve University Parkway to provide an exclusive right-turn lane in the NB direction and one left-turn lane, one left/through-shared lane, and one through lane in the SB direction. In order to accommodate the left-through-shared lane, modify the existing traffic signal to allow split phases for the NB and SB approaches.
10. Lytle Creek Road/Glen Helen Parkway	Restripe Lytle Creek Road to accommodate one left-turn lane and two through lanes in the southeast-bound direction and two through lanes and one right-turn lane in the northwest-bound direction. Improve and restripe the Glen Helen Parkway approach at Lytle Creek Road to provide dual left-turn lanes and one right-turn lane. Install traffic signal.
11. Lytle Creek Road/Sierra Avenue	Restripe Lytle Creek Road and Sierra Avenue to accommodate one left-turn lane and two through lanes in the northwest-bound direction and one through lane and one through/right-shared lane in the southeast-bound direction. Install traffic signal.
12. I-15 Freeway SB On/Off Ramps/Sierra Avenue	Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the northwest-bound direction and two through lanes, and one free right-turn lane in the southeast-bound direction. Widen the SB off-ramp to accommodate one left-turn lane, one left/right-shared lane, and one right-turn lane. Install a traffic signal.
13. I-15 Freeway NB On/Off Ramps/Sierra Avenue	Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the southeast-bound direction and two through lanes and one right-turn lane in the northwest-bound direction. Reconstruct the NB off-ramp to accommodate one left-turn lane, one left/through-shared lane, and one free right-turn lane. Install traffic signal.
16. I-15 Freeway SB On/Off Ramps/Summit Avenue	Restripe Summit Avenue to accommodate one additional left-turn lane in the EB direction.
17. I-15 Freeway NB On/Off Ramps/Summit Avenue	Restripe the NB off-ramp to provide dual left-turn lanes and one right-turn lane.
18. Riverside Avenue/Sierra Avenue	Widen and restripe Sierra Avenue to provide dual left-turn lanes and two through lanes in the SB direction. Improve the intersection to allow a free right-turn from Riverside Avenue onto Sierra Avenue. Install traffic signal.
22. Riverside Avenue/Linden Avenue	Widen and restripe to provide one left-turn lane, one through lane, and one through/right-shared lane in the northwest-bound direction.
39. SR-210 Freeway WB On/Off Ramps/ Alder Avenue	Restripe the WB approach to provide one left-turn lane and one left/through/right-shared lane.

Table 4.6-11 (Continued)
PROJECT STUDY AREA AND COUNTY CMP INTERSECTIONS
MITIGATION MEASURE IMPROVEMENTS

Intersection No.	Improvements
43. SR-210 Freeway WB On/Off Ramps/ Riverside Avenue	Flare and restripe Riverside Avenue to provide an exclusive right-turn lane in the SB direction.
44. SR-210 Freeway EB On/Off Ramps/ Riverside Avenue	Improve Riverside Avenue to provide two through lanes and two right-turn lanes in the NB direction and dual left-turn lanes and two through lanes in the SB direction. In addition, improve the SR-210 Freeway off-ramp to provide one left-turn lane, left/through/right shared lane, and one right-turn lane.
47. SR-210 Freeway WB On/Off Ramps/ State Street	Improve State Street to provide dual left-turn lanes and two through lanes in the NB direction and one through lane, one through/right shared lane, and one right-turn lane in the SB direction.
48. SR-210 Freeway EB On/Off Ramps/ State Street	Flare and restripe the EB off-ramp to provide one left-turn lane, one left/through-share lane, and two right-turn lanes. Modify the traffic signal to accommodate a right-turn overlap phase for the off-ramp EB approach and the SB approach on State Street.
49. Highland Avenue/State Street	Flare and restripe Highland Avenue to provide dual left-turn lanes, one through lane, and one through/right-shared lane in the WB direction and one left-turn lane, one through lane, one through/right shared lane, and one right-turn lane in the EB direction.
55. Easton Street/Ayala Drive	Flare and restripe Easton Street in the eastbound direction to accommodate an exclusive right-turn lane. Modify the traffic signal to include a right-turn overlap phase with the left-turn phase in the NB direction.
59. Baseline Road/Alder Avenue	Flare and restripe Alder Avenue to provide one left-turn lane, one through lane, and one through/right shared lane in the SB direction.
72. Rialto Avenue/Cedar Avenue	Flare and restripe Cedar Avenue to provide an exclusive right-turn lane in the SB direction.
74. Merrill Avenue/Cedar Avenue	Flare and restripe Cedar Avenue to provide an exclusive right-turn lane in the NB direction and Merrill Avenue to provide an exclusive right-turn lane in the EB direction. Additional right-of-way may be required to implement this measure.

Source: Crain and Associates

Table 4.6-12
PROJECT STUDY AREA AND COUNTY CMP INTERSECTIONS LOS SUMMARY
FUTURE (2030) TRAFFIC CONDITIONS WITH PROJECT PLUS MITIGATION

Intersection No.	Peak Hour	Without Project (2030)			With Project (2030)			With Project + Mitigation (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
1. I-215 Freeway NB On/ Off Ramps/Arrowhead Boulevard/Devore Road	AM PM	-[1] -[1]	19.1 **302.6**	C F*	-[1] -[1]	22.0 **507.3**	C **F*,****	0.425 0.834	8.3 16.4	A B
2. Cajon Boulevard/I-215 SB On/ Off Ramps	AM PM	-[1] -[1]	13.7 13.0	B B	-[1] -[1]	14.6 13.7	B B	-	-	-
3. Cajon Boulevard/Glen Helen Parkway[4]	AM PM	0.766 1.076	20.4 51.7	C F	0.957 1.181	29.9 **71.4**	D **F****	0.414 0.491	9.9 10.8	A B
4. I-215 Freeway NB On/Off Ramps/ Palm Avenue	AM PM	-[1] -[1]	**289.3** **245.9**	**F*** **F***	-[1] -[1]	**305.5** **260.2**	**F*,**** **F*,****	0.468 0.735	11.2 14.7	B B
5. I-215 Freeway SB On/Off Ramps/ Palm Avenue	AM PM	**1.884** **1.899**	**181.4** **167.6**	**F*** **F***	**1.892** **1.985**	**191.1** **182.2**	**F*,**** **F*,****	0.806 0.873	22.1 25.6	C C
6. I-215 NB On/Off Ramps/University Parkway	AM PM	0.766 0.971	18.6 34.1	B C	0.776 0.984	18.8 36.1	B D	-	-	-
7. I-215 Freeway SB On/Off Ramps/ University Parkway	AM PM	**1.070** **1.453**	58.5 **150.6**	E* **F***	1.083 1.472	**61.8** **156.7**	**E*,**** **F*,****	0.731 0.931	17.3 26.2	B C
8. I-15 SB On/Off Ramps/Glen Helen Parkway	AM PM	-[1] -[1]	10.8 10.5	B B	-[1] -[1]	12.7 12.6	B B	-	-	-
9. I-15 NB On/Off Ramps/Glen Helen Parkway	AM PM	-[1] -[1]	10.3 11.2	B B	-[1] -[1]	11.6 13.6	B B	-	-	-
10. Lytle Creek Road & Glen Helen Parkway[2,4]	AM PM	N/A N/A	OVRFL OVRFL	F F	0.000 0.000	**OVRFL** **OVRFL**	**F**** **F****	0.676 0.626	15.4 14.0	B B
11. Lytle Creek Road/Sierra Avenue	AM PM	-[1] -[1]	48.3 **OVRFL**	E **F***	0.000 0.000	**336.6** **OVRFL**	**F*,**** **F*,****	0.611 0.777	1.8 9.1	A A
12. I-15 Freeway SB On/Off Ramps/ Sierra Avenue	AM PM	**3.832** **3.270**	**806.2** 506.5	**F*** **F***	**4.801** **4.502**	**OVRFL** 826.8	**F*,**** **F*,****	0.816 0.950	21.1 22.4	C C
13. I-15 Freeway NB On/Off Ramps/ Sierra Avenue	AM PM	**1.697** **1.962**	**146.9** **307.6**	**F*** **F***	**2.827** **3.357**	**460.8** **770.7**	**F*,**** **F*,****	0.461 0.967	5.9 32.1	A C
14. I-15 SB On/Off Ramps/Duncan Canyon Road	AM PM	0.578 0.716	10.4 18.4	B B	0.590 0.766	10.4 20.6	B C	-	-	-

Table 4.6-12 (Continued)
PROJECT STUDY AREA AND COUNTY CMP INTERSECTIONS LOS SUMMARY
FUTURE (2030) TRAFFIC CONDITIONS WITH PROJECT PLUS MITIGATION

Intersection No.	Peak Hour	Without Project (2030)			With Project (2030)			With Project + Mitigation (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
15. I-15 NB On/Off Ramps/Lytle Creek Road/Duncan Canyon Rd[3]	AM PM	0.184 0.464	15.4 11.5	B B	0.214 0.494	15.0 13.0	B B	-	-	-
16. I-15 Freeway SB On/Off Ramps/ Summit Avenue	AM PM	**1.156** 0.792	78.9 18.7	E* B	**1.160** 0.817	**80.4** 19.7	**F*,**** B	0.983 0.749	37.0 17.1	D B
17. I-15 Freeway NB On/Off Ramps/ Summit Avenue	AM PM	0.816 **1.312**	19.2 **124.6**	B **F***	0.829 **1.319**	198. **129.9**	B **F*,******	0.682 0.982	14.6 34.9	B C
18. Riverside Avenue/Sierra Avenue	AM PM	**1.457** **1.728**	**136.2** **186.2**	**F*** **F***	**2.739** **4.067**	**570.2** **906.9**	**F*,**** **F*,******	0.659 0.982	11.9 36.7	B D
19. Riverside Avenue/Live Oak Avenue	AM PM	0.435 0.422	14.6 13.0	B B	0.729 0.929	21.4 0.929	21.4 35.3	C D	-	-
20. Riverside Avenue/Alder Avenue	AM PM	-[1] -[1]	20.5 37.0	C E	0.590 0.804	14.3 19.8	B B	-	-	-
21. Riverside Avenue/Locust Avenue	AM PM	-[1] -[1]	19.5 18.1	C C	0.575 0.766	15.3 17.7	B B	-	-	-
22. Riverside Avenue/Linden Avenue	AM PM	-[1] -[1]	40.4 32.1	E D	1.193 1.663	100.5 270.7	**F** **F**	0.592 0.864	12.7 25.1	B C
23. Riverside Avenue/Ayala Drive	AM PM	0.585 0.388	16.0 13.5	B B	0.824 0.779	17.9 17.6	B B	-	-	-
24. Riverside Avenue/Knollwood Avenue	AM PM	0.305 0.270	7.2 5.3	A A	0.417 0.440	8.4 6.5	A A	-	-	-
25. Riverside Avenue/Country Club Drive	AM PM	0.426 0.296	12.3 10.8	B B	0.678 0.757	17.2 18.8	B B	-	-	-
26. Riverside Avenue/Driveway (for shopping center)	AM PM	0.355 0.417	6.9 8.5	A A	0.502 0.622	5.6 8.5	A A	-	-	-
27. Casa Grande Drive/Sierra Avenue	AM PM	0.450 0.779	11.2 16.2	B B	0.469 0.812	11.3 17.4	B B	-	-	-
28. Case Grande Drive/Alder Avenue[4]	AM PM	0.314 0.568	18.9 20.8	B C	0.410 0.642	19.6 23.0	B C	-	-	-

Table 4.6-12 (Continued)
PROJECT STUDY AREA AND COUNTY CMP INTERSECTIONS LOS SUMMARY
FUTURE (2030) TRAFFIC CONDITIONS WITH PROJECT PLUS MITIGATION

Intersection No.	Peak Hour	Without Project (2030)			With Project (2030)			With Project + Mitigation (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
29. Casa Grande Drive/Locust Avenue[4]	AM PM	-[1] -[1]	11.6 9.9	B A	-[1] -[1]	12.5 11.6	B B	-	-	-
30. Summit Avenue/Sierra Avenue	AM PM	0.527 0.707	15.4 17.3	B B	0.544 0.731	15.5 18.2	B B	-	-	-
31. Bohnert Avenue/Locust Avenue[4]	AM PM	-[1] -[1]	21.6 19.0	C C	-[1] -[1]	22.5 21.1	C C	-	-	-
32. Bohnert Avenue/Ayala Drive[4]	AM PM	0.214 0.445	12.5 7.9	B A	0.330 0.579	12.6 8.8	B A	-	-	-
33. Sierra Lake Parkway/Casmalia Street/Sierra Avenue	AM PM	0.553 0.796	19.5 23.5	B C	0.557 0.801	19.5 23.6	B C	-	-	-
34. Casmalia Street/Alder Avenue[4]	AM PM	0.637 0.899	22.9 41.8	C D	0.680 0.955	23.6 52.7	C D	-	-	-
35. Casmalia Street/Locust Avenue[4]	AM PM	0.595 0.468	20.8 18.2	C B	0.596 0.472	20.9 18.3	C B	-	-	-
36. Casmalia Street/Ayala Drive[4]	AM PM	0.595 0.611	17.1 15.3	B B	0.687 0.609	17.4 17.5	B B	-	-	-
37. SR-210 Freeway WB On/Off Ramps/Sierra Avenue	AM PM	0.229 0.267	4.2 6.9	A A	0.246 0.287	4.6 7.4	A A	-	-	-
38. SR-210 Freeway EB On/Off Ramps/Sierra Avenue	AM PM	0.492 0.658	10.9 12.1	B B	0.497 0.667	10.9 12.3	B B	-	-	-
39. SR-210 Freeway WB On/Off Ramps/Alder Avenue	AM PM	0.542 0.977	11.9 30.3	B C	0.582 **1.014**	11.5 34.0	B C*	0.517 0.947	10.2 21.6	B C
40. SR-210 Freeway EB On/Off Ramps/Alder Avenue	AM PM	0.748 0.756	19.5 17.6	B B	0.811 0.822	21.3 19.3	C B	-	-	-
41. SR-210 Freeway WB On/Off Ramps/Ayala Avenue	AM PM	0.842 0.734	20.3 17.9	C B	0.932 0.873	25.8 22.8	C C	-	-	-
42. SR-210 Freeway EB On/Off Ramps/Ayala Avenue	AM PM	0.735 0.895	16.5 25.6	B C	0.832 0.940	20.4 30.0	C C	-	-	-

Table 4.6-12 (Continued)
PROJECT STUDY AREA AND COUNTY CMP INTERSECTIONS LOS SUMMARY
FUTURE (2030) TRAFFIC CONDITIONS WITH PROJECT PLUS MITIGATION

Intersection No.	Peak Hour	Without Project (2030)			With Project (2030)			With Project + Mitigation (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
43. SR-210 Freeway WB On/Off Ramps/Riverside Avenue	AM PM	0.708 0.776	16.9 17.3	B B	0.902 1.057	22.8 56.4	C **E*,****	0.811 0.957	18.3 31.2	B C
44. SR-210 Freeway EB On/Off Ramps/Riverside Avenue	AM PM	**1.398** **1.344**	**157.2** **128.6**	**F*** **F***	**1.703** **1.606**	**258.3** **210.7**	**F*,**** **F*,****	1.020 1.033	42.3 43.6	D D
45. SR-210 Freeway WB On/Off Ramps/Pepper Avenue	AM PM	0.617 0.751	15.1 17.8	B B	0.638 0.794	15.8 20.2	B C	-	-	-
46. SR-210 Freeway EB On/Off Ramps/Pepper Avenue	AM PM	0.515 0.656	11.3 15.3	B B	0.541 0.680	12.1 16.1	B B	-	-	-
47. SR-210 Freeway WB On/Off Ramps/State Street	AM PM	0.969 1.497	26.8 174.5	C F	1.031 1.667	35.6 229.0	D **F**	0.653 0.975	11.8 29.7	B C
48. SR-210 Freeway EB On/Off Ramps/ State Street	AM PM	0.745 **1.116**	33.5 71.7	C E	0.861 **1.184**	36.6 **88.7**	D **F*,****	0.702 0.873	22.5 25.3	C C
49. Highland Avenue/State Street	AM PM	**1.163** **1.374**	**115.9** **195.1**	**F*** **F***	**1.208** **1.484**	**133.9** **234.1**	**F*,**** **F*,****	0.820 0.909	26.8 44.3	C D
50. Highland Avenue/California Street	AM PM	0.490 0.873	9.3 17.5	A B	0.512 0.931	9.1 21.3	A C	-	-	-
51. Highland Avenue/Medical Center Drive	AM PM	0.382 0.518	6.4 7.9	A A	0.401 0.560	6.2 7.8	A A	-	-	-
52. Highland Avenue/Mount Vernon Avenue	AM PM	0.524 0.700	14.7 17.7	B B	0.545 0.748	14.7 18.3	B B	-	-	-
53. Highland Avenue/Sierra Avenue	AM PM	0.409 0.523	12.7 10.1	B B	0.422 0.543	12.8 10.4	B B	-	-	-
54. Highland Avenue/Easton Street/Alder Avenue	AM PM	0.668 0.904	21.8 34.2	C C	0.725 0.961	22.8 42.6	C C	-	-	-
55. Easton Street/Ayala Drive[4]	AM PM	0858 1.176	31.7 83.9	C F	0.916 1.256	34.6 **100.2**	C **F****	0.719 1.057	20.3 52.7	C D
56. Easton Street/Riverside Avenue	AM PM	0.812 0.895	27.4 31.3	C C	0.837 0.962	29.2 38.6	C D	-	-	-
57.Easton Street/Highland Avenue	AM PM	0.254 0.583	9.0 9.5	A A	0.261 0.625	9.2 10.3	A B	-	-	-

Table 4.6-12 (Continued)
PROJECT STUDY AREA AND COUNTY CMP INTERSECTIONS LOS SUMMARY
FUTURE (2030) TRAFFIC CONDITIONS WITH PROJECT PLUS MITIGATION

Intersection No.	Peak Hour	Without Project (2030)			With Project (2030)			With Project and Mitigation		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
58. Baseline Road/Sierra Avenue	AM PM	0.452 0.775	17.5 23.9	B C	0.463 0.797	17.4 24.5	B C	-	-	-
59. Baseline Road/Alder Avenue	AM PM	0.765 **1.044**	29.5 66.2	C E	0.786 **1.106**	32.3 **80.5**	C **F*,******	0.786 0.998	31.1 51.2	C D
60. Baseline Road/Cedar Avenue/ Ayala Drive	AM PM	0.498 0.860	18.7 27.0	B C	0.517 0.891	18.5 28.8	B C	-	-	-
61. Baseline Road/Cactus Avenue	AM PM	0.515 0.629	18.8 19.7	B B	0.547 0.690	18.9 20.9	B C	-	-	-
62. Baseline Road/Riverside Avenue	AM PM	0.557 0.843	19.5 27.6	B C	0.580 0.866	19.4 28.9	B C	-	-	-
63. Baseline Road/Pepper Avenue	AM PM	0.464 0.467	8.4 10.6	A B	0.479 0.482	8.3 10.7	A B	-	-	-
64. Baseline Road/State Street	AM PM	0.323 0.471	9.7 10.6	A B	0.340 0.493	9.6 10.8	A B	-	-	-
65. Foothill Boulevard/Sierra Avenue	AM PM	0.544 0.970	19.9 36.2	B D	0.552 0.969	20.1 37.9	C D	-	-	-
66. Foothill Boulevard/Alder Avenue	AM PM	0.412 0.768	14.8 18.2	B B	0.425 0.803	15.0 19.2	B B	-	-	-
67. Foothill Boulevard/Cedar Avenue	AM PM	0.775 0.957	21.3 37.1	C D	0.791 0.959	21.6 39.2	C D	-	-	-
68. Foothill Boulevard/Cactus Avenue	AM PM	0.429 0.750	14.5 19.6	B B	0.434 0.782	14.6 20.7	B C	-	-	-
69. Foothill Boulevard/Riverside Avenue	AM PM	0.549 0.847	19.4 27.5	B C	0.565 0.860	19.5 28.3	B C	-	-	-
70. Arrow Boulevard/Sierra Avenue	AM PM	0.543 0.904	18.5 33.6	B C	0.550 0.914	18.5 34.5	B C	-	-	-
71. Arrow Boulevard/Alder Avenue	AM PM	0.693 0.912	21.2 32.0	C C	0.699 0.924	21.6 33.3	C C	-	-	-
72. Rialto Avenue/Cedar Avenue	AM PM	0.811 **1.030**	30.7 59,1	C E*	0.828 **1.042**	31.4 61.3	C E*,**	0.828 0.974	29.8 45.0	C D

Table 4.6-12 (Continued)
PROJECT STUDY AREA AND COUNTY CMP INTERSECTIONS LOS SUMMARY
FUTURE (2030) TRAFFIC CONDITIONS WITH PROJECT PLUS MITIGATION

Intersection No.	Peak Hour	Without Project (2030)			With Project (2030)			With Project + Mitigation (2030)		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
73. Rialto Avenue/Cactus Avenue[4]	AM PM	0.418 0.491	9.7 10.2	A B	0.425 0.501	9.8 10.4	A B	-	-	-
74. Merrill Avenue/Cedar Avenue	AM PM	0.888 **1.080**	21.8 55.1	C E	0.896 **1.088**	22.1 57.1	C E***	0.859 0.996	20.7 36.8	C D
75. Merrill Avenue/Cactus Avenue[4]	AM PM	0.309 0.427	13.7 14.3	B B	0.316 0.436	13.7 14.3	B B	-	-	-

Notes:
* Denotes a CMP deficiency (i.e., LOS "F" and/or V/C ≥1).
** Denotes a significant project CEQA traffic impact, prior to mitigation.
N/A Intersection does not currently exist but is scheduled to be constructed by the 2030 horizon year.
Bold Indicates unsatisfactory conditions.

1. V/C ratio not provided for two-way, STOP controlled intersections.
2. Glen Helen Parkway is currently closed at Lytle Creek Road.
3. I-15 Freeway on/off ramps at Duncan Canyon Road do not currently exist but are scheduled to be constructed by the 2030 horizon year.
4. Non-CMP-Network intersection.

Source: Crain and Associates

Table 4.6-13
REGIONAL TRANSPORTATION SYSTEM
FUTURE (2030) TRAFFIC CONDITIONS WITH PROJECT PLUS MITIGATION

Segment No. Location	Peak Hour	Direction	Number of Lanes	Total Capacity	Without Project Conditions			
					Daily Volume	Peak Hour Volume	V/C	LOS
12. I-215 Freeway between Highland Avenue and Massachusetts Avenue	AM	NB	4	6900	134,900	2,980	0.32	A
		SB	4	6900		7,230	0.79	C
	PM	NB	4	6900		7,750	0.84	D
		SB	4	6900		4,760	0.52	A
13. I-215 Freeway between Massachusetts Avenue and SR-259 Freeway	AM	NB	4	6900	137,000	3,080	0.33	A
		SB	4	6900		7,230	0.79	C
	PM	NB	4	6900		7,950	0.86	D
		SB	4	6900		4,760	0.52	A
14. I-215 Freeway between SR-259 Freeway and Baseline Street	AM	NB	5+1HOV	10800	160,700	5,480	0.42	A
		SB	4+1HOV	10800		10,230	0.95	D
	PM	NB	5+1HOV	10800		10,920	0.83	D
		SB	4+1HOV	10800		7,860	0.73	C
15. I-215 Freeway between Baseline Street and 5th Street	AM	NB	5+1HOV	10800	262,800	6,680	0.51	A
		SB	5+1HOV	10800		11,930	0.91	E
	PM	NB	5+1HOV	10800		13,420	1.02	**F**
		SB	5+1HOV	10800		9,260	0.71	C
17. I-215 Freeway between 2nd Street and Mill Street	AM	NB	5+1HOV	10800	268,100	7,860	0.60	A
		SB	5+1HOV	10800		11,040	0.84	D
	PM	NB	5+1HOV	10800		12,630	0.96	E
		SB	5+1HOV	10800		10,530	0.80	C
24. SR-210 Freeway between Riverside Avenue and Pepper Avenue	AM	WB	4+1HOV	8500	196,000	6,710	0.62	B
		EB	4+1HOV	8500		6,620	0.61	B
	PM	WB	4+1HOV	8500		8,150	0.75	C
		EB	4+1HOV	8500		8,590	0.80	C
25. SR-210 Freeway between Pepper Avenue and State Street	AM	WB	4+1HOV	8500	203,700	7,080	0.66	B
		EB	4+1HOV	8500		6,770	0.63	B
	PM	WB	4+1HOV	8500		8,770	0.81	D
		EB	4+1HOV	8500		8,630	0.80	C
26. SR-210 Freeway between State Street and Barstow (I-215) Freeway	AM	WB	4	6900	180,000	6,260	0.68	B
		EB	4	6900		6,340	0.69	B
	PM	WB	4	6900		7,080	0.77	C
		EB	4	6900		8,110	0.88	D

Source: Crain & Associates

- **Mitigation Measure 6-2**. Traffic Control Plan. Prior to the issuance of the final grading plan for new major development projects, defined herein as 50 or more new dwelling units and/or 50,000 or greater square feet of new non-residential use, the Applicant shall submit and, when deemed acceptable, the City Engineer shall approve a traffic control plan (TCP), consistent with Caltrans' "Manual of Traffic Controls for Construction and Maintenance Work Zones," or such alternative as may be deemed acceptable by the City Engineer, describing the Applicant's efforts to maintain vehicular and non-vehicular access throughout the construction period. If temporary access restrictions are proposed or deemed to be required by the Applicant, the plan shall delineate the period and likely frequency of such restrictions and describe emergency access and safety measures that will be implemented during those closures and/or restrictions.

- **Mitigation Measure 6-3**. Construction Traffic Safety Plan. Prior to the issuance of the final grading permit for new major development projects, the Applicant shall submit and, when deemed acceptable, the City shall approve a construction traffic mitigation plan (CTMP). The CTMP shall identify the travel and haul routes through residential neighborhoods, if any, to be used by construction vehicles; the points of ingress and egress of construction vehicles; temporary street or lane closures, temporary signage, and temporary striping; the location of materials and equipment staging areas; maintenance plans to remove spilled debris from neighborhood road surfaces; and the hours during which large construction equipment may be brought onto and off the project site. The CTMP shall provide for the scheduling of construction and maintenance-related traffic so that it does not unduly create any safety hazards to children, to pedestrians, and to other parties.

- **Mitigation Measure 6-4**. Fair-Share Contribution. Based on a schedule and in an amount established by the City, as developed in consultation with the County, the Applicant shall equitably contribute to the implementation of identified improvement to the following project area and CMP intersections by paying a "fair share" of the cost of those improvements. These measures are included as part of those transportation improvements being funded by the City's transportation development impact fees. The project will be required to pay into this fund, less any in-lieu credit for measures which the Applicant implements.

  - ◊ **I-215 Freeway NB On/Off Ramps/Arrowhead Boulevard/Devore Road**. Install traffic signal.

  - ◊ **Cajon Blvd/Glen Helen Parkway**. Install traffic signal.

  - ◊ **I-215 Freeway NB On/Off Ramps/Palm Avenue**. Install traffic signal.

  - ◊ **I-215 Freeway SB On/Off Ramps/Palm Avenue**. Install traffic signal.

  - ◊ **I-215 Freeway SB On/Off Ramps/University Parkway**. Improve University Parkway to provide an exclusive right-turn lane in the NB direction and one left-turn lane, one left/through-shared lane, and one through lane in the SB direction. In order to accommodate the left-through-shared lane, modify the existing traffic signal to allow split phases for the NB and SB approaches.

◊ **Lytle Creek Road/Glen Helen Parkway**. Restripe Lytle Creek Road to accommodate one left-turn lane and two through lanes in the southeast-bound direction and two through lanes and one right-turn lane in the northwest-bound direction. Improve and restripe the Glen Helen Parkway approach at Lytle Creek Road to provide dual left-turn lanes and one right-turn lane. Install a traffic signal at this location.

◊ **Lytle Creek Road/Sierra Avenue**. Restripe Lytle Creek Road and Sierra Avenue to accommodate one left-turn lane and two through lanes in the northwest-bound direction and one through lane and one through/right-shared lane in the southeast-bound direction. Install a traffic signal at this location.

◊ **I-15 Freeway SB On/Off Ramps/Sierra Avenue**. Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the northwest-bound direction and two through lanes and one free right-turn lane in the southeast-bound direction. Widen the SB off-ramp to accommodate one left-turn lane, one left/right-shared lane, and one right-turn lane. Install a traffic signal at this location.

◊ **I-15 Freeway NB On/Off Ramps/Sierra Avenue**. Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the southeast-bound direction and two through lanes and one right-turn lane in the northwest-bound direction. Reconstruct the NB off-ramp to accommodate one left-turn lane, one left/through-shared lane, and one free right-turn lane. Install a traffic signal at this location.

◊ **I-15 Freeway SB On/Off Ramps/Summit Avenue**. Restripe Summit Avenue to accommodate one additional left-turn lane in the EB direction.

◊ **I-15 NB Freeway On/Off Ramps/Summit Avenue**. Restripe the NB off-ramp to provide dual left-turn lanes and one right-turn lane.

◊ **Riverside Avenue/Sierra Avenue**. Widen and restripe Sierra Avenue to provide dual left-turn lanes and two through lanes in the SB direction. Improve the intersection to allow a free right-turn from Riverside Avenue onto Sierra Avenue. Install a traffic signal at this intersection.

◊ **Riverside Avenue/Linden Avenue**. Widen and restripe to provide one left-turn lane, one through lane, and one through/right-shared lane in the northwest-bound direction.

◊ **SR-210 Freeway WB On/Off Ramps/Alder Avenue**. Restripe the WB approach to provide one left-turn lane and one left/through/right-shared lane.

◊ **SR-210 Freeway WB On/Off Ramps/Riverside Avenue**. Flare and restripe Riverside Avenue to provide an exclusive right-turn lane in the SB direction. In addition, improve the Sr-210 off-ramp to provide one left-turn lane, left/through/ right shared lane, and one right-turn lane.

- ◊ **SR-210 Freeway EB On/Off Ramps/Riverside Avenue**. Improve Riverside Avenue to provide two through lanes and two right-turn lanes in the NB direction and dual left-turn lanes and two through lanes in the SB direction.

- ◊ **SR-210 Freeway WB On/Off Ramps/State Street**. Improve State Street to provide dual left-turn lanes and two through lanes in the NB direction and one through lane, one through/right shared lane, and one right-turn lane in the SB direction.

- ◊ **SR-210 Freeway EB On/Off Ramps/State Street**. Flare and restripe the EB off-ramp to provide one left-turn lane, one left/through-share lane, and two right-turn lanes. Modify the traffic signal to accommodate a right-turn overlap phase for the off-ramp EB approach and the SB approach on State Street.

- ◊ **Highland Avenue/State Street**. Flare and restripe Highland Avenue to provide dual left-turn lanes, one through lane, and one through/right-shared lane in the WB direction and one left-turn lane, one through lane, one through/right-shared lane, and one right-turn lane in the EB direction.

- ◊ **Easton Street/Ayala Drive**. Flare and restripe Easton Street in the EB direction to accommodate an exclusive right-turn lane. Modify the traffic signal to include a right-turn overlap phase with the left-turn phase in the NB direction.

- ◊ **Baseline Road/Alder Avenue**. Flare and restripe Alder Avenue to provide one left-turn lane, one through lane, and one through/right shared lane in the SB direction.

- ◊ **Rialto Avenue/Cedar Avenue**. Flare and restripe Cedar Avenue to provide an exclusive right-turn lane in the SB direction.

- ◊ **Merrill Avenue/Cedar Avenue**. Flare and restripe Cedar Avenue to provide an exclusive right-turn lane in the NB direction and Merrill Avenue to provide an exclusive right-turn lane in the EB direction. Additional right-of-way may be required to implement this measure.

- **Mitigation Measure 6-5**. Study Area Roadways. Based on a schedule established by the City, in consultation with the County, the Applicant shall undertake the following non-intersection improvements to study area roadways. These improvements could, however, be implemented by SanBAG, the City, the Applicant, and/or by others.

  - ◊ **Lytle Creek Road**. Widen and restripe Lytle Creek Road from Glen Helen Parkway to Sierra Avenue to provide two through lanes in each direction.

  - ◊ **Glen Helen Parkway**. Widen and restripe Glen Helen Parkway between Lytle Creek Road and Cajon Boulevard to provide two through lanes in each direction.

  - ◊ **Sierra Avenue**. Improve Sierra Avenue to provide two through lanes in each direction between Riverside Avenue and just north of Glen Helen Parkway.

◊ **Riverside Avenue**. Widen and restripe Riverside Avenue between Sierra Avenue and Ayala Drive to provide two through lanes in each direction.

- **Mitigation Measure 6-6**. Freeway Study Segments. Those CMP freeway improvements that are located in the study area are described below: (1) add a high-occupancy-vehicle (HOV) lane in the NB and SB directions on I-15 Freeway between the I-215 and the I-10 Freeways; (2) add a mainline lane in the NB and SB directions on the I-215 Freeway between the I-15 and the SR-259 Freeway; (3) improve the I-215 Freeway between the SR-259 and the I-10 Freeways to provide four mainline and one HOV lane in the NB and SB directions; (4) improve the SR-210 Freeway between the I-15 Freeway and Highland Avenue to provide a total of three mainline lanes and one HOV lane in the WB and EB directions; and (5) add a mainline lane on the SR-30 Freeway between Highland Avenue and the I-10 Freeway in the WB and EB directions.

  In addition to those freeway improvements, other physical improvements to address the cumulative impact of overall regional growth could include the addition of one freeway lane on the segments below: (1) I-215 Freeway between Highland Avenue and Massachusetts Avenue (NB and SB); (2) I-215 Freeway between Massachusetts Avenue and SR-259 Freeway (NB and SB); (3) I-215 Freeway between SR-259 Freeway and Baseline Street (NB only); (4) I-215 Freeway between Baseline Street and 5th Street (NB and SB); (5) I-215 Freeway between 2nd Street and Mill Street (NB and SB); (6) SR-210 Freeway between Riverside Avenue and Pepper Avenue (EB only); (7) SR-210 Freeway between Pepper Avenue and State Street (WB and EB); and (8) SR-210 Freeway between State Street and I-215 Freeway (WB and EB).

  Based on an implementation schedule and in an amount to be established by the City, as developed in consultation with the County and Caltrans, the Applicant shall equitably contribute to the implementation of identified regional transportation system improvement by paying a “fair share” of the cost of those improvements. These measures are included as part of those transportation improvements being funded by the City’s transportation development impact fees. The project will be required to pay into this fund, less any in-lieu credit for measures which the Applicant implements.

4.6.7 Significant Unavoidable Adverse Effects

As mitigated, all project-related and cumulative traffic impacts can be mitigated to below a level of significance. Although the payment of a “fair-share” contribution to the cost of off-site street improvements will not, in and of itself, ensure the timely construction of those improvements, the payment of those fees constitutes full mitigation for the project’s anticipated impacts upon those off-site intersections. It is the City’s obligation and/or the obligation of other affected public agencies to ensure the timing of those identified improvements in a manner consistent with the projected demand for those facilities.

4.7 AIR QUALITY

The air quality analysis is divided into two major categories of impact. The first category concerns the analysis of criteria air emissions as they relate to consistency with the South Coast Air Quality Management District's (SCAQMD) "Final 2007 Air Quality Management Plan"[1] (2007 AQMP), the quantification of project-related construction-term and operational emissions, the evaluation of those emissions relative to those thresholds standards recommended by SCAQMD, and odors that may affect air quality. The second category of impacts analyzed in this section is the effect of the proposed project on global climate change. Because a large part of the impact analysis for global climate change involves the quantification and analysis of greenhouse gas (GHG) emissions and the impact of those emissions relative to global climate change, this analysis is also included as part of this air quality section.

4.7.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- Crain & Associates, Lytle Creek Development Mobile Emissions Analysis Input, September 15, 2009 (see Appendix II-A-C).
- County of San Bernardino, Conservation Background Report, February 1, 2006.
- Environ International Corporation, Climate Change Technical Report – Lytle Creek Ranch, November 19, 2009 (see Appendix III-G).
- PCR Services Corporation, Air Quality Assessment Technical Report – Lytle Creek Specific Plan, San Bernardino County, June 2008 (see Appendix III-F).

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.7.2 Regulatory and Policy Setting

4.7.2.1 United States

The following information presents a general discussion of certain federal statutes, regulations, and related policies that may be applicable to an understanding of the project's regulatory setting. For ease of reference, federal statues, regulations, and policies addressing GHG emissions and global climate change are addressed separately from those statutes, regulations, and policies addressing the more general topic of air quality and criteria pollutants.[2]

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[1]/ South Coast Air Quality Management District, Final 2007 Air Quality Management Plan, June 1, 2007.

[2]/ Section 108 of the federal Clean Air Act (42 USC Section 7401 *et seq*.) (CAA) directs the United States Environmental Protection Agency (USEPA) to list pollutants that may reasonably be anticipated to endanger public health and welfare and to issue air quality criteria for those pollutants, hence the name "criteria" air pollutants. The USEPA has set national ambient air quality standards (NAAQS) for the following criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2). To date, the USEPA has not regulated greenhouse gases (GHG) under the CAA. In April 2007, however, the United States Supreme Court in Massachusetts v. EPA (127 S. Ct 1438) held that the USEPA can and should regulate motor-vehicle GHG emissions.

Air Quality

- **Federal Clean Air Act**. The federal Clean Air Act of 1970 (42 U.S.C. 7401 *et seq*.) (CAA) establishes National Ambient Air Quality Standards (NAAQS), as shown in Table 4.7-1 (Ambient Air Quality Standards for Criteria Pollutants, Major Pollutant Source, and Primary Health Effects). Under the CAA, the United States Environmental Protection Agency (USEPA) is responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The USEPA also has jurisdiction over emission sources outside state waters (outer continental shelf) and establishes various emission standards for vehicles sold in states other than California.[3]

  As part of its enforcement responsibilities under the CAA, the USEPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local actions and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

  The USEPA lists pollutants that may reasonably be anticipated to endanger public health and welfare and to issue air quality criteria for those pollutants. The USEPA has set NAAQS for the following six common pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2). The NAAQS for those primary pollutants are listed in Table 4.7-1 (Ambient Air Quality Standards for Criteria Pollutants, Major Pollutant Source, and Primary Health Effects).

Greenhouse Gas Emissions and Global Climate Change

- **National Policy**. With regards to GHG emissions and global climate change, in 2002, President George W. Bush set a national policy goal of reducing the GHG emission intensity (tons of GHG emissions per million dollars of gross domestic product) of the nation's economy by 18 percent by 2012. No binding reductions were, however, associated with the goal; rather, the USEPA administers a variety of voluntary programs and partnerships with GHG emitters in which the USEPA partners with industries producing and utilizing synthetic greenhouse gases (GHGs) to reduce emissions of these particularly potent GHGs. The United States has instead opted for a voluntary and incentive-based approach toward GHG emissions reductions, identified as the Climate Change Technology Program (CCTP), in lieu of the Kyoto Protocol's mandatory framework. CCTP is a multi-agency research and development coordination effort, led by the Secretaries of Energy and Commerce.

  In September 2006, the United States Department of Energy (USDOE) released the "Climate Change Technology Program Strategic Plan," which organizes federal spending for climate technology research, development, demonstration, and deployment to reduce GHG emissions and increase economic growth.

[3]/ Pursuant to Section 131 of the CAA: "Nothing in this Act constitutes an infringement on the existing authority of counties and cities to plan or control land use, and nothing in this Act provides or transfers authority over such land use."

Table 4.7-1
AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS, MAJOR POLLUTANT SOURCE, AND PRIMARY HEALTH EFFECTS

Pollutant	Averaging Time	Federal Standard	California Standard	Major Pollutant Sources	Primary Health Effects
Ozone (O_3)	1 hour	0.12 ppm (235 µg/m^3)	0.09 ppm (180 µg/m^3)	Motor vehicles, paints, coatings, and solvents.	Aggravation of respiratory and cardiovascular disease. Irritation of eyes. Impairment of cardiopulmonary functions. Plant leaf injury.
	8 hours	0.08 ppm (157 µg/m^3)	0.07 ppm (140 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24 hours	150 µg/m^3	50 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).	Reduced lung function. Aggravation of the effects of gaseous pollutants. Aggravation of respiratory and cardirespiratory diseases. Increased cough and chest discomfort. Soiling. Reduced visibility.
	Annual Arithmetic Mean	50 µg/m^3	20 µg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	24 hours	65 µg/m^3	No separate State standard		Increased hospital admissions and emergency room visits for heart and lung disease. Increased respiratory symptoms and disease. Decreased lung functions and premature death.
	Annual Arithmetic Mean	15 µg/m^3	12 µg/m^3		
Carbon Monoxide (CO)	1 hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)	Internal combustion engines, primarily gasoline-powered motor vehicles.	Reduced tolerance for exercise. Impairment of mental functions. Impairment of fetal development. Death at high levels of exposure. Aggravation of some heart diseases (angina).
	8 hours	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	0.053 ppm (100 µg/m^3)	*	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.	Aggravation of respiratory illness. Reduced visibility. Reduced plant growth. Formation of acid rain.
	1 hour	*	0.25 ppm (470 µg/m^3)		
Sulfur Dioxide (SO_2)	Annual Average	0.030 ppm (80 µg/m^3)	*	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.	Aggravation of respiratory diseases (asthma, emphysema). Reduced lung function. Irritation of eyes. Reduced visibility. Plant injury. Deterioration of metals, textiles, leather, finishes, coatings, etc.
	1 hour	*	0.25 ppm (655 µg/m^3)		
	24 hours	0.14 ppm (385 µg/m^3)	0.04 ppm		
Lead (Pb)	30-Day Average	*	1.5 µg/m^3	Present sources: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.	Impairment of blood function and nerve construction. Behavioral and hearing problems in children.
	Calendar Quarterly	1.5 µg/m^3	*		
Visibility-Reducing Particles	8-hour	No federal standard	Extinction coefficient of 0.25/km – visibility of >10 miles due to particles when relative humidity is <70%	Soil disturbance, wind.	Visibility impairment on days when relative humidity is <70%
Sulfates (SO_4)	24 hours	No federal standard	25 µg/m^3	Industrial processes.	Aggrevation of asthmatic symptoms. Aggravation of cardiopulmonary disease. Vegetation damage. Degradation of visibility.
Hydrogen Sulfide (H_2S)	1-hour	No federal standard	0.03 ppm (42 µg/m^3)	Sewer gas, geothermal exploitation.	Odor annoyance.
Vinyl Chloride	24-hour	No federal standard	0.01 ppm (26 µg/m^3)	Used in producing polyvinyl chloride.	Acute exposure has lead to narcosis, cardiovascular and respiratory irregularity, convulsions, cyanosis, and death.

Notes: ppm - parts per million; µg/m^3 - micrograms per cubic meter; * - standard has not been established for this pollutant/duration by this entity.

Source: South Coast Air Quality Management District, California Air Resources Board

On April 24, 2009 the USEPA issued a proposed endangerment finding, stating that high atmospheric levels of GHGs "are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The finding itself does not impose any requirements on industry or other entities. The public comment period for this proposed endangerment finding ended June 23, 2009, and the finding is now under final review.[4]

- **United States Supreme Court**. In April 2007, the United States Supreme Court (Massachusetts *et al.* v. United States Environmental Protection Agency *et al*.) ruled that the federal CAA authorizes the USEPA to regulate CO_2 emissions from new motor vehicles. The court did not mandate that the USEPA enact regulations to reduce GHG emissions but found that the only instances where the USEPA could avoid taking action were if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

- **Energy Independence and Security Act of 2007**. In response to the April 2007 Massachusetts v. USEPA ruling, the Bush Administration issued an executive order on May 14, 2007, directing the USEPA , the United States Departments of Transportation (USDOT), and the USDOE to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. On December 19, 2007, the Energy Independence and Security Act of 2007 (H.R. 6; Pub. L. 110-140) (EISA) was signed into law, which requires an increased corporate average fuel economy (CAFE) standard of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020. The National Highway Traffic Safety Administration (NHTSA) is directed to phase-in requirements to achieve this goal. Analysis by the California Air Resources Board (CARB) suggests that this will require an annual improvement of approximately 3.4 percent between now and 2020.[5]

  EISA requires establishment of interim standards (from 2011 to 2020) that will be the "maximum feasible average fuel economy" for each fleet. On October 10, 2008, the NHTSA released a final environmental impact statement analyzing proposed interim standards for model years 2011 to 2015 passenger cars and light trucks. NHTSA issued a final rule for model year 2011 on March 23, 2009.[6]

  In addition to setting increased CAFE standards for motor vehicles, the EISA included other provisions: (1) renewable fuel standard (RFS) (Section 202); (2) appliance and lighting efficiency standards (Section 301–325); and (3) building energy efficiency (Sections 411-441). Additional provisions addressed energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

  On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The proposed federal standards

[4]/ United States Environmental Protection Agency website, Climate Change (http://www.epa.gov/climatechange/endangerment.html).

[5]/ California Air Resources Board website, Comparison between Pavley Assembly Bill 1493 and the Federal 2007 CAFE Standards (http://www.arb.ca.gov/cc/ccms/ab1493_v_cafe_study.pdf).

[6]/ National Highway Traffic Safety Administration website, Laws/Regulations/Guidance (http://www.nhtsa.dot.gov/portal/site/nhtsa/menuitem.43ac99aefa80569eea57529cdba046a0/).

apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles built in model years 2012-2016. If finalized, the proposed rule would surpass the 2007 CAFE standards and require an average fuel economy standard of 35.5 mpg in 2016. On May 22, 2009, the USDOT and USEPA issued a notice of upcoming joint rulemaking.[7,8]

In furtherance of the May 2009 announcement, on September 15, 2009, President Obama proposed new fuel efficiency standards for cars and trucks. As proposed, fuel economy would be required to increase by five percent annually. In 2016, new cars and trucks would have to achieve an average rating of 35.5 mpg, four years sooner than the law now requires. Alternatively, manufacturers could meet this requirement if their vehicles, on average, emit no more than 250 grams of CO per mile.[9]

California has petitioned the USEPA to allow more stringent standards and California executive agencies have repeated their commitment to higher mileage standards. On June 30, 2009, beginning with the 2009 model year, the USEPA granted the State a waiver of CCA preemption for its GHG emission standards for motor vehicles.[10] As part of that waiver, the USEPA specified that the CARB may not hold a manufacture liable or responsible for any noncompliance caused by emission debits generated by a manufacture for the 2009 model year.

- **The Consolidated Appropriations Act of 2008**. The United States Congress passed The Consolidated Appropriations Act of 2008 (HR 2764) in December 2007, which includes provisions requiring the establishment of mandatory GHG reporting requirements. The measure directs USEPA to publish draft rules by September 2008 and final rules by June 2009 mandating reporting "for all sectors of the economy." As of the time of release of this document, the USEPA has not developed draft rules as directed by the act but states that the proposed rule is currently in interagency review. The act also directs the USEPA to determine what reporting thresholds to use.

On December 7, 2009, the USEPA signed the following two findings regarding GHGs under Section 202(a) of the CAA: (1) Endangerment finding - the USEPA finds that the current and projected concentrations of the following six "well-mixed greenhouse gases" in the atmosphere threaten the public health and welfare of current and future generations: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6); and (2) Cause or contribute finding - the USEPA finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.[11] These findings do not explicitly impose any requirements on industry or other entities but do serve as a prerequisite to finalizing the USEPA's proposed GHG emission standards for light-duty vehicles, as jointly proposed by the USEPA and the United States Department of Transportation's National Highway Safety Administration on September 15, 2009.

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[7]/ United States Environmental Protection Agency website (http://yosemite.epa.gov/opa/admpress.nsf/6fa790d452bcd7f58525750100565efa/451902cb77d4add5852575bb006d3f9b!OpenDocument).

[8]/ National Highway Traffic Safety Administration website, Laws/Regulations/Guidance (http://www.nhtsa.dot.gov/portal/site/nhtsa/menuitem.43ac99aefa80569eea57529cdba046a0/).

[9]/ Fahrenthold, David A. and Eilperin Juliet, White House is Prepared to Set First National Limits on Greenhouse Gases, Washington Post website, September 16, 2009 (http://www.washingtonpost.com/wp-dyn/content/article/2009/09/15/AR2009091503146_pf.html).

[10]/ 74 FR 32744 (July 8, 2009).

[11]/ United States Environmental Protection Agency, Docket ID No. EPA-HQ-OAR-2009-0171, December 7, 2009.

4.7.2.2 State of California

The following information presents a general discussion of certain State statutes, regulations, and related policies that may be applicable to an understanding of the project's regulatory setting. For ease of reference, State statues, regulations, and policies addressing greenhouse gas emissions and global climate change are addressed separately from those statutes, regulations, and policies addressing the more general topic of air quality and criteria pollutants.

Air Quality

- **California Health and Safety Code**.[12] Section 41700 of the H&SC requires that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, response, health, or safety of any such person or the public, or which causes, or have a natural tendency to cause, injury or damage to business or property." Section 39606(b) of the H&SC authorizes the CARB to adopt standards for ambient air quality "in consideration of public health and safety, and welfare, including but not limited to health, illness, irritation to the senses, aesthetic value, interference with visibility, and the effects of air pollution on the economy." The objective of ambient air quality standards (AAQS) is to provide a basis for preventing or abating adverse health or welfare effects of air pollution (17 CCR 70101).

  Section 39607(e) requires that the CARB establish and periodically review area designation criteria. The CARB makes area designations for the following pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), sulfates (SO_4), lead (Pb), hydrogen sulfide (H_2S), and visibility-reducing particles. Assembly Bill (AB) 2595, known as the California Clean Air Act (CCAA), divided non-attainment areas into categories with progressively more stringent requirements (Sections 40918-40920.5, H&SC). As specified, it is the responsibility of each air pollution control district (APCD) and air quality management district (AQMD) within the State to attain and maintain California Ambient Air Quality Standards (CAAQS).[13] The CCAA requires that an attainment plan be developed by all non-attainment districts for O_3, CO, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) that are either receptors or contributors of transported air pollutants. The CAAQS are listed in Table 4.7-1 (Ambient Air Quality Standards for Criteria Pollutants, Major Pollutant Source, and Primary Health Effects). Areas meeting CAAQS are classified as attainment; areas not meeting CAAQS are classified as non-attainment.

  Section 42300 authorizes delegation of stationary source permitting authority from the State to local air districts. Section 42301(a) requires air district permit systems to ensure

[12]/ Assembly Bill 1493, signed into law on July 22, 2002 and chaptered in Sections 42823 and 43018.5 of the H&SC, mandates that the CARB develop and implement GHG limits for vehicles beginning with model year 2009. Under this directive, CARB approved regulations limiting the amount of GHG that may be released from new passenger cars, sports utility vehicles (SUVs), and pick-up trucks sold in California in model year 2009. The standards will be phased in from 2009 to 2016, reducing emissions by 22 percent in the near term (2009-2012) and 30 percent in the mid-term (2013-2016).

[13]/ The CARB considers an area to be non-attainment of a CAAQS for a particular pollutant if the standards for O_3, CO (except Lake Tahoe), SO_2 (1 hour and 24 hour), NO_2, PM_{10}, and visibility-reducing particles are exceeded.

new permits will not be issued for emission units (sources) that will prevent or interfere with the attainment or maintenance of any applicable air quality standard.

Section 39650 requires the CARB to develop airborne toxic control measures (ATCMs) to reduce public exposure to toxic air contaminants (TACs).[14] Section 39666(d) requires air pollution control districts (APCDs) and air quality management districts (AQMDs) to implement and enforce ATCMs developed by the CARB or propose regulations enacting ATCMs that are equally effective or more stringent than the State ATCM.

Other applicable or potentially applicable provisions of the H&SC are summarized below.

◊ **Senate Bill 656**. Senate Bill 656, adding Section 39614 of the H&SC, was adopted (October 9, 2003) to reduce particulate matter (PM) emissions and reduce public exposure to PM. The bill required the CARB to develop and adopt a list of the most readily available, feasible, and cost effective control measures to reduce PM_{10} and $PM_{2.5}$ emissions. Section 39614(d)(1) states, in part, that each air pollution control district "shall adopt and implement control measures to reduce $PM_{2.5}$ and PM_{10} from stationary area. . .sources, and to make progress toward attainment of State and federal $PM_{2.5}$ and PM_{10} standards."

◊ **Air Toxic's "Hot Spots" Information and Assessment Act**. The Air Toxic's "Hot Spots" Information and Assessment Act, codified in Sections 44300-44384 of the H&SC, requires affected facilities to prepare: (1) an emissions inventory plan that identifies relevant air toxics and sources of air toxic emissions; (2) an emissions inventory report quantifying air toxics emissions; and (3) a health risk assessment (HRA), if necessary, to characterize the health risks to the exposed public.

◊ **Children's Environmental Health Protection Act of 1999**. Senate Bill 25 (Children's Environmental Health Protection Act of 1999), codified in Sections 39669.5(a)(1) of the H&SC, required the CalEPA to specifically consider children in setting ambient air quality standards and developing criteria for TACs. SB 25 required the CalEPA to review and, as necessary, revise the air pollution standards and control measures for TACs to better protect infants and children. The act required the CARB to evaluate its current air-monitoring program and, as necessary, institute changes to more accurately measure the exposure of infants and children to air pollutants, created the Children's Environmental Health Center to advise the Secretary of the CalEPA and the Governor on environmental health matters that affect infants and children, and required the SCAQMD to notify day care centers if air quality standards are exceeded.

Under the provisions of the act, the Office of Environmental Health Hazard Assessment (OSHHA) was required to develop (by July 1, 2001) a list of up to five TACs (Tier 1) that may cause infants and children to be especially susceptible to illness. OSHHA's "Prioritization of Toxic Air Contaminants – Children's Environmental Health Protection Act" included a description of the

[14]/ The H&SC described broad authority for emissions controls, with the CARB having the primary jurisdiction over mobile sources and air districts having primary jurisdiction over stationary sources. There are, however, areas where cross-over can occur, such as CARB authority to develop airborne toxic control measures, area-wide sources, transportation-related programs, and incentive programs.

prioritization process used to identify and evaluate those TACs that potentially disproportionately impact children andpresented summaries for chemicals considered priority candidates for listing. The five identified TACs that may disproportionately impact infants and children are listed in Table 4.7-2 (Five Toxic Air Contaminants that May Disproportionately Impact Infants and Children).[15]

Table 4.7-2
FIVE TOXIC AIR CONTAMINANTS THAT MAY DISPROPORTIONATELY IMPACT INFANTS AND CHILDREN

TAC	Endpoints of Most Concern	Major Reasons Why Chosen
Acrolein	Respiratory irritant	Exacerbation of asthma; modeling predictions indicate concentrations in urban air above chronic reference exposure level (REL[1])
Chlorinated dioxins and dibenzofurans (dioxins)	Developmental toxicity, immunotoxicity, endocrine disruption; thyroid effects	Widespread exposure; endocrine disruption, thyroid and immunotoxicity at low body burden; young animals more susceptible that older animals
Lead and compounds	Developmental neurotoxicity/central nervous system effects	Children the most susceptible subpopulation due to developmental neurotoxicity
Particulate emissions from diesel-fueled engines (diesel PM)	Enhancement of allergic response; exacerbation of asthma; development effects, genotoxicity, and lung cancer	Enhancement of allergic response and implications for exacerbation and possible induction of asthma; major source of ambient polycyclic aromatic hydrocarbons (PAHs[2]), PM_{10}; exacerbation of asthma by PM_{10}; PAH developmental toxicity and genotoxicity concern
Polycyclic organic matter (POM)	Developmental effects, genotoxicity and lung cancer	Animal studies indicate teratogenicity and fetotoxicity; human studies indicate greater genotoxicity following in uteral exposures

Notes:
1. A chronic reference exposure level (REL) is an airborne concentration at or below which adverse non-cancer health risks would not be anticipated.
2. Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Source: California Air Resources Board

- **California Code of Regulations**. As outlined in the CARB's "Diesel Risk Reduction Plan," idling restrictions could be used to "limit the amount of time heavy duty vehicle engines are allowed to operate while not performing useful work, e.g., moving the vehicle or operating essential equipment."[16] One component of the risk reduction plan

[15]/ California Environmental Protection Agency, California Air Resources Control Board, Office of Environmental Health Hazard Assessment, Prioritization of Toxic Air Contaminants under the Children's Environmental Health Protection Act, Final Report, October 2001, Table 4, p. 28.
[16]/ *Ibid*.

was implementation of "idling restrictions"[17] (codified in Section 1956.8 in Title 13 of the CCR). Based on those recommendations, CARB adopted diesel-fueled vehicle idling restriction. In accordance therewith, commercial diesel-fueled vehicles with a gross vehicular weight rating (GVWR) greater than 10,000 pounds and any bus, when not engaged in work activities, are subject to idling restrictions (13 CCR 2485). As specified therein, on or after February 1, 2005, the driver of any vehicle subject to those provisions: (1) shall not idle the vehicle's primary diesel engine for greater than 5.0 minutes at any location; and (2) shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 100 feet of a restricted area. Specific exceptions apply (13 CCR 2485[d]). A "restricted area" is defined to mean "any real property zoned for individual or multifamily housing units that has one or more of such units on it."

Greenhouse Gas Emissions and Global Climate Change

- **Executive Order S-3-05**. Under Executive Order S-3-05, as signed by Governor Arnold Schwarzenegger on June 1, 2005, the following GHG emission reduction targets were established for California: (1) by 2010, reduce GHG emissions to 2000 levels; (2) by 2020, reduce GHG emissions to 1990 levels; and (3) by 2050, reduce GHG emissions to 80 percent below 1990 levels. In March 2006, the California Environmental Protection Agency (CalEPA) published a Climate Action Team (CAT) report detailing how State agencies could meet the 2010 and 2020 goals. As indicated therein, among the policy actions that are cited are "smart land use and intelligent transportation." The CAT states that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.[18]

- **Executive Order S-1-07**. On January 18, 2007, Governor Schwarzenegger signed Executive Order S-1-07, establishing a Low Carbon Fuel Standard (LCFS). The LCFS mandates that by 2020, fuel providers (including refiners, blenders, producers, and importers) must reduce their average carbon intensity by 10 percent. This reduction is expected to result in replacement of 20 percent of on-road gasoline consumption with lower-carbon fuels and will lead to the addition of seven million alternative fuel or hybrid vehicles on California roads.

- **Western Climate Initiative**. On February 26, 2007, the governors of the States of Arizona, California, New Mexico, Oregon, and Washington, later joined by the State of Utah and the Canadian Provinces of British Columbia and Manitoba, created the Western Climate Initiative (WCI) with a long-term commitment to significantly reduce

[17]/ California Air Resources Control Board, Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, October 2000, p. 27.

[18]/ California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 58.

regional GHG emissions, thus lowering the risk of dangerous threats to climate change. As part of this commitment, the members of the WCI agreed to establish a western regional reduction goal by the end of August 2007 and design a multi-sector market-based mechanism, such as a load-based cap-and-trade program, by the end of August 2008. On August 22, 2007, the members of the WCI agreed to a regional goal to reduce GHG emissions to 15 percent below 2005 levels by 2020. The WCI's regional goal does not serve to replace or supersede the goals set by individual states and provinces.[19]

- **Assembly Bill 1493**. Assembly Bill 1493 (Pavley), adopted September 2002, requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. Although setting emission standards on automobiles is solely the responsibility of the USEPA, the CAA Act allows California to set state-specific emission standards on automobiles if the state first obtains a waiver from the USEPA.

- **California Health and Safety Code**. The California Global Warming Solutions Act of 2006 (AB 32), codified in Section 38500 *et seq*. of the H&SC, establishes a comprehensive program to reduce GHGs by 2020 and identifies several major requirements that the CARB is required to implement, including: (1) the adoption and implementation of a list of discrete and early action GHG[20] reduction measures; (2) approval of a Statewide1990 emission level that becomes the Statewide 2020 emissions limits; (3) adoption of mandatory GHG reporting rules for significant GHG sources; and (4) adoption of emission regulations to achieve the maximum technologically feasible and cost-effective reductions.

  AB 32 commits the State to achieving the following: (1) 2000 GHG emission levels by 2010 (which represents an approximately 11 percent reduction from "business-as-usual")[21]; and (2) 1990 levels by 2020 (approximately 30 percent below "business-as-usual"). To achieve these goals, AB 32 mandates that the California Air Resources Board establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce Statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

  By January 1, 2008, the CARB was directed to create a carbon dioxide (CO_2) emissions inventory. The CARB was instructed to begin with sources or categories of sources that contribute the most to Statewide emissions. By January 1, 2008, CARB must establish the 1990 CO_2 emission levels from the State.[22] The statute requires CARB to reach the

[19]/ Western Climate Initiative, Press Release: Western Climate Initiative Members Set Regional Target to Reduce Greenhouse Gas Emissions – Eight States, Provinces Agree to Reduce Emissions by 15 Percent below 2005 Levels by 2020, August 22, 2007.

[20]/ As defined in Section 38505 of the H&SC, greenhouse gases include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

[21]/ The CARB defines "business-as-usual" as emissions in the absence of any GHG reduction measures discussed in the "Climate Change Scoping Plan."

[22]/ As required, CARB shall determine the Statewide GHG emission levels in 1990 and to approve a Statewide GHG emissions limit, equal to that level, to be achieved by 2020. CARB staff is recommending approval of 427 million metric tonnes of carbon dioxide equivalent ($MMTCO_2e$) as the total Statewide aggregated greenhouse gas 1990 emissions level and 2020 emissions limit (Source: California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emission Limit, November 16, 2007, p. i).

1990 baseline through limits on sources and categories of sources primarily responsible for GHG emissions. An advance set of GHG emission reduction measures was required no later than June 30, 2007.[23] These "early action" measures must then be incorporated into regulations no later than January 1, 2010.[24,25]

As indicated by CARB: "The Statewide 1990 greenhouse gas emissions level of 427 $MMTCO_2e$ [million metric tonnes of carbon dioxide equivalent] is based on the net amount of greenhouse gas emitted to and removed from the air. The gross Statewide emissions in 1990 were 433 $MMTCO_2e$ with forestry sinks offsetting approximately 7 $MMTCO_2e$, resulting in net emissions to the atmosphere of approximately 427 $MMTCO_2e$). The 1990 emissions level is a compilation or inventory of the amount and type of greenhouse gases emitted by different sources on an annual basis."[26]

In October 2008, the CARB, in coordination with the Climate Action Team (CAT), published a draft scoping plan[27] outlining the State's strategy to achieve the 2020 GHG emissions limit. The draft scoping plan outlined a strategy for reducing the State's carbon footprint. Reducing GHG emissions to 1990 levels means cutting approximately 30 percent from the "business-as-usual" (BAU) emission levels projected for 2020 or about 15 percent from current (2008) levels. On a per capita basis, that means reducing annual emissions from 14 tonnes ofCO_2 to about 10 tonnes per person by 2020.

As noted in the CARB's functional equivalent document, the draft scoping plan included a recommended measure to establish a process whereby regions in California integrate development patterns, transportation networks, and other transportation measures and policies in a way that achieves GHG emission reductions. Shifting land-use patterns can improvement transportation and build on successful planning processes that integrate sustainable community principals. Land-use considerations are, however, determined by local governments and no land use or planning requirements are mandated or altered by the proposed measure.[28]

On December 11, 2008, the CARB approved a "Climate Change Scoping Plan" (Resolution 08-47), as required by Global Warming Solutions Act of 2006 (AB 32). The plan proposes a "comprehensive set of actions designed to reduce overall carbon greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and

[23]/ California Air Resources Board, Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration, October 2007.

[24]/ CARB is also directed to develop a scoping plan for meeting the requirement of reducing greenhouse gas emissions to 1990 levels. This plan is to be developed in consultation with other State agencies, including the CPUC. This plan must be approved no later than January 1, 2009. Based on this plan, CARB is to promulgate a broader set of measures by January 1, 2011 in order to achieve the requisite reductions. The statute leaves it open to CARB whether the reductions will be achieved through source category limits or whether the plan could include a market-based trading program. The statute requires the CARB to establish de minimis thresholds for GHG emissions below which emission reduction requirements would not apply.

[25]/ On October 18, 2006, Governor Schwarzenegger issued Executive Order S-20-06, ordering State agencies to develop market-based compliance mechanisms for GHG reduction, consistent with AB 32, concurrent with regulatory measures.

[26]/ California Air Resources Board, Staff Report: California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, November 16, 2007, p. 2.

[27]/ California Air Resources Board, Climate Change – Proposed Scoping Plan, A Framework for Change, October 2008.

[28]/ California Air Resources Board, Climate Change – Proposed Scoping Plan, A Framework for Change, California Environmental Quality Act Functional Equivalent Document, October 2008, p. J-54.

enhance public health."[29] The plan indicates that "reducing greenhouse gas emissions to 1990 levels means cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 15 percent from today's [absolute] levels."

The "Climate Change Scoping Plan" calls for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions will be addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard, and greater consideration to reducing trip length and generation through land-use planning and transit-oriented development. Buildings, land use, and industrial operations will be encouraged and, sometimes, required to use energy more efficiently. Utility energy supplies will change to include more renewable energy sources through implementation of the renewable portfolio standard (RPS).[30] This will be complemented with emphasis on local generation, including rooftop photovoltaics and solar hot water installations.

Additionally, the plan emphasizes opportunities for households and businesses to save energy and money through increasing energy efficiency. The plan indicates that substantial savings of electricity and natural gas will be accomplished through improving energy efficiency. The "Climate Change Scoping Plan" identifies a number of specific issues potentially relevant to the proposed project including:

- ◊ Regulation of landfills, motor vehicles, refrigerants, and roofing materials.
- ◊ The potential of using the green building framework as a mechanism that could enable GHG emissions reductions in other sectors (i.e., electricity, natural gas), noting that green buildings "exceed minimum energy-efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable and low-emitting materials. Combined, these measures can also contribute to healthy indoor air quality, protect human health and minimize impacts to the environment."
- ◊ The importance of increasing the supply and utilization of green power and lower carbon intensity energy sources. Broadly defined, this includes implementation of the utility-based RPS, use of solar hot water heating (pursuant to the SB 1470 goal), support for the Million Solar Roofs Program (including the California Solar Initiative and the New Solar Homes Partnership), and increased use of combined heat and power.
- ◊ The importance of supporting the Department of Water Resources' work to implement the Governor's objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff.
- ◊ Encouraging local governments to set quantifiable emissions reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

[29]/ California Air Resources Control Board, Climate Change Proposed Scoping Plan, California Air Resources Board, October 2008 (http://www.arb.ca.gov/cc/scopingplan/document/draftscopingplan.pdf).

[30]/ The State's renewable portfolio standard (RPS) program was established in 2002 under Senate Bill 1078 and requires retail suppliers of electric services to increase procurement for eligible renewable energy resources up to 20 percent by 2017. In 2006, SB 107 advanced the 20 percent deadline to 2010, a goal that was expanded to 33 percent by 2020 in the 2005 "Energy Action Plan II." These mandates apply directly to investor-owned utilities; however, publicly-owned utilities have agreed to voluntarily meet the 20 percent goal.

- **California Government Code**. Senate Bill 375 (Chapter 728, Statutes of 2008), among other things, amended Section 65080 of the CGC to require that the regional transportation plan for those regions of the State with a metropolitan planning organization (MPO) adopt a sustainable communities strategy (SCS) as part of its regional transportation plan (RTP), designed to achieve certain goals for the reduction of GHG emissions from automobiles and light trucks in a region. This requires the CARB, working in consultation with the MPOs, to provide each affected region with GHG emission reduction targets for the automobile and light truck sector for 2020 and 2035 by September 30, 2010, to appoint a regional targets advisory committee to recommend factors and methodologies for setting those targets, and to update those targets every eight years.

  SB 375 requires that certain transportation planning and programming activities by the MPOs be consistent with the SCS contained in the RTP. Certain transportation projects programmed for funding on or before December 31, 2011 are not, however, required to be consistent with the SCS process. To the extent the SCS is unable to achieve the GHG emission reduction targets, the bill requires affected MPOs to prepare an alternative planning strategy (APS) to the SCS showing how the targets would be achieved through alternative development patterns, infrastructure or additional transportation measures or policies. The bill requires the CARB to review each MPO's SCS and APS determine whether the strategy, if implemented, would achieve the GHG emission reduction targets.

- **California Code of Regulations**. Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6, CCR). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy-efficiency technologies and methods. The 2006 “Appliance Efficiency Regulations” (Title 20, Sections 1601 through 1608), dated December 2006, were adopted by the California Energy Commission (CEC) on October 11, 2006 and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally-regulated and non-federally regulated appliances.

  On July 17, 2008, the California Building Standards Commission adopted the nation’s first green building standards. The “California Green Building Standards Code” (proposed Part 11, Title 24) was adopted as part of the “California Building Standards Code” (Title 24, California Code of Regulations). Part 11 establishes voluntary standards (that will become mandatory in the 2010 edition of the code) on planning and design for sustainable site development, energy efficiency, water conservation, material conservation, and internal air contaminants.

  On April 23, 2008, the California Energy Commission (CEC) adopted the “2008 Building Efficiency Standards for Residential and Nonresidential Buildings – Regulations/ Standards”[31,32] (2008 Energy-Efficiency Standards) and the Building Standards

[31]/ California Energy Commission, 2008 Building Efficiency Standards for Residential and Nonresidential Buildings – Regulations/ Standards, CEC-400-2008-001-CMF, December 2008; California Energy Commission, Reference Appendices for the 2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, CEC-400-2008-004-CMF, December 2008, revised June 2009.

Commission approved them for publication on September 11, 2008. The effective date for the 2008 Energy-Efficiency Standards is January 1, 2010. The requirement for when the 2008 standards must be followed is dependent on when the application for the building permit is submitted. If the application is submitted on or after January 1, 2010, the 2008 standards must be met.

The 2008 Energy-Efficiency Standards authorizes locally-adopted energy standards (Section 10-106). As authorized therein: "Local governmental agencies may adopt and enforce energy standards for newly constructed buildings, additions, alterations, and repairs provided that the Commission finds that the standards will require buildings to be designed to consume no more energy than permitted by Part 6. Such local standards include, but are not limited to, adopting the requirements of Part 6 before their effective date, requiring additional energy conservation measures, or setting more stringent energy budgets."[33]

- **Senate Bills 107 and 1078**. The California renewable portfolio standard (RPS) program was established in 2002 under Senate Bill 1078 and requires retail suppliers of electric services to increase procurement for eligible renewable energy resources up to 20 percent by 2017. In 2006, Senate Bill 107 advanced the 20 percent deadline to 2010, a goal that was expanded to 33 percent by 2020 in the 2005 "Energy Action Plan II."[34] These mandates apply directly to investor-owned utilities; however, publicly-owned utilities have agreed to voluntarily meet the 20 percent goal.

- **Senate Bill 1368**. Senate Bill 1368, a companion bill to the Global Warming Solutions Act of 2006 (AB 32), requires the California Public Utilities Commission (CPUC) and CEC to establish greenhouse gas emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting the CARB meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG emissions performance standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. On May 23, 2007, the CPUC adopted regulations establishing an identical emissions performance standard of 1,100 pounds of CO_2 per megawatt-hour (Order No. 07-523-7).

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[32]/ The CEC adopted the 2008 changes to the previous "2005 Building Efficiency Standards for Residential and Nonresidential Buildings – Regulations/Standards"[32] (2005 Energy-Efficiency Standards) for a number of specified reasons, including: (1) to provide California with an adequate, reasonably-priced, and environmentally-sound supply of energy; (2) to respond to AB 32 (Global Warming Solutions Act of 2006) which mandates that California must reduce its GHG emissions to 1990 levels by 2020; (3) to pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs; (4) to act on the findings of California's "Integrated Energy Policy Report" that standards are the most cost effective means to achieve energy efficiency, expects the building energy-efficiency standards to continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the standards in reducing energy related to meeting California's water needs and in reducing greenhouse gas emissions; (5) to meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy-efficiency measures into updates of state building codes; and (6) to meet the Executive Order in the Green Building Initiative to improve the energy efficiency of nonresidential buildings through aggressive standards (Source: http://www.energy.ca.gov/title24/2008standards/).

[33]/ *Ibid*., Section 10-106, p. 10.

[34]/ California Energy Commission and California Public Utilities Commission, Energy Action Plan II – Implementation Roadmap for Energy Policies, September 21,2005.

- **Senate Bill 97**. Senate Bill 97, passed in August 2007, is designed to work in conjunction with CEQA and AB 32. SB 97 requires the Governor's Office of Planning and Research (OPR) to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including but not limited to, effects associated with transportation and energy consumption. These guidelines must be transmitted to the Resources Agency by July 1, 2009, to be certified and adopted by January 1, 2010. OPR and the Resources Agency shall periodically update these guidelines to incorporate new information or criteria established by the CARB. SB 97 will apply retroactively to any EIR, negative declaration, mitigated negative declaration, or other document required by CEQA which has not been finalized.[35]

- **Senate Bill 375**. Senate Bill 375 was signed into law by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in the Global Warming Solutions Act of 2006 (AB 32). Reductions in GHG emissions would be achieved through transit-oriented developments that locate housing closer to jobs, retail, and transit. Under the bill, each MPO would be required to adopt a sustainable community strategy to encourage compact development so that the region will meet a target, created by CARB, for reducing GHG emissions.

- **California Environmental Quality Act**. Senate Bill 97, which added Sections 21083.05 and 21097 to CEQA and which was signed by the Governor on August 24, 2007, requires OPR to prepare, develop, and transmit (by July 1, 2009) to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including effects associated with transportation or energy consumption. The Resources Agency is required to certify and adopt those guidelines by January 1, 2010.

  On June 19, 2008, OPR published a technical advisory, entitled "CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act Review"[36] (OPR Advisory). This guidance, which is purely advisory, proposes a three-step analysis of GHG emissions:

  - ◊ **Mandatory quantification of GHG project emissions**. The environmental impact analysis must include quantitative estimates of a project's GHG emissions from different types of air emission sources. These estimates should include both construction-phase emissions, as well as completed operational emissions, using one of a variety of available modeling tools.

  - ◊ **Continued uncertainty regarding "significance" of project-specific GHG emissions**. Each EIR should assess the significance of the project's impacts on climate change. The OPR Advisory recognizes uncertainty regarding what GHG impacts should be determined to be significant and encourages agencies to rely on the evolving guidance being developed in this area. According to the OPR Advisory, the environmental analysis should describe a "baseline" of existing

[35]/ Under SB 97, transportation projects funded under the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 and projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006 are exempted from analyzing the effects of greenhouse gases in an EIR, negative declaration, mitigated negative declaration, or other CEQA document.

[36]/ Governor's Office of Planning and Research, CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act Review, June 19, 2008 (http://opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf).

(pre-project) environmental conditions and then add project GHG emissions on to this baseline to evaluate whether impacts are significant.

◊ **Mitigation measures**. According to the OPR Advisory, "all feasible" mitigation measures or project alternatives should be adopted if an impact is significant, defining feasibility in relation to scientific, technical, and economic factors. If mitigation measures cannot sufficiently reduce project impacts, the agency should adopt whatever measures are feasible and include a fact-based statement of overriding considerations explaining why additional mitigation is not feasible. OPR also identifies a menu of GHG emissions mitigation measures, ranging from balanced mixed-use master-planned project designs to construction equipment and material selection criteria and practices.

In addition, the OPR Advisory contains more general policy-level guidance, encouraging agencies to develop standard GHG emissions reduction and mitigation measures. The OPR Advisory directs the CARB to recommend a method for setting the GHG emissions threshold of significance, including both qualitative and quantitative options.

4.7.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

Air Quality

- **San Bernardino County General Plan**. As indicated in the County General Plan, the air pollutants of greatest concern in the County are ozone (O_3) and particulate matter less than 10 microns (PM_{10}) because of the current non-attainment status with the AAQS. The "worst air quality occurs in the southwestern portion of the County. Approximately 78.0 percent of the total population residents in this area and drive over 28 million miles per day. Other contributors include pollution transported from upwind areas in the SCAB [South Coast Air Basin] region and other major sources of air pollution in San Bernardino County, such as military bases, highways, and railroad facilities, cement manufacturing, and mineral processing."[37] In the context of the proposed project, those air quality goals, objectives, and programs presented in the County General Plan that appear to be most closely related to the unincorporated County portion of the project site are presented below.

  - Goal CO4. The County will ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy.

    ◊ Policy CO4.1. Because development can add to the wind hazard, the County will require either as mitigation measures in the appropriate environmental analysis required by the County for the development

[37] / *Op. Cit*., County of San Bernardino 2007 General Plan, Conservation Element, pp. V-10 and V-11.

proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of: (a) Grading restrictions and/or controls on the basis of soil types, topography and season. (b) Landscaping methods, plant varieties, and scheduling to maximize successful revegetation. (c) Dust-control measures during grading, heavy truck travel, and other dust generating activities.

◊ Policy CO4.4. Because congestion resulting form growth is expected to result in a significant increase in the air quality degradation, the County may manage growth by insuring the timely provision of infrastructure to serve new development.

Programs. Locate and design new development in a manner that will minimize direct and indirect emissions of air contaminants through such means as: [a] Promoting mixed-use development to reduce the length and frequency of vehicle trips. [b] Providing for increased intensity of development along existing and proposed transit corridors. [c] Providing for the location of ancillary employee services at major employment centers for the purpose of reducing midday vehicle trips. [d] The County shall comply, to the extent feasible, with the recommendations on siting new sensitive land uses, as recommended in the California Air Resources Board's Air Quality and Land Use Handbook; A community Health Perspective, which includes the following: Notable siting recommendations include avoiding siting new sensitive land uses within: [i] 500 feet of a freeway, urban road with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; [ii] 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration units exceed 300 hours per week); [iii]1,000 feet of a chrome plater; [iv] 300 feet of any dry cleaning operation; and 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater); a 50 foot separation distance is recommended for typical gas dispersing facilities.

◊ Policy CO4.5. Reduce emissions through reduced energy consumption.[38]

◊ Policy LU8.2. Review development proposals to minimize impacts, such as air emissions, on sensitive receptors. [39]

- **San Bernardino County Development Code**. No County Development Code excerpts are cited herein.

Greenhouse Gas Emissions and Global Climate Change

- **San Bernardino County Superior Court Case No. CIVSS 700329**. In April 2007, the California Attorney General brought a challenge to the County's General Plan FPEIR,

[38]/ *Ibid*., pp. V-22 through V-25.
[39]/ *Ibid*., Land Use Element, p. II-36.

alleging that the County violated CEQA because it "failed to fully evaluate and disclose the reasonably foreseeable effects of the General Plan update on global warming" and "failed to consider and adopt appropriate mitigation." In its General Plan FPEIR, the County did not quantify GHG emissions associated with the General Plan update. The Attorney General alleged that the County's approval would aggravate climate change by increasing vehicle miles traveled, increasing consumption of fossil fuel-based energy, and developing forested and vegetated land that currently sequesters carbon. In particular, the Attorney General criticized the County for failing to compare "the increases in greenhouse gas emissions that are reasonably expected to result from implementation of the General Plan update and the reductions in greenhouse gas emissions mandated by AB 32."

In August 2007, the Attorney General and the County entered into a settlement agreement that requires the County to prepare an amendment to its General Plan Update calling for the adoption of a Greenhouse Gas Emissions Reduction Plan (GHG ERP). This GHG ERP must inventory the County's GHG emissions as of 1990, as of the notice of preparation for the General Plan Update EIR, and as of 2020 (which will include GHG emissions arising from development under the General Plan Update). The county must also set a target for reducing GHG emissions, and adopt feasible reduction measures to meet this target.

4.7.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. The City General Plan acknowledges that the "air quality in San Bernardino County, and specifically Rialto, results form a unique combination of factors: air flow patterns and emission sources, both local and those located throughout the region. These factors result in some of the worst air quality in the nation."[40] In the context of the proposed project, those air quality goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

  - Goal 5.1. To achieve conformance with the AQMP [Air Quality Management Plan] by adopting a comprehensive plan for implementation, so that all general development projects approved are consistent with the AQMP.

    - ◊ Policy 5.1.1. Require that all developments within the City with more than 100 employees develop a rideshare program.

    - ◊ Policy 5.1.2. Require all developments to comply with the AQMP, particularly regarding transportation demand management (TDM) programs. A TDM plan for new development shall be limited to design

[40]/ *Op. Cit.*, City of Rialto General Plan, Conservation Element, p. X-7.

considerations to encourage ridesharing, transit use, park and ride facilities, as well as bicycle and pedestrian circulation.

◊ Policy 5.1.3. Incorporate phasing policies and requirements in development plans to achieve concurrent provision of infrastructure, particularly transportation facilities, to serve development.

◊ Policy 5.1.4. Locate and design new development in a manner that will minimize direct and indirect emission of air contaminants. To this end, participate with SANBAG in jointly formulating appropriate standards for regulating the location and protection of sensitive receptors from excessive and hazardous emissions.

- Goal 5.2. Improve the balance between jobs and housing in order to create a more efficient urban form and/or reduce the vehicle miles traveled (VMT).

  ◊ Policy 5.2.6. Improve the jobs-housing balance through new development and redevelopment project review and actions.[41]

Applicable or potentially applicable air quality policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. As specified in Section 18.58.020 (General Provisions) in Chapter 18.58 (Off-Street Parking) in the City Municipal Code, "all new nonresidential and residential developments shall conform to the applicable requirements of Chapter 18.59 (Transportation Control Measures) in compliance with State and federal air quality requirements."

4.7.2.5 California Air Resource Agencies

California Air Resources Board

With regards to GHG emissions and global climate change, on September 27, 2006, Governor Schwarzenegger signed into law the Global Warming Solutions Act of 2006 (AB 32), requiring a reduction in GHG emissions to 1990 levels by 2020. The CARB is the lead agency for implementing the provisions of AB 32 which set forth major milestones for establishing the program. In 2007, the CARB met the first of those milestones by developing a list of discrete earl actions to begin reducing GHG emissions, assembling an inventory of historic emissions, establishing GHG emissions reporting requirements, and setting 2020 emission limits. In December 2008, the CARB adopted the "Climate Change Scoping Plan" outlining the State's strategy to achieve the 2020 GHG emissions limit.

South Coast Air Quality Management District

The California Legislature created the South Coast Air Quality Management District (SCAQMD) in 1977[42] as the agency responsible for developing and enforcing air pollution control rules and

[41]/ *Ibid*., pp. X-9 and X-10.

regulations in the South Coast Air Basin (SCAB or Basin) and in portions of the Salton Sea Air Basin and Mojave Desert Air Basin,. By statute, SCAQMD is required to adopt an air quality management plan (AQMP) which outlines plans and programs to achieve compliance with federal and State ambient air quality standards for all areas within the district[43]. Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP[44]

With regards to air quality, SCAQMD and SCAG are the agencies responsible for preparing the 2007 AQMP for the South Coast Air Basin (SCAB or Basin).[45] Since 1979, a number of AQMPs have been prepared, with later plans superseding earlier documents. The earlier 1997 AQMP, subsequently updated in 1999 and then replaced in 2003, was based on the previous 1991 and 1994 AQMPs and was designed to comply with State and federal requirements, reduce the high level of pollutant emissions in the SCAB, and ensure clean air for the region through various control measures. To accomplish its task, the 1991 AQMP (and successive revisions) relied on a multi-level partnership of agencies at the federal, State, regional, and local level. These agencies (USEPA, CARB, SCAG, SCAQMD, and local governments) are responsible for the implementation of AQMP programs.

The most recent comprehensive plan is the 2007 AQMP which employs up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

The 2007 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standards through a more focused control of SO_X, directly emitted $PM_{2.5}$, and NO_X supplemented with volatile organic compound (VOC) reductions by 2014. The 8-hour ozone control strategy builds upon the $PM_{2.5}$ strategy, augmented with additional VOC reductions to meet the standard by 2020. An extended attainment date (additional 3 years) is allowed under the CAA if a “bump-up” request is made by the State showing the need for such extension.

The 2007 AQMP proposes policies and measures currently contemplated by responsible agencies to achieve federal standards for healthful air quality in the Basin and those portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under SCAQMD’s jurisdiction (Coachella Valley). The 2007 AQMP also addresses several federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. In addition, the 2007 AQMP builds upon the approaches taken in the 2003 AQMP for the SCAB for the attainment of the federal ozone air quality standard. The 2007 AQMP highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under CAA.

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[42]/ The Lewis-Presley Air Quality Management Act (Sections 40400-40540, Health and Safety Code).

[43]/ Section40460(a), Health and Safety Code.

[44]/ Section 40440(a), Health and Safety Code.

[45]/ On April 6, 1990, the SCAQMD adopted a “Policy on Global Warming and Stratospheric Ozone Depletion.” The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the AQMP. In March 1992, the SCAQMD reaffirmed this policy and adopted amendments to the policy to include the following directives: (1) phase out the use and corresponding emissions of chlorofluorocarbons (CFCs), methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995; (2) phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons (HFCs) by the year 2000; (3) develop recycling regulations for HFCs (e.g., Rules 1411 and 1415); (4) develop an emissions inventory and control strategy for methyl bromide; and (5) support the adoption of a California greenhouse gas emission reduction goal.

The 2007 AQMP updates the attainment demonstration for the federal standards for O_3 and particulate matter (PM_{10}), replaces the 1997 attainment demonstration for the federal CO standard and provides a basis for a maintenance plan for CO for the future, and updates the maintenance plan for the federal NO_2 standard that the Basin has met since 1992.

Areas that meet the ambient air quality standards are classified as "attainment" areas while areas that do not meet these standards are classified as "nonattainment" areas. The severity of the classifications for ozone nonattainment include and range in magnitude from marginal, moderate, serious, severe, and extreme. The attainment status for the SCAB is included in Table 4.7-3 (Attainment Status for the South Coast Air Basin).

Table 4.7-3
ATTAINMENT STATUS FOR THE SOUTH COAST AIR BASIN

Pollutant	State Status	Federal Status
Ozone (1-hour)	Extreme Nonattainment	Extreme Nonattainment (Under the prior standard)
Ozone (8-hour)	Extreme Nonattainment	Severe-17 (May petition for Extreme Nonattainment)
PM_{10}	Serious Nonattainment	Serious Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance

Source: South Coast Air Quality Management District

The Basin is designated as attainment of CAAQS for SO_2, lead, and sulfates. Areas that are designated as Severe-17 for the ozone standard must meet attainment of the 8-hour standard by 2021 (2024 if reclassified to extreme nonattainment). Areas considered as serious nonattainment of the PM_{10} standards must have reached attainment by the end of 2006 or as expeditiously as possible. The $PM_{2.5}$ attainment date is to be met in 2015.

The SCAQMD is responsible for reducing emissions from stationary, mobile, and indirect sources. In furtherance of that objective, the SCAQMD has promulgated a series of binding rules and regulations governing specific activities performed within the SCAB. Although too numerous to recite herein, a number of relevant rules are briefly described below. Compliance with the following rules is mandatory for all large-scale construction projects.

- **Rule 402** (Nuisance) is a nuisance provision that states that a person shall not discharge such quantities of air contaminants or other material that: (1) cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; (2) endanger the comfort, repose, health, or safety of any such persons or the public; and/or (3) cause or have a natural tendency to cause, injury or damage to business or property.

- **Rule 403** (Fugitive Dust) is a provision that sets requirements for control and monitoring of any activity or man-made condition capable of generating fugitive dust. Basically, the rule requires that all parties shall: (1) not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area so that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source or the dust emission exceeds 20 percent opacity if the dust emission is the result of movement of a motorized vehicle; (2) utilize the applicable best available control measures (as included in the rule) to minimize fugitive dust emissions from each fugitive dust source type within the active operation; (3) not cause or allow PM_{10} levels to

exceed 50 micrograms per cubic meter ($\mu g/m^3$) in the air when determined by simultaneous upwind and downwind sampling; (4) not allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation; and (5) not conduct an active operation with a disturbed surface area of five or more acres or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in the rule. "Large operations"[46] are required to submit a large operation notification and install and maintain project signage that meets the minimum standards of the rule and identify a dust control supervisor.

- **Rule 1113** (Architectural Coatings) specifies that no person shall supply, sell, offer for sale, manufacture, blend, or repackage any architectural coating for use in the District which contains more than 250 grams of VOC[47] per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, and less any colorant added to tint bases, and no person shall apply or solicit the application of any architectural coating within the District that exceeds 250 grams of VOC per liter of coating. Rule 1113 lists specific effective dates and contains a table of standards for VOC emissions for various architectural coatings.

- **Rule 1157** (PM_{10} Emission Reductions from Aggregate and Related Operations) applies to all permanent and temporary aggregate and related operations (defined as operations that produce sand, gravel, crushed stone, and/or quarried rocks) and stipulates that the operator of a facility/operation shall not cause or allow, among other requirements: (1) a discharge into the atmosphere of fugitive dust emissions exceeding 20 percent opacity from any activity, equipment, storage pile, or disturbed surface are, based on an average of 12 consecutive readings (using SCAQMD Opacity Test Method No. 9B); (2) discharge into the atmosphere of fugitive dust emissions exceeding 50 percent opacity from any activity, equipment, storage pile, or disturbed area based on five individual, consecutive readings; or (3) any visible fugitive dust plume from exceeding 100 feet in any direction from any activity, equipment, storage pile, or disturbed surface area. The operator of an existing permanent or temporary facility/operation shall use dust suppressants or other dust control methods at each emission source during loading, unloading, or transferring activities of materials as necessary to meet specified performance standards.

- **Rule 1186** (PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations) imposes specific obligations on the owners or operators of paved or unpaved public roads. Those requirements include, but are not limited to: (1) any owner or operator of a paved public road on which there is visible roadway accumulations shall begin removal of such material through street cleaning within 72 hours of any notification of the accumulation and shall completely remove such material as soon as feasible); (2) any owner or operator of a public or private paved road shall construct, or require to be constructed, all new or widened paved roads in accordance with the American Association of State Highway and Transportation Officials (AASHTO) guidelines or the applicable equivalent locally adopted guidelines for curbing, width of shoulder, and medians as specified in the rule; and (3) any owner or operator of an unpaved public

[46]/ "Large operations" are defined in Rule 403 to mean "any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth=moving or throughput volume of 3,850 cubic meters (5,000 cubic yards) or more three timed during the most recent 365-day period."

[47]/ In SCAQMD documents, the inclusive term "reactive organic compounds" generally describes and is gradually replacing the separate terms "reactive organic gases" (ROG), "volatile organic compounds" (VOC), and "hydrocarbons" (HC), except in cases where such separation provides additional clarification and definition. For purposes of this analysis, these terms are used synonymously herein.

road in the SCAB shall annually treat unpaved roads that have greater than the ADT of all unpaved roads in its jurisdiction (as determined by the owner/operator) beginning January 1, 1998 and each of eight calendar years thereafter by either (a) paving at least 1 mile of such roads using typical roadway materials, (b) applying chemical stabilization to 2 miles of such roads in sufficient quantities to maintain a stabilized surface, or (c) taking one or more of the following actions on 3 miles of such roads (i) installing signage at ¼ intervals that prohibits vehicular speeds in excess of 15 mph, as authorized by Section 22365 of the CVC, (ii) installing speed control devices (e.g., speed bumps) every 500 feet, and/or (iii) maintaining the roadway in such a manner that inhibits vehicular speeds in excess of 15 mph.

- **Rule 1401** (New Source Review of Toxic Air Contaminants) specifies limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic health index (HI) for new permit units, relocations, or modifications to existing permit units that emit TACs listed in the rule. As defined therein, "cancer burden" means the estimated increase in the occurrence of cancer cases in a population subject to a MICR of greater than or equal to one in one million (1.0×10^{-6}) resulting from exposure to TACs. MICR is defined as the estimated probability of a potential maximally exposed individual contracting cancer as a result of exposure to TACs over a period of 70 years for residential and 40 years for worker receptor locations. The MICR calculations are to include multi-pathway considerations, if applicable. Rule 1401 requires installation of Best Available Control Technology (T-BACT) for toxics for sources with individual cancer risk greater than one in one million (1×10^{-6}).

- **Rule 1421**. Dry cleaning facilities using perchloroethylene (perc)[48] dry cleaning systems are required to comply with SCAQMD Rule 1421 (Control of Perchloroethylene Emissions from Dry Cleaners). Rule 1421 has been formulated to reduce perc emissions from dry cleaning systems by transitioning them to non-perc alternatives.[49] Dry cleaning equipment utilizing perchloroethylene must be phased out by 2020 and new facilities may not operate a perc dry cleaning system after January 1, 2003. Perc has been identified by the CARB and listed as a TAC under Section 93000 in Title 17 of the CCR.

4.7.3 Environmental Setting

4.7.3.1 Regional Setting

Air Quality

The proposed project is located within the South Coast Air Basin, a geographical area roughly bordered by mountains that inhibit regional air circulation during certain meteorological conditions. The SCAB includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the

[48]/ Also referred to by its chemical names and synonyms, including tetrachloroethylene, tetrachloroethene, ethylene tetrachloride, and 1,1,2,2-tetrachloroethylene.

[49]/ Within the SCAB, dry cleaners are further regulated under Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) and Rule 1102 (Dry Cleaners Using Solvents Other than Perchloroethyene).

Basin is primarily influenced by a wide range of emissions sources (e.g., dense population centers, heavy vehicular traffic, and industry) and meteorology.

Air pollutant emissions within the SCAB are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at an identified location. Examples are boilers or combustion equipment that produces electricity or generates heat. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, racecars, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when high winds suspend fine dust particles.

As indicated in the CalEPA's "Climate Action Team Report to Governor Schwarzenegger and the Legislature": "California experiences the worst air quality in the nation, with annual health and economic impacts estimated at 9,000 deaths and $60 billion per year. Ozone and particulate matter (PM) are the pollutants of greatest concern, and the current control programs for motor vehicles and industrial sources costs about $10 billion per year. Maximum ozone levels are about double the current air quality standards. Climate change will slow progress toward attainment and increase control costs by boosting emissions, accelerating chemical processes, and raising inversion temperatures during summertime stagnation episodes. Results from statistical analysis indicate that the number of days meteorologically conducive to pollution formulation may rise by 75 to 85 percent in high ozone area of Los Angeles (Riverside) and the San Joaquin Valley (Visalia) by the end of the century if temperatures rise to the higher projected warming range, and by 25 to 35 percent if temperature increases stay within the lower warming range.

Global background ozone (primarily formed from methane and nitrogen oxides from fuel combustion) is projected to increase by 4 to 10 percent (lower emissions scenario) to 25 percent (higher emissions scenario) by 2100. If background ozone increases by the amount projected for the higher scenario, the ozone targets would be impossible to attain in much of California, even with near-zero local emissions. The future trend for PM is not as clear, as increasing temperatures reduce some particle types while others show no change or increase slightly. In general, increased temperatures tend to reduce atmospheric nitrate, an important contributor to levels of $PM_{2.5}$ (particles less than 2.5 microns) in California."[50]

Criteria Pollutants

Both the federal and State governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect the public health and welfare. These pollutants are referred to as "criteria" air pollutants as a result of the specific standards or (criteria) which have been adopted for them. The national and State standards have been set at levels considered safe to protect public health, including the health of "sensitive" populations (e.g., asthmatics, children, and the elderly) with a margin of safety and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The national and State criteria pollutants and the applicable standards are listed in Table 4.7-1 (Ambient Air Quality Standards for Criteria Pollutants, Major Pollutant Source, and

[50]/ *Op. Cit.*, Climate Action Team Report to Governor Schwarzenegger and the Legislature, pp. 25-26.

Primary Health Effects). Prolonged or heightened exposure to criteria pollutants may raise the following potential health risks:

- **Ozone**. Ozone (O_3) is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. Ozone is a powerful oxidant that can damage the respiratory tract, causing inflammation and irritation. Ozone can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthma symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering the cells more susceptible to toxins and microorganisms. The highest risks from ozone exposure are associated with active outdoor activities during smoggy periods, such as by children, athletes, and outdoor workers. Exposure to levels of ozone above the current ambient air quality standards may lead to lung inflammation, lung damage, and a reduction in the amount of air inhaled during breathing.

- **Carbon monoxide**. Carbon monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and motor vehicles operating at slow speeds are the primary source of CO in the Basin, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of moderate levels of CO can cause nausea, dizziness, and headaches, and can be fatal at high concentrations.

- **Respirable and fine particulate matter**. Respirable (PM_{10}) and fine particulate matter ($PM_{2.5}$) consist of extremely small, suspended particles or droplets 10 and 2.5 microns or smaller in diameter, respectively. Some sources of particulate matter (PM), like pollen and windstorms, are naturally occurring. In populated areas, however, most PM is caused by road dust, diesel PM (soot), combustion products, abrasion of tires and brakes, and construction activities. Exposure to PM_{10} and $PM_{2.5}$ may lead to health problems. The human body naturally prevents the entry of larger particles into the body. PM_{10} and $PM_{2.5}$ can, however, become trapped in the nose, throat, and upper respiratory tract. PM_{10} may accumulate in the lungs and irritate the respiratory tract and may also lead to eye irritation. $PM_{2.5}$ are more likely than PM_{10} to contribute to health effects. Elevated levels of PM_{10} and $PM_{2.5}$ can potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive. The USEPA and CARB have recognized adverse health effects that may be associated with exposure to PM_{10} and $PM_{2.5}$, including: (1) increased respiratory symptoms, such as the irritation of the airways, coughing, or difficulty breathing; (2) decreased lung function, particularly in children; (3) aggravated asthma; (4) development of chronic bronchitis; (5) irregular heartbeat; (6) increased respiratory and cardiovascular hospitalizations; and)7) premature death in people with heart or lung disease.[51]

[51]/ USEPA website, Health and the Environment (www.epa.gov/air/particlepollution/health.html); USEPA website, Particle Pollution and Your Health (www.epa.gov/airnow/particles-bw.pdf); California Air Resources Control Board, Health Effects of Particulate Matter and Ozone Air Pollution, January 2004.

- **Oxides of nitrogen**. Nitrogen dioxide (NO_2) is a byproduct of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), which reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called oxides of nitrogen (NO_X). NO_2 absorbs blue light (resulting in a brownish-red cast to the atmosphere) and reduced visibility. NO_2 also contributes to the formation of PM_{10}. Major sources of NO_X include power plants, large industrial facilities, and motor vehicles. Nitrogen oxides irritate the nose and throat, and increase susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_x is as a precursor to the formation of ozone.

- **Sulfur dioxide**. Sulfur dioxide (SO_2) is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. SO_2 emissions aggravate lung diseases (especially bronchitis) and constrict breathing passages (especially in asthmatics and people involved in moderate to heavy exercise). SO_2 potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide and long-term exposures to both pollutants leads to higher rates of respiratory illness.

- **Lead**. Lead (Pb) occurs in the atmosphere as particulate matter. Since leaded gasoline is no longer permitted for on-road motor vehicles, the primary sources of airborne lead pollution include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

The USEPA notes that transportation sources are significant contributors to emissions of VOCs and NO_X, the two major air pollutants related to smog. Transportation sources also contribute to the other criteria pollutants regulated by the USEPA. Based on the 1998 National Emissions Inventories,[52] Table 4.7-4 (Transportation Source Contributions to National Emissions Inventories of Criteria Pollutants [1998]) shows the percentage of the total emissions inventory for each pollutant that is due to on-road and non-road vehicles and engines. Transportation sources are also significant contributors to GHG emissions. In 1998, transportation sources account for approximately 31 percent of the total United States emissions of CO_2.[53]

Toxic Air Contaminants

An air contaminant is “any discharge, release, or other propagation into the atmosphere and includes, but is not limited to, smoke, charred paper, dust, soot, grime, carbon fumes, odors, particulate matter, acids, or any combination thereof” (Section 39013, H&SC). Section 39655 of the H&SC defines "toxic air contaminants" (TACs) as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant (HAP) pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. 7412[b]) is a toxic air

[52]/ United States Environmental Protection Agency, National Air Pollutant Emission Trends – 1990-1998, EPA-454/R-00-002, 2000.

[53]/ United States Environmental Protection Agency, EPA Guidance: Improving Air Quality through Land Use Activities, EPA 420-R-01-001, January 2001, p. 9.

contaminant." Under State law, the CARB is authorized to identify a substance as a TAC if it determines the substance is an air pollutant which may cause or contribute to an increase in mortality or serious illness or which may pose a present or potential hazard to human health.[54] The CAA contains a list of 189 hazardous air pollutants (HAPs) designated by Congress and the USEPA's current list contains 188 compounds. As required under the CAA, the USEPA has also established National Emission Standards for Hazardous Air Pollutants (NESHAPs).

Table 4.7-4
TRANSPORTATION SOURCE CONTRIBUTIONS TO NATIONAL EMISSIONS INVENTORIES OF CRITERIA POLLUTANTS
(1998)

Criteria/Precursor Pollutant	Percent of Total Inventory[2]
Carbon Monoxide (CO)	79
Oxides of Nitrogen (NO_X)[1]	53
Volatile Organic Compounds (VOCs)[1]	43
Particulate Matter (PM_{10})	19
Lead (Pb)	13
Sulfur Dioxide (SO_2)	7

Notes:
1. NO_X and VOCs are not criteria pollutants but are precursor to the criteria pollutant ozone (O_3).
2. Due to on-road and non-road vehicles and engines.

Source: United States Environmental Protection Agency

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. To date, CARB has identified 21 TACs and has also adopted the USEPA's list of HAPs as TACs. Once a TAC is identified, the CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a "safe" threshold[55] for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no "safe" threshold, the measure must incorporate Best Available Control Technology for TACs (T-BACT)[56] to minimize emissions. CARB has, to date, established formal control measures for 11 TACs (17 CCR 93001); all of which have no "safe" threshold.

[54]/ A characteristic of TAC pollution, which distinguishes it from most criteria pollutants, is that the impact of TACs tends to be highest in close proximity to sources and drops off with distance. TACs are less pervasive in the urban atmosphere than criteria pollutants but are linked to short-term (acute) and long-term (chronic or carcinogenic) adverse human health impacts. The cancer causing potential of TACs is a particular public health concern because many scientists believe that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen can pose some risk of causing cancer. Many components interact and cause effects greater than that of individual components involved (South Coast Air Quality Management District, Final Draft – An Air Toxic Control Plan for the Next Ten Years, March 2000, p. 6).

[55]/ The primary health risk of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a primary public health concern because many scientists currently believe that there are no "safe" levels of exposure to carcinogens. Any exposure to carcinogen poses some risk to causing cancer. Unlike carcinogens, for most non-carcinogens, it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The Office of Environmental Health Hazard Assessment (OEHHA) developed Reference Exposure Levels (RELs) for TACs which are health-conservative estimates of levels of exposure at or below which health effects are not expected. The non-cancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

[56]/ As defined in SCAQMD Rule 1401, T-BACT "means the most stringent emissions limitation or control technique which: (A) has been achieved in practice for such permit unit category or class of source; or (B) is any

AB 2588 addresses public concerns that emissions from individual facilities might cause local concentrations of air toxics "hot spots" at a level where individuals may be exposed to an excess risk of adverse health effects.[57] The act requires facilities to notify all exposed persons if it is determined that there is a significant health risk. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the AQMD or APCD. High priority facilities are required to perform a HRA and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings.

To characterize health risks posed by TACs in the SCAB, the SCAQMD conducted the "Multiple Air Toxics Exposure Study" (MATES-II).[58] The MATES-II study concluded that the Basinwide average cancer risk was about 1,400 in one million (1,400 x 10^{-6})[59] (assuming continuous exposure 24-hours per day for a 70-year lifetime). Mobile sources (e.g., automobiles, trucks, trains, ships, aircraft) were reported to be the largest contributors and about 70 percent of the cancer risk was attributed to diesel PM; another 20 percent was attributed to other TACs associated with mobile sources (including benzene, 1,3-butadiene, and formaldehyde). The remaining 10 percent was attributed to stationary sources (e.g., industry, certain businesses such as dry cleaners and chrome plating operations). In the MATES-II study, the SCAQMD found that cancer risk across the SCAB ranged from about 1,120 (1,120 x 10^{-6}) to 1,740 in one million (1,740 x 10^{-6}) among eight fixed sites. As a follow-up, during 2004-2006, SCAQMD conducted the MATES-III study, which affirmed the findings of MATES-II. In the MATES-III study, the SCAQMD estimated that the Basinwide cancer risk was about 1,200 in one million (1,200 x 10^{-6}), with TACs from mobile sources accounting for 94 percent of this risk on average.

TACs potentially relevant to the proposed project are discussed below. The following TACs are not, however, inclusive of all TACs that may potentially occur in the general project area.

- **Diesel particulate matter**. Diesel PM, which is emitted in the exhaust from diesel engines, was listed by the State as a TAC in 1998. Diesel PM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. Diesel PM consists of fine particles (fine particles have a diameter <2.5 µm), including a subgroup of ultrafine particles (ultrafine particles have a diameter <0.1 µm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or soot.[60] Diesel exhaust also contains a variety of harmful gases and over 40 cancer-causing substances. Exposure to diesel PM may be a health hazard, particularly to

other emissions limitation or control technique, including process and equipment changes of basic and control equipment, found by the Executive Director to be technologically feasible for such class or category of sources, or for a specific source."

[57]/ The act requires certain facilities to submit information regarding emissions of more than 550 TACs to their local AQMDs and APCDs. The AB 2588 toxics list was developed using the TACs list, candidate TACs list, Proposition 65 chemicals, certain hazardous chemicals identified under the California Labor Code, certain substances listed by the National Toxicology Program, and additional substances recognized by the CARB as presenting a chronic or acute threat to public health. A facility is subject to the act if it is on any toxics use or toxics air emissions survey, inventory, or report compiled by an air pollution control district or manufactures, uses, or releases any substance on the act's list and releases or has the potential to release more than 10 tons/year total organic gases, particulates, NO_x, or SO_x.

[58]/ South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-II), Final Report, March 2000.

[59]/ South Coast Air Quality Management District, Final 2007 Air Quality Management Plan, June 1, 2007.

[60]/ Soot refers to elemental carbon formed from gas phase hydrocarbons in the combustion process and tends to be in the submicron fraction and often in the fraction of particles that are smaller than 0.10 microns in aerodynamic diameter.

children whose lungs are still developing and elderly who may have other serious health problems. Diesel PM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, diesel PM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.[61]

Diesel-fueled vehicles emit diesel PM, a complex mixture of gaseous vapors, fine particles, and numerous associated TACs. Near-source exposures to diesel exhausts occur near busy roads and intersections where diesel vehicles are operating. Higher than average concentrations of diesel exhaust occur near oil and gas production areas, railroad yards, shipping docks, and other stationary point and area sources where diesel engine use is common.[62] Hot-spot concentrations have been identified along certain roadways and can occur in the immediate vicinity of use of non-road equipment, such as near urban construction sites.[63]

Based on the findings of the USEPA's "Health Assessment Document for Diesel Engine Exhaust," acute or short-term exposure to diesel exhaust can cause acute irritation (e.g., eye, throat, bronchial), affect neurophysiological systems (e.g., lightheadedness, nausea), and produce respiratory symptoms (e.g., cough, phlegm). There is also evidence for an immunologic effect, such as the exacerbation of allergenic responses to known allergens and asthma-like symptoms. In August 1998, the CARB identified diesel PM as a TAC. Almost all of the diesel exhaust particle mass (soot) is in the fine particle range of 10 microns or less in diameter. Because of their size, these particles can be inhaled and eventually trapped into the bronchial and alveolar regions of the lung.[64]

In 2000, the SCAQMD conducted a study on ambient concentrations of TACs and estimated the potential health risks from air toxics. Although concentrations and risk levels vary throughout the region, as illustrated in Figure 4.7-1 (Regional Air Toxics Cancer Risks in the South Coast Air Basin), the results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,400 in one million ($1{,}400 \times 10^{-6}$). As illustrated in Figure 4.7-2 (Major Pollutants Contributing to Air Toxics Cancer Risks in the South Coast Air Basin),[65] the largest contributor to this risk was diesel exhausts, accounting for 71 percent of the air toxics risk.[66] Other cancer risk contributors, primarily from gasoline engines and other non-diesel sources, included other pollutants (primarily from stationary sources) at 11 percent, 1,3-butadiene[67] at 8

[61]/ California Air Resources Board website, Health Effects of Diesel Exhaust Particulate Matter (http://www.arb.ca.gov/research/diesel/dpm_health_fs.pdf).

[62]/ California Air Resources Control Board, Office of Environmental Health Hazard Assessment, Executive Summary – For the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant," Scientific Review Panel, April 22, 1998 (http://www.arb.ca.gov/toxics/summary/dieselex/dieselex.htm).

[63]/ 68 FR 28343.

[64]/ California Environmental Protection Agency, California Air Resources Control Board, Office of Environmental Health Hazard Assessment, Executive Summary – for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant," Scientific Review Panel, April 22, 1998.

[65]/ South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-II), March 2000, p. ES-8.

[66]/ *Op. Cit*., 2003 Air Quality Management Plan – Cleaning the Air we Breath, adopted August 1, 2003, Appendix I, Health Effects, pp. I-18 and I-19.

[67]/ 1,3-Butadiene is produced through the processing of petroleum and is mainly used in the production of synthetic rubber but is also found in smaller amounts in plastics and fuel. Exposure mainly occurs in the workplace,

percent of the risk, benzene[68] at 7 percent, and carbonyls (including formaldehyde and acetaldehyde) at 3 percent. Using methodology approved by the USEPA's Science Advisory Board, a recent Clean Air Task Force analysis concluded that about 21,000 people die prematurely each year due to particulate pollution from diesels.[69]

- **Volatile organic compounds**. Volatile organic compounds (VOCs) are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some are also classified by the State as TACs. While there are no specific VOC ambient air quality standards, VOC is a prime component (along with NO_X) of the photochemical processes by which such criteria pollutants as O_3, NO_2, and certain fine particles are formed and are regulated as "precursors" to formation of those criteria pollutants.

- **Hexavalent chromium**.[70] Hexavalent chromium (Cr+6 or Cr[VI]) is one of the most toxic air pollutants regulated by the State. Cr+6 is a carcinogen and has been identified in worker health studies as causing lung cancer. When inhaled over a period of many years, it can cause a variety of non-cancer health effects, including damage to the nose, blood disorders, lung disease, and kidney damage.[71]

  Cr+6 is found primarily in industrial settings, including metallurgical, refractory, and chemical. Occupational exposure can be from thermal spraying, welding of alloys or steel, leather tanning, chomate production, textiles, and wood preservatives. Exposure to Cr+6 can also occur from airborne emissions from chemical plants, incineration facilities, cement plants, and tobacco smoke. Exposure to Cr+6 can be through inhalation, ingestion, and dermal contact. Inhalation exposure has been known to cause lung and nasal cancers, respiratory irritation, severe nasal and skin ulcerations and lesions, perforation in the nasal septum, liver and kidney failure, and birth defects. Cr+6 is mutagenic in bacterial and mammalian cell systems. As a mutagenic environmental carcinogen, hexavalent chromium has the ability to alter the DNA base sequence.[72,73]

  Cr+6 has also been linked to Portland cement.[74] Because Portland cement contains Cr(VI), operations that create concrete dust may lead to worker exposure.[75]

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including the following industries: synthetic elastomer (rubber and latex) production, petroleum refining, secondary lead smelting, water treatment, agricultural fungicides, production of raw material for nylon, and the use of fossil fuels. Exposure can also occur from automobile exhaust, polluted air and water near chemical, plastic or rubber facilities, cigarette smoke, and ingestion of foods that are contaminated from plastic or rubber containers.

[68]/ Benzene is an aromatic hydrocarbon that is produced by the burning of natural products. It is a component of products derived from coal and petroleum and is found in gasoline and other fuels. Benzene is used in the manufacture of plastics, detergents, pesticides, and other chemicals. Research has shown benzene to be a carcinogen (cancer-causing). With exposures from less than five years to more than 30 years, individuals have developed, and died from, leukemia. Long-term exposure may affect bone marrow and blood production. Short-term exposure to high levels of benzene can cause drowsiness, dizziness, unconsciousness, and death.

[69]/ Clean Air Task Force, Diesel and Health in America: The Lingering Threat, February 2005, Forward.

[70]/ The CARB identified Cr+6 as a TAC in January 1986, finding, based on epidemiological and animal studies, that Cr+6 should be considered a human carcinogen for which there is no safe threshold exposure level.

[71]/ California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005, p. 25.

[72]/ California Air Resources Control Board, Fact Sheet - Hexavalent Chromium, March 16, 2004.

[73]/ In the area of Rubidoux (Riverside County), a localized increased Cr+6 air levels has been linked with a cement company (TXI Riverside Cement Company) operating in that area. Similar conditions are not anticipated in the area of Cemex USA's Lytle Creek facility since cement manufacturing is not known to occur at that location.

[74]/ As reported by the United States Department of Labor Occupational Safety and Health Administration (OSHA): "Portland cement is one of the most widely-used formulations of cement in construction and the occupational health hazards are generally well known. These include inhalation, dermal, and eye hazards, some of

The CARB states that protecting California's communities and children from health effects of air pollution is one of the fundamental goals of State and local air pollution prevention programs. Children, the elderly, pregnant woman, and those with serious health problems may each have a "special vulnerability to the health impacts of air pollution."[76]

As indicated by the CARB: "Land use policies and practices can worsen air pollution exposure and adversely affect public health by mixing incompatible land uses. Examples include locating new sensitive land uses, such as housing or schools, next to small metal plating facilities that use a highly toxic form of chromium, or very near large industrial facilities or freeways. Based on recent monitoring and health-based studies, we now know that air quality impacts from incompatible land uses can contribute to increased risk of illness, missed work and school, a lower quality of life, and higher costs for public health and pollution control. Avoiding incompatible land uses can be a challenge in the context of mixed-use industrial and residential zoning. . .Generally speaking, typical distances in mixed-use communities between businesses and industries and other land uses such as homes and schools, should be adequate to avoid health risks. . .In terms of siting air pollution sources, the proposed location of a project is a major factor in determining whether it will result in localized air quality impacts. Often, the problem can be avoided by providing an adequate distance or setback between a source of emissions and nearby sensitive land uses."[77]

The CARB further notes that "[a]ir pollution studies indicate that living close to high traffic and the associated emissions may lead to adverse health effects beyond those associated with regional air pollution in urban areas. Many of these epidemiological studies have focused on children. A number of studies identified an association between adverse non-cancer health effects and living or attending school near heavily traveled roadways. These studies have reported associations between residential proximity to high traffic roadways and a variety of respiratory systems, asthma exacerbations, and decreases in lung functions in children."[78]

The I-15 (Ontario) Freeway traverses the project site and abuts lands located within proposed Neighborhoods I, III, and IV. Although not specific to the I-15 Freeway, the CARB has formulated recommendations concerning "minimum separation between new sensitive land uses and existing sources," including freeways and other high-traffic roads.

On April 28, 2005, the CARB published the "Air Quality and Land Use Handbook" (CARB Handbook), including recommended minimum separation distances, to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to facilities that emit TACs. As guidance, the CARB Handbook recommends avoiding the siting of sensitive

which result from trace constituents generally found in portland cement, including hexavalent chromium ('Cr(VI)'). Cr(VI) is a trace constituent of portland cement not because it is an added ingredient but because it is a contaminant that enters the mixture during its manufacture. Generally there is less than 20 µg Cr(VI) per gram of cement, or 20 parts per million (ppm). OSHA's Cr(VI) standards do not apply to operations with portland cement because OSHA determined that compliance with pre-existing OSHA general standards provides adequate protection for employees exposed to the trace amounts of Cr(VI) found in portland cement." (Source: United States Department of Labor Occupational Safety and Health Administration, Memorandum from Edwin G. Foulke, Jr. [Subject: Inspection Procedures for Construction Sites Using Portland Cement] to Regional Administrators – State Designees, April 16, 2007, Appendix C-1 [http://www.osha.gov/dep/hexchrom/BCTD_settlement_memo_20070416.html].

[75]/ United States Department of Health and Human Services, Center for Disease Control and Prevention, National Institute of Occupational Health and Safety, Criteria Document Update – Occupational Exposure to Hexavalent Chromium, External Review Draft, September 2008, p. 132.

[76]/ *Op. Cit*., Air Quality and Land Use Handbook: A Community Health Perspective, p. 1.

[77]/ *Ibid*., pp. 38-39.

[78]/ *Ibid*., p. 8.

receptors within certain distances of TAC sources.[79,80] The recommendations provided in the CARB Handbook are voluntary and do not constitute a requirement or mandate for either land-use agencies or local air districts. The CARB's recommended minimum separation distance between potentially incompatible land uses are presented in Table 4.7-5 (California Air Resources Board – Recommendations on Siting Sensitive Land Uses).[81]

In addition to those source-specific recommendations presented in the CARB Handbook, as indicated in Table 4.7-6 (Examples of Other Facility Types that Emit Air Pollutants of Concern),[82] the CARB has developed a list of other industrial sources that could pose a significant health risk to nearby sensitive receptors depending on a number of factors. Those factors include the amount of pollutant emitted and its toxicity, the distance to nearby individuals, and the type of emission controls that are in place.

Global Climate Change

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and storms. Global warming, a related concept, is the observed increase in average temperature of the Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in the Earth's atmosphere that play a critical role in determining the Earth's surface temperature. GHGs allow high-frequency solar radiation to enter the Earth's atmosphere but trap the low frequency, long-wave energy which is radiated back from the Earth to space, resulting in a warming of the atmosphere. The Earthward movement of this long-wave radiation is known as the "greenhouse effect."

Studies indicate that the effects of global climate change may include rising surface temperatures, loss of snow pack, sea level rise, more extreme heat days per year, and more drought years.[83] Understanding of the fundamental processes responsible for global climate change has improved over the past decade and predictive capabilities are advancing. However, there remain scientific uncertainties surrounding the response of the Earth's climate system to combinations of changes, particularly at regional and local scales. Consequently, the scientific community has systematically developed a range of scenarios that are based on ensembles of computer programs, model parameters, climatic processes, and social and economic responses. The result is a range of potential future conditions for key variables, such as peak summer temperature, the occurrence of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system and inherent uncertainty in the future actions of human beings, predictions of future climatic conditions will always include a range of possible outcomes.

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[79]/ *Ibid*., Table 1-1.

[80]/ As indicated in the proposed LCRSP, conditionally permitted land uses within the "Village Center Commercial (VC)" and "General Warehousing Overlay" districts include "welding, machine, and metal plating shops" and "central cleaning or laundry plants."

[81]/ *Op. Cit*., Air Quality and Land Use Handbook: A Community Health Perspective, Tables 1-1 and 1-2, pp. 4, 6 and 7.

[82]/ *Ibid*., Table 1-3, pp. 32-33.

[83]/ Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability.

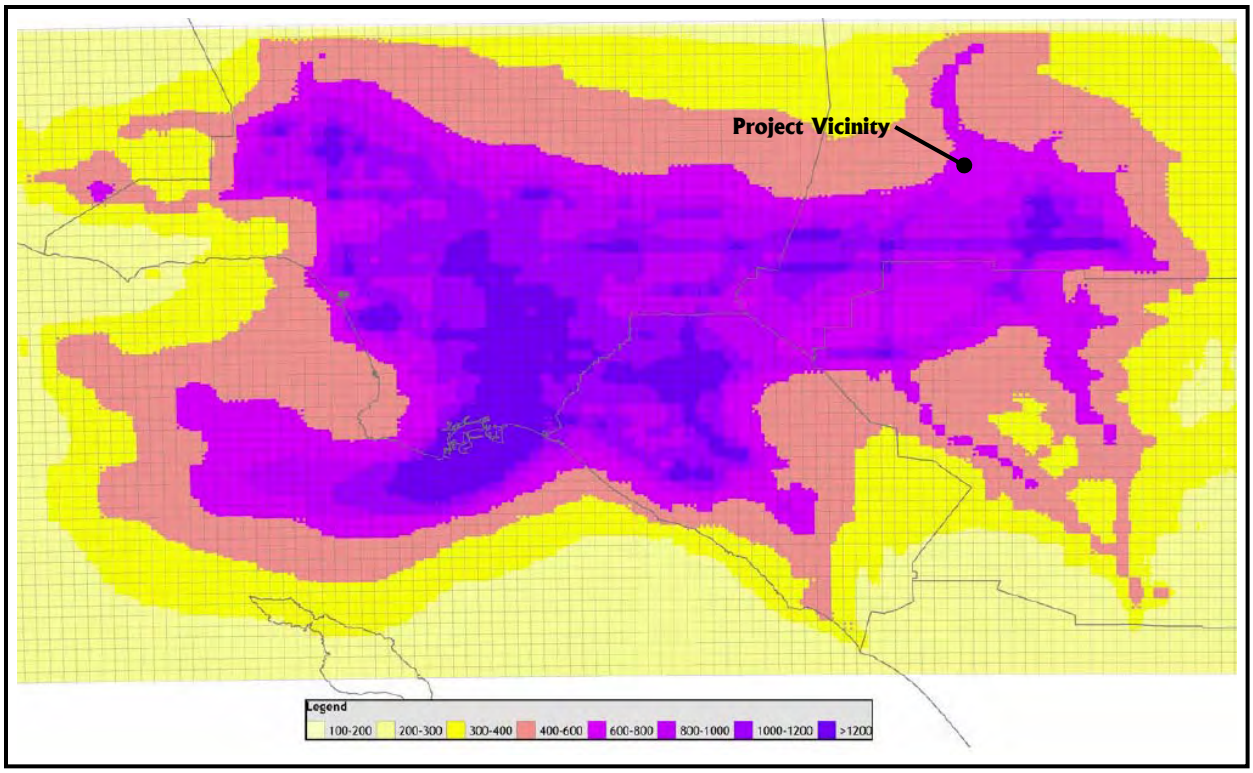

Figure 4.7-1
REGIONAL AIR TOXICS CANCER RISKS IN THE SOUTH COAST AIR BASIN
Source: South Coast Air Quality Management District

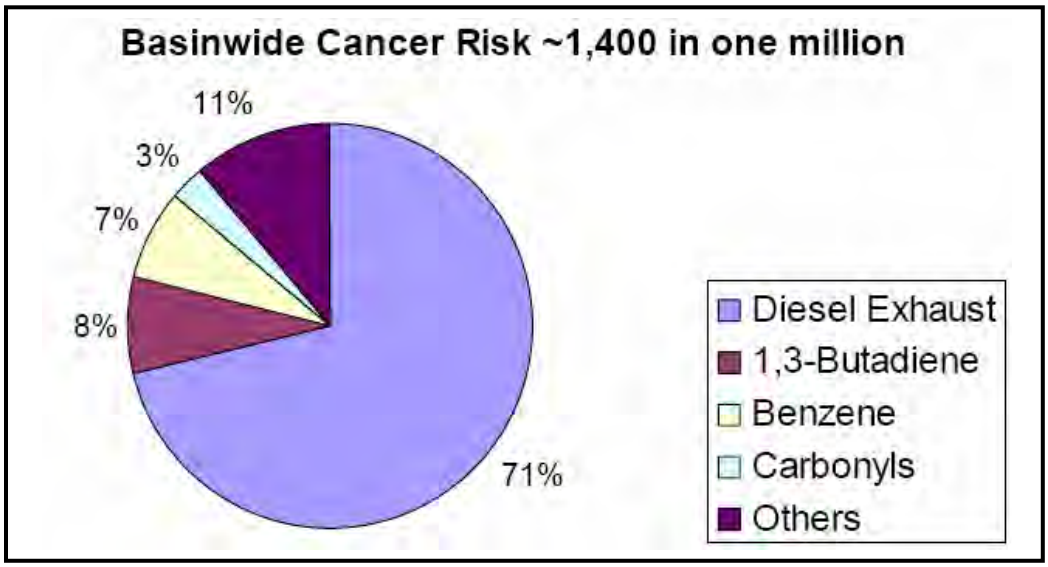

Figure 4.7-2
MAJOR POLLUTANTS CONTRIBUTING TO AIR TOXICS CANCER RISKS IN THE SOUTH COAST AIR BASIN
Source: South Coast Air Quality Management District

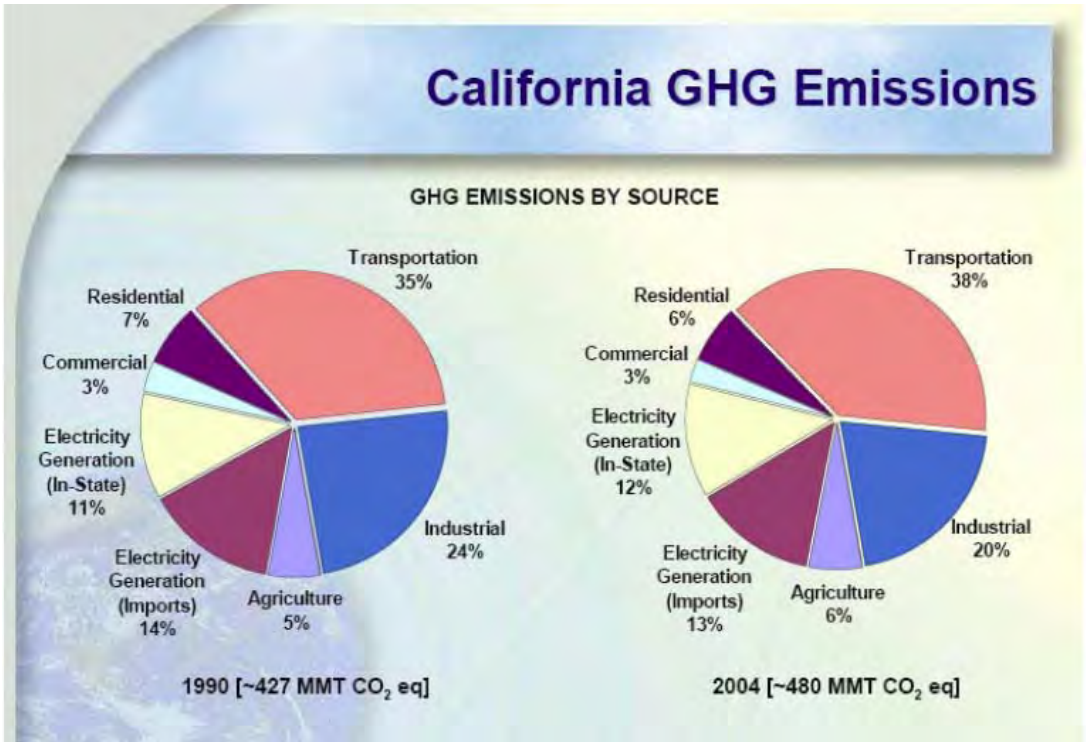

Figure 4.7-3
CALIFORNIA AIR RESOURCES BOARD
SOURCES OF CALIFORNIA GHG EMISSIONS BY END-USER (1990 and 2004)
Source: California Air Resources Board

Table 4.7-5
CALIFORNIA AIR RESOURCES BOARD RECOMMENDATIONS ON SITING SENSITIVE LAND USES

Source Category	Advisory Recommendations	Range of Cancer Risks[1,2]	Summary of Basis for Advisory Recommendations
Freeway and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roadway with 100,000 vehicles/day, or rural roadway with 50,000 vehicles day.	300-1,700	The additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. Studies show about 70% drop off in PM pollution levels at 500 feet.
Distribution Centers[3] (DC)	Avoid siting new sensitive land uses within 1,000 feet of a DC (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU units operations exceed 300 hours/week) Take into account the configuration of existing DCs and avoid locating residences and other new sensitive land uses near entry and exit points.	Up to 500	Because CARB regulations will restrict truck idling at DCs, TRU operations are the largest on-site diesel PM emission source followed by truck travel in/out of DCs. 80% drop-off in pollution concentrations at approximately 1,000 feet from a DC.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.	10-100	Localized risk of Cr+6 diminishes significantly at 300 feet. A distance of 1,000 feet was used as a precautionary measure.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with 2+ machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perc dry cleaners.	15-150	Individual cancer risks can be reduced by as much as 75% by establishing a 300-foot separation between a sensitive land use and a one-machine perc dry cleaning operation. For larger operations, a separation distance of 500 feet can reduce risks by over 85%.
Gasoline Dispensing Facilities[4] (GDF)	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.	Typical GDF: <10 Large GDF: <10-120	Most GDFs (<3.6 million gallons/year) have a risk of less than 10 at 50 feet under urban air dispersion conditions. Under rural air dispersion conditions, larger GDFs can pose a larger risk at a greater distance.

Notes:
1. For cancer health effects, risk is expressed as an estimate of the increased chances of getting cancer due to facility emissions over a 70-year lifetime. This increase in risk is expressed as chances in a million.
2. The estimated cancer risks are a function of proximity to the specific category and were calculated independent of the regional health risk for air pollution. For example, the estimated regional cancer risk from air toxics in the Los Angeles Region (SCAB) is approximately 1,000 in one million ($1,000 \times 10^{-6}$).
3. Analysis based on refrigerator trucks.
4. A typical GDF in California dispenses under 3.6 million gallons of gasoline per year. The cancer risk for this size facility is likely to be less than 10 in one million (10×10^{-6}) at the fence line under urban air dispersion conditions. A large GDF has fuel throughputs that can range from 3.6 to 19 million gallons of gasoline per year. The upper end of the risk (i.e., 120 in one million [120×10^{-6}]) represents a hypothetical worst-case scenario for an extremely large GDF under rural air dispersion conditions.

Source: California Air Resources Board

Table 4.7-6
EXAMPLES OF OTHER FACILITY TYPES THAT EMIT AIR POLLUTANTS OF CONCERN[1]

Category	Facility Type	Air Pollutants of Concern
Commercial	Autobody Shops	Metals, Solvents
	Furniture Repair	Solvents[2], Methylene Chloride
	Film Processing Services	Solvents, Perchloroethylene
	Distribution Centers	Diesel PM
	Printing Shops	Solvents
	Diesel Engines	Diesel PM
Industrial	Construction	Particulate Matter, Asbestos
	Manufacturing	Solvents, Metals
	Metal Platers, Welders, Metal	Hexavalent Chromium, Nickel
	Spray (flame spray) Operations	Metals
	Chemical Producers	Solvents, Metals
	Furniture Manufacturers	Solvents
	Shipbuilding and Repair	Hexavalent Chromium and other Metals, Solvents
	Rock Quarries and Cement Manufacturers	Particulate Matter, Asbestos
	Hazardous Waste Incinerators	Dioxin, Solvents, Metals
	Power Plants	Benzene, Formaldehyde, Particulate Matter
	Research and Development Facilities	Solvents, Metals, etc.
Public	Landfills	Benzene, Vinyl Chloride, Diesel PM
	Waste Water Treatment Plants	Hydrogen Sulfide
	Medical Waste Incinerators	Dioxin, Benzene, PAH, PCBs, 1,3-Butadiene
	Recycling, Garbage Transfer Stations	Diesel PM
	Municipal Incinerators	Dioxin, Benzene, PAH, PCBs, 1,3-Butadiene
Transportation	Truck Stops	Diesel PM
Agricultural Operations	Farming Operations	Diesel PM, VOCs, NO_X, PM_{10}, CO, SO_X, Pesticides
	Livestock and Dairy Operations	Ammonia, VOCs, PM_{10}

Notes:
1. Not all facilities will emit pollutants of concern due to process changes or chemical substitution. Consult the local air district regarding specific facilities.
2. Some solvents may emit toxic air pollutants but not all solvents are toxic air contaminants.

Source: California Air Resources Board

The World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988 in order to provide an authoritative, international consensus of scientific opinion on climate change. In February 2007, the IPCC reported: "Global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have increased markedly as a result of human activities since 1750 and now far exceed pre-industrial values determined from ice cores spanning many thousands of years. Carbon dioxide is the most important anthopogenic greenhouse gas. The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of

about 280 ppm [parts per million] to 379 ppm[84] in 2005. The atmospheric concentration of carbon dioxide in 2005 exceeds by far the natural range over the last 650,000 years (180 to 300 ppm) as determined by ice cores. The primary source of the increased atmospheric concentration of carbon dioxide since the pre-industrial period results from fossil fuel use, with land use change providing another significant but smaller contribution."[85]

The IPCC concluded that "[c]ontinued greenhouse gas emissions at or above current rates would cause further warming and induce many changes in the global climate system during the 21st century that would very likely be larger than those observed during the 20th century."[86]

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG needed to peak in the next 10-15 years and must then be reduced to very low levels. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25-40 percent below 1990 levels. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries, as well.[87]

As indicated in the IPCC's "Climate Change 2007: The Physical Science Basis – Summary for Policymakers": "The primary source of the increased atmospheric concentration of carbon dioxide since the pre-industrial period results from fossil fuel use, with land use change providing another significant but smaller contribution. Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea levels."[88] In response to the IPCC's publication" Energy Secretary Samual Bodman acknowledged that "[c]limate change is a global challenge that requires global solutions."[89]

Eleven of the 12 years between 1995 and 2006 ranked among the warmest years in the instrumental record of global surface temperatures (since 1850). Global average sea level has risen since 1961 at an average rate of 1.8 millimeters per year (mm/yr) and since 1993 at 3.1 mm/yr, with contributions from thermal expansion, melting glaciers and ice caps, and polar ice sheets. It is very likely that over the past 50 years, cold days, cold nights, and frost have become less frequent over most land areas and hot days and hot nights have become more frequent. Average Northern Hemisphere temperatures during the second half of the 20th Century were very likely higher than during any other 50-year period in the last 500 years and

[84]/ ppm or p.p.m. (parts per million) is the ratio of the number of greenhouse gas molecules to the total number of molecules of dry air (e.g., 300 ppm = 300 molecules of a greenhouse gas per million molecules of dry air).

[85]/ Intergovernmental Panel on Climate Change, Climate Change 2007: The Physical Science Basis – Summary for Policymakers, February 2007, p. 2.

[86]/ *Ibid*., p. 10.

[87]/ United Nations Framework Convention on Climate Change, Press Release – Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change, August 31, 2007).

[88]/ United Nations International Panel on Climate Change, Climate Change 2007: The Physical Science Basis – Summary for Policymakers, Fourth Assessment Report, February 5, 2007, pp. 2 and 5.

[89]/ United States Department of Energy, Press Release: Bush Administration Plays Leading Role in Studying and Addressing Global Climate Change, February 2, 2007.

likely the highest in at least the past 1,300 years.[90] There is very high confidence that the net effect of human activities since 1750 has been one of warming. Most of the observed increase in globally-averaged temperature since the mid-20th Century is very likely due to the observed increase in anthropogenic GHG concentrations.[91]

Changes in atmospheric concentrations of GHGs and aerosols, land cover, and solar radiation alter the energy balance of the climate system. Global GHG emissions due to human activities have grown since pre-industrial times, with an increase of 70 percent between 1970 and 2004. The annual emissions of carbon dioxide (CO_2) grew by about 80 percent between 1970 and 2004. Atmospheric concentrations of CO_2 and methane (CH_4) in 2005 exceed by far the natural range over the last 650,000 years. Global increases in CO_2 concentrations are due primarily to fossil fuel use, with land-use change providing another significant but smaller contribution. It is very likely that the observed increase in CH_4 concentration is predominantly due to agriculture and fossil fuel use.[92]

As reported by SCAG: "Global warming poses a serious threat to the economic well-being, public health and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and State economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO_2 emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO_2 emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the State's population and economic activities, is also a major contributor to the global warming problem."[93]

With regards to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO_2; (2) ground-level ozone or photochemical smog, which is the reaction of oxides of nitrogen (NO_x) and VOC and which are "tailpipe emissions," is temperature dependent (i.e., heat increases smog); ground-level ozone, which is also increased by higher levels of ultraviolet B radiation from stratospheric zone depletion, has been shown to cause asthma in children and to trigger attacks and causes increased morbidity and mortality in those with chronic obstructive pulmonary disease; (3) diesel exhaust particulates cause significant illness, especially when they are smaller than 10 microns in diameter and can bypass the lung's defense, and can clog airways and cause acute and worsen chronic, cardiovascular, and respiratory illness, help deliver pollen grains and molds deep into the lung, and cause lung cancer; (4) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (5) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter

[90]/ Intergovernmental Panel on Climate Change, Summary for Policymakers of the Synthesis Report of the IPCC Fourth Assessment Report, Draft November 16, 2007, p. 1.
[91]/ *Ibid*., pp. 4-5.
[92]/ *Ibid*.
[93]/ Southern California Association of Governments, The State of the Region – Measuring Regional Progress, December 2006, p. 121.

snows; these fires can create smoke and haze which can settle over urban populations causing acute and exacerbating chronic respiratory illness.[94]

Greenhouse Gas Emissions

The six most globally important GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).[95] Some GHGs occur naturally in the atmosphere, while others result from human activities. Naturally occurring GHGs include water vapor, carbon dioxide, methane, nitrous oxides, and ozone. Certain human activities add to the levels of most of these naturally occurring gases. CO_2 is released to the atmosphere when solid waste, fossil fuels, wood, and wood products are burned. CH_4 is emitted during the production and transport of coal, natural gas, and oil and results from the decomposition of organic wastes and the raising of livestock. N_2O is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuel. Other GHGs are not naturally occurring, including hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride which are generated in a variety of industrial processes. Each GHG differs in its ability to absorb heat in the atmosphere.[96]

Carbon dioxide is the most abundant GHG. As such, GHG emissions typically are measured in metric tonnes of "carbon dioxide equivalent" (CO_2e) units.[97] A "metric ton" is 1,000 kilograms (approximately 2,205 pounds). These gases have different potentials for trapping heat in the atmosphere, called "global warming potential" (GWP). When dealing with an array of emissions, the gases are often converted to their CO_2e for comparison purposes.[98] CO_2e represent the

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[94]/ Epstein, Paul R. *et al*., Urban Indicators of Climate Change, Report from the Center for Health and the Global Environment, Harvard Medical School and the Boston Public Health Commission, August 2003, unpaginated.

[95]/ Section 38505(g) of the H&SC recognizes the six listed gases as greenhouse gases. Recently, some groups have advocated for the inclusion of "black carbon" in analyses of climate change under CEQA. Black carbon is a form of particulate air pollution that is most often produced from the burning of biomass, cooking with solid fuels, and diesel exhaust. Some studies have implicated black carbon as a source of global climate change; however, the potential impact of black carbon on climate change is currently under substantial dispute. Some studies indicate that less than 15 percent of the man-made portion of global warming is due to black carbon (Source: Jacobson, Mark Z., Effects of Black Carbon and Other Non-Kyoto Pollutants on Climate, Presentation to the Economic and Technology Advancement Advisory Committee California Air Resources Board, September 6, 2007). A high-end estimate indicates that black carbon could be responsible for 60 percent of the global warming. (Source: Ramanathan and Carmichael, Global and Regional Climate Changes Due to Black Carbon, Nature Geoscience, 2008).

Black carbon is not assessed in this report for the following reasons: (1) No regulatory authority has classified black carbon as a GHG and it is not regulated under AB 32 or any other law implemented to address global climate change; (2) Tools are not available to quantify black carbon emissions at this time (i.e., emissions factors for black carbon have not been published by the CARB, USEPA, or other reputable bodies; while some calculation methodologies have been postulated, the methodologies have not been confirmed by actual measurements of sources); and (3) No guidance on the importance, evaluation, or mitigation of black carbon has been provided by the agencies leading the climate change issue. The SCAQMD has not included black carbon in their discussion of GHG significance thresholds. There does not appear to be any guidance provided in recent guidelines released by OPR or the California Air Pollution Control Officers Association (CAPCOA) nor does black carbon appear to be addressed in current efforts to implement AB 32, the primary legislation designed to reduce California's impact on climate change. While the proposed project will generate some black carbon, the quantities are indeterminable at this time. The potential impact of the black carbon emissions on climate change is also unknown at this time.

[96]/ Bay Area Air Quality Management District, Source Inventory of Bay Area Greenhouse Gas Emissions, November 2006, pp. 1-2.

[97]/ In this analysis, "tonnes" is used to refer to metric tonnes (1,000 kilograms) and "tons" is used to refer to short tons (2,000 pounds).

[98]/ The term "carbon dioxide equivalent" (CO_2e) is used to describe the ensemble of GHG gases that contribute to global warming, including CO_2, methane, nitrous oxides, and a class of gases called "high GWP gases." The term "high GWP gases" is applied to a series of gases used in industrial process, including HFCs, PFCs, and SF_6, which are used mainly as replacements for ozone-depleting industrial gases, as byproducts of manufacturing

total impact (radiative forcing) of GHGs in the atmosphere, making it possible to determine the climate change of one GHG versus another. As established by the United Nations Intergovernmental Panel on Climate Change (IPCC) and the Bay Area Air Quality Management District, Table 4.7-7 (Global Warming Potentials for Greenhouse Gases) shows GWP for different GHG for 100-year time horizon.[99]

Table 4.7-7
GLOBAL WARMING POTENTIALS FOR GREENHOUSE GASES

Greenhouse Gas	Global Warming Potential[1]
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (N_2O)	310
Perfluorocarbons (PFCs)	6,500
Hydrofluorocarbons (HFCs)	
HFC-32	650
HFC-134a	1,300
HFC-125	2,800
HFC-143a	3,800
CF4	6,500
C2F6	9,200
HFC-23	11,700
Sulfur Hexafluoride (SF_6)	23,900

Notes:
1. Bay Area Air Quality Management District, Source Inventory of Bay Area Greenhouse Gas Emissions, November 2006, pp. 1-2.

Source: United Nations Intergovernmental Panel on Climate Change

As illustrated in Figure 4.7-3 (California Air Resources Board – Sources of California GHG Emissions by End-User [1990 and 2004]) and shown in Table 4.7-8 (2002-2004 Average Emissions and 2020 Projected Emissions [Business-as-Usual]),[100] total GHG emissions was estimated at 427 million gross tonnes of CO_2e[101] ($MMTCO_2e$) in 1990.[102] In 2004, California produced 469 $MMTCO_2e$ GHG emissions. The CARB also reports that the transportation sector is the largest emitter of GHG, emitting 179.3 $MMTCO_2e$ GHG or emissions roughly 38 percent of California's GHGs in 2004.[103,104]

processes, for semiconductor manufacturing, and for electric power transmission and distribution switchyard gear. These non-CO_2 gases cause the atmosphere to heat (radiative forcing) at a faster rate than CO_2. To determine CO_2-equivalent of these non-CO_2 gases, CO_2 is given a weighting factor of 1.0 and the other gases are given a weighting factor that represents their rate of warming compared to CO_2. These weighting factors are called global warming potential (GWP) are usually based upon the impact of the subject gas estimated over a 100-year time period..

[99]/ California Air Resources Board, Staff Report: California 1990 Greenhouse Gas Emissions Level and 2020 Emission Limit, November 16, 2007.

[100]/ *Op. Cit.*, Climate Change – Proposed Scoping Plan, A Framework for Change, Table 1, p. 13.

[101]/ Gross emissions represent emissions without taking into account emissions reductions or sinks.

[102]/ The California Energy Commission (CEC) and the Climate Action Team (CAT) also produced estimates of the 1990 emission level based on the best available data at the time those estimates were made. While the numbers are similar, emissions from individual sources from individual sectors differ between the CARB and CEC by up to 30 percent due to updated data, methodologies, and differences in included and excluded emissions.

[103]/ *Op. Cit.*, Climate Change – Proposed Scoping Plan, A Framework for Change, p. 13.

Table 4.7-8
2002-2004 AVERAGE EMISSIONS AND 2020 PROJECTED EMISSIONS (BUSINESS-AS-USUAL)
($MMTCO_2e$)

Sector	2002-2004 Average Emissions	Projected 2020 Emissions (Business-as-Usual)
Transportation	179.3	225.4
Electricity	109.0	139.2
Commercial and Residential	41.0	46.7
Industry	95.9	100.5
Recycling and Waste	5.6	7.7
High GWP	14.8	46.9
Agriculture	27.7	29.8
Forest Net Emissions	-4.7	0.0
Emissions Total	469	596

Source: California Air Resources Board

As reported by CARB, the electricity generation sector was the next largest emitter of GHGs, emitting 109.6 $MMTCO_2e$ or roughly 23 percent of Statewide GHG emissions in 2004. Although electricity imported into California accounts for only about a quarter of the electricity, imports contribute more than half of the GHG emissions from electricity because much of the imported electricity is generated at coal-fired power plants[105] Electricity generation was a relatively minor source of methane (CH_4) and nitrous oxide (N_2O). This sector uses sulfur hexafluoride (SF_6) as an electrical insulator in the transmission and distribution of electricity. The quantities of SF_6 released in the atmosphere during these applications are small but, as discussed above, its GWP is the highest of the greenhouse gases in the CARB inventory.[106,107]

The Global Warming Solutions Act of 2006 (AB 32) required the CARB to determine the Statewide GHG emissions levels in 1990 and to approve a Statewide GHG emissions limit, equal to that level, to be achieved by 2020. In December 2007, the CARB adopted 427 $MMTCO_2e$ as the total Statewide aggregate GHG 1990 emissions level and 2020 GHG emissions limit. The 2020 target (427 $MMTCO_2e$) requires the reduction of 169 $MMTCO_2e$ or approximately 30 percent from the State's projected 2020 emission of 596 $MMTCO_2e$ (BAU) and a reduction of 42 $MMTCO_2e$ from 2002-2004 emission averages.[108]

[104]/ As reported by the United States Department of Energy - Energy Information Administration (EIA), nationally, the transportation sector accounts for 33 percent of total energy-related CO_2 emission in 2005. Almost all (98 percent) of transportation sector CO_2 emissions result from the consumption of petroleum products: motor gasoline (60 percent of total transportation sector emissions), middle distillates (diesel fuel, 22 percent), jet fuel (12 percent), and residual oil (heavy fuel oil, 3.1 percent).

[105]/ *Op. Cit.*, Climate Change – Proposed Scoping Plan, A Framework for Change, pp. 12-13.

[106]/ *Op. Cit.,* Staff Report: California 1990 Greenhouse Gas Emissions Level and 2020 Emission Limit, November 16, 2007, p. 17.

[107]/ As reported by the United States Department of Energy, industrial sector carbon dioxide emissions accounted for 28 percent of total United States energy-related CO_2 emissions in 2005. Residential CO_2 emissions represented 21 percent of United States energy-related CO_2 emissions in 2005, of which natural gas accounted for 21 percent and petroleum (mainly distillate fuel oil) represented 8.4 percent. Commercial sector CO_2 emissions accounted for about 18 percent of total energy-related CO_2 emissions in 2005, of which natural gas contributed 16 percent and petroleum 5.3 percent (Source: United States Department of Energy, Energy Information Administration, Emissions of Greenhouse Gases in the United States 2005, 2006, pp. xii and xiii).

[108]/ *Op. Cit.*, Climate Change – Proposed Scoping Plan, A Framework for Change, p. 12.

California's Climate Action Team's[109] (CAT) "Climate Action Team Report to Governor Schwarzenegger and the Legislature" (2006 CAT Report) proposed "a path to achieve the Governor's targets that will build on voluntary actions of California's businesses, local government and community actions, and State incentive and regulatory programs."[110] The report provided an evaluation of the impacts of climate change on California, the potential adaptation measures that can be taken to best respond to those impacts, an economic assessment of the impacts, and possible emission reduction implementation options. The 2006 CAT Report presented data on more than 40 climate strategies, representing actions that could be taken by nine State agencies to reduce global warming pollution emissions and achieve the State's emission goals in 2010 and 2030. The total emission reduction potential for those strategies was estimated at 193 $MMTCO_2e$.

Following the completion of the 2006 CAT Report, it was recognized that additional data were needed to improve the characterization of the strategies across several dimensions, including the steps required to implement the strategy, the expected emission reductions, costs, and savings.[111] As a result of subsequent analysis, the total emission reduction estimates for 2020 is about 138 $MMTCO_2e$. Of this amount, about 6 $MMTCO_2e$ may be double counted due to interactions between the strategies. The net emission reduction is, therefore, about 132 $MMTCO_2e$ in 2020. This estimate is lower than the 193 $MMTCO_2e$ GHG emission reduction figure derived by comparing the CARB's projected BAU emission estimate for 2020 with the CARB's calculated 1990 GHG emission level.[112]

State and federal policies addressing climate change are still evolving. In response to the Global Warming Solutions Act of 2006 (AB 32), various agencies, including the California State Association of Counties (CSAC), developed policy statements to assist local planning efforts. As indicated in the CSAC's "Climate Change Policy Statement and Principals": "Local governments have the ability to demonstrate leadership at the local and regional level to influence GHG emissions reductions and support a collaborative State, regional, and local approach to the development of GHG reduction strategies." As excerpted below, the CSAC's comprehensive policy includes guidelines regarding a number of relevant planning sectors.

- **Land use and climate change**. CSAC recognizes that population growth in the State is inevitable, thus any climate change strategies that affect land use must focus on how and where to accommodate and mitigate the expected growth in California. Land-use planning and development plays a direct role in transportation patterns, affecting travel demands and in return VMT and fuel consumption. It is recognized that in addition to reducing VMTs, investing in a seamless and efficient transportation system to address congestion also contributes to the reduction of GHG emissions. Smart land-use planning and growth remain critical components to achieve the reduction targets pursuant to the Global Warming Solutions Act of 2006 (AB 32), particularly to address the emissions from the transportation sector.

[109]/ The CAT includes representatives from California Air Resources Board, Business, Transportation, & Housing Agency, California Department of Food and Agriculture, California Energy Commission, California Integrated Waste Management Board, Resources Agency, and California Public Utilities Commission.

[110]/ Lloyd, Alan C., *et al*., Climate Action Team Report to Governor Schwarzenegger and the Legislature, California Climate Action Team, California Environmental Protection Agency, March 2006, p. 97.

[111]/ Climate Action Team, Updated Macroeconomic Analysis of Climate Strategies Presented in the March 2006 Climate Action Team Report – Final Report, October 15, 2007.

[112]/ *Ibid*., p. 20.

- **Energy**. Reducing energy consumption is an important way to reduce GHG emissions and conserve. Additionally, the capture and reuse of certain GHGs can lead to additional sources of energy. CSAC supports incentive-based green building programs that encourage the use of green building practices, incorporating energy efficiency and conservation technologies into State and local facilities.

- **Water**. According to the Department of Water Resources, projected increases in air temperature may lead to changes in the timing, amount, and form of precipitation, changes in runoff timing and volume, effects of sea level rise, and changes in the amount of irrigation water needed. CSAC has an existing policy that recognizes the need for State and local programs that promote water conservation and water storage development.

- **Air quality**. CSAC encourages the research, development, and use of alternative, cleaner fuels. Further, air quality issues reach beyond personal vehicle use and affect diesel equipment used in development and construction for both the public and private sectors.

- **Solid waste and recycling**. The consumption of materials is related to climate change because it requires energy to mine, extract, harvest, process, and transfer raw materials, and more energy to manufacture, transport and, after use, dispose of products. Recycling and waste prevention can reduce GHG emissions by reducing the amount of energy needed to process materials, and reducing the amount of natural resources needed to make products.

- **Health**. CSAC recognizes the potential impacts of climate change on human health. As administrators of a variety of public health services and providers of health care services, California counties have significant health, administrative, and cost concerns related to a changing climate. Heat-related illnesses, air pollution, wild fire, water pollution and supply issues, mental health impact, and infectious disease all relate to the health and well-being of county residents, and to the range of cost of services provided by county governments. CSAC recognizes that there are direct human health benefits associated with mitigating greenhouse gas emissions, such as lowering rates of obesity, injuries, and asthma. Counties believe that prevention, planning, research, and preparation are the keys to coping with the public health issues brought about by climate change, and that any public policy related to climate change and public health must take into account the existing roles and resources of county governments.[113]

On August 3, 2009, in response to Governor Schwarzenegger's Executive Order S-13-08 (November 14, 2008)[114], the California Natural Resource Agency (CNRA) released the "2009 California Climate Adaptation Strategy Discussion Draft – Public Review Draft"[115] and started a

[113]/ California State Association of Counties, Climate Change Policy Statement and Principals, November 2007.

[114]/ As noted, in part, therein: "By June 30, 2009, the California Resources Agency, through the Climate Action Team, shall coordinate with local, regional, state and federal public and private entities to develop a state Climate Adaptation Strategy. The strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts and then outline solutions that can be implemented within and across state agencies to promote resiliency."

[115]/ California Natural Resources Agency, 2009 California Climate Adaptation Strategy Discussion Draft: A Report to the Governor of the State of California in Response to Executive Order S-13-2008 – Public Review Draft, August 3, 2009.

45-day public comment period concerning that document. The report constituted a draft comprehensive plan designed to guide adaption to climate change, presented an assessment how climate change could impact the State, and provided recommendations on how to manage that change in seven sectors (i.e., public health, biodiversity and habitat, ocean and coastal resources, water management, agriculture, forestry, and transportation and energy resources). With regards to GHG emissions, the report noted that "one should consider that pre-industrial concentrations of carbon dioxide in the atmosphere were about 280 parts per million by volume (ppmv). By 1960, CO_2 concentrations had crept up slowly to about 315 ppmv – an increase of just 10 percent in about 200 years. The warming effect of those GHG concentrations is currently being felt. In the five intervening decades, with considerable economic growth worldwide that is fueled by the burning of carbon-based fossil fuels such as coal, gas, and oil, and extensive land use changes, there has been a staggering increase in atmospheric carbon dioxide. Recent measurements indicated global carbon dioxide concentrations in the atmosphere of 386 ppmv, a 38 percent increase over pre-industrial times. The rate of annual increase of CO_2 continues to accelerate, largely determining future warming for the next few decades. In addition, other GHGs such as methane, nitrous oxide, and other gases, have dramatically increased over the last 200 years, adding to the heat-trapping effect of the atmosphere."[116]

With regards to projected changes in air quality, the draft report notes that "[m]any Californians living in or near urban areas currently experience the worst air quality in the nation, with associated economic costs reaching tens of billions every year. Research indicates that climate change influences on atmospheric processes will promote formulation of ground-level pollutants, such as ozone and secondary aerosols (particulate matter), and that these increases could offset much of the potential gains achieved through air pollution control measures, a phenomenon referred to as a 'climate penalty'. . .Recent evidence shows that increased ozone levels also impact overall mortality due to cardiovascular and lung disease; particulate matter also increases cardiovascular and respiratory illness and deaths."[117]

Impact of Changing Climatic Conditions

This analysis includes an assessment of the potential relationship between the proposed project and GHG emissions (the primary drivers of anthropogenic climate change) and climate change. The climatic conditions experienced by the proposed project over its lifetime are likely to be substantially different from those observed over the past century. Consequently, it is useful to consider the implications of changing climatic conditions for project performance.

As indicated in the IPCC's "Fourth Assessment Report,"[118] future "scenarios"[119] for Year 2100 modeled included: (1) temperature increase (a) "low-emissions scenario" (1.8°C [best estimate],

[116]/ *Ibid*., p. 16.
[117]/ *Ibid*., p. 36.
[118]/ the IPCC "Fourth Annual Report" is comprised of the four documents: (1) "Climate Change 2007: The Physical Science Basis – Summary for Policymakers" (February 2007); (2) "Climate Change 2007: Impacts, Adaptation and Vulnerability" (April 2007); (3) "Climate Change 2007: Mitigation of Climate Change" (May 2007); and (4) "Climate Change 2007: Synthesis Report" (November 2007).
[119]/ Future GHG emissions are the product of very complex dynamic systems, determined by driving forces such as demographic development, socio-economic development, and technological change. Their future evolution is highly uncertain. Scenarios are alternative images of how the future might unfold and are an appropriate tool with which to analyze how driving forces may influence future emission outcomes and to assess the associated uncertainties. Scenarios assist in climate change analysis, including climate modeling and the assessment of impacts, adaptation, and mitigation. The possibility that any single emissions path will occur as described in scenarios is highly uncertain. More information on the IPCC's selection of scenarios is available at the IPCC website (http://www.ipcc.ch/ipccreports/sres/emission/index.htm).

with a range of 1.1 to 2.9°C), and (b) "high-emissions scenario" (4.0°C [best estimate], with a range of 2.4 to 6.4°C); and (2) sea level rise (a) "low-emissions scenario" (0.18 to 0.38 meters [range]), and (b) "high-emissions scenario" (0.26 to 0.59 meters [range]). The potential implications of those "scenarios" to the proposed project are briefly outlined below:

- **Sea level**. Rising sea levels are unlikely to directly impact the proposed project due to its distance from the coast and relative elevation.

- **Temperature**. Rising temperatures could have a variety of impacts, including stress on sensitive populations (e.g., sick and elderly), additional burden on building systems (e.g., demand for conditioning), and, indirectly, increasing emissions of GHGs and criteria pollutants associated with energy generation. It is not, however, possible to reliably quantify these risks at this time.

- **Precipitation**. Climate change is expected to alter seasonal and inter-annual patterns of precipitation. These changes continue to be one of the most uncertain aspects of future scenarios. For the proposed project, the most relevant direct impacts are likely to be changes in the timing and volume of storm water runoff and changes in demand for irrigation. It is not, however, possible to reliably quantify the implications of these changes at this time.

- **Wildfire**. Changes in temperature and precipitation may combine to alter risks of wildfire. Changes in wildfire hazard have the potential to impact the proposed project; however, it is not possible to reliably quantify the implications of these changes at this time.

- **Water supply reliability**. Changes in temperature and precipitation may influence seasonal and inter-annual availability of water supplies. Consequently, it is reasonable to consider that climate change may affect water supply reliability. It is not, however, possible to reliably quantify these risks for the proposed project at this time. For more information on the project's water supply, see Section 4.10 (Utilities and Service Systems) herein.

Land Use and Transportation Linkages

As noted by the Land Use Subgroup of the California Climate Action Team (LUSCAT): "How California communities are designed and built has large consequences on the State's greenhouse gas emission levels, and as a result, has an impact on global climate change. The majority of the State's GHG emissions are the result of infrastructure and development decisions: how we build our buildings, where we put them, and the quality and types of infrastructure that are required to serve them. The act of designing the physical footprint and form of communities is called land use planning. In California, local governments are responsible for making land use and local infrastructure decisions."[120] The LUSCAT further noted that the availability and lower cost of land away from urban centers has resulted in development becoming less dense. This less dense, more dispersed development pattern has resulted in annual increases in the distances people drive, as measured in VMT.

The goal of reducing VMT is an official goal of the federal government's policy as it is stated in sections of the CAA, President Clinton's "Climate Change Action Plan" (CCAP), and in the

[120]/ California Climate Action Team, Land Use Subgroup, LUSCAT Submission to CARB Scoping Plan on Local Government, Land Use and Transportation, April 2008, p. 5.

Congestion Mitigation Air Quality Improvement Program (CMAQ), included in both the Intermodal Surface Transportation Efficiency Act (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21) (U.S.C. 23, Section 149).[121]

The amount of miles traveled by California residents increased at a rate of three percent per year between 1975 and 2004, outpacing population growth, which grew at less than two percent annually over that same period. This increase in VMT directly correlates to an increase in petroleum use and GHG production. In 2004, passenger vehicle (cars and light trucks) emissions of 136 $MMTCO_2e$ per year represented about 30 percent of the State's total GHG emissions, making passenger vehicles the biggest GHG emitters in California. The transportation sector accounted for 38 percent of the State's GHG inventory in 2004. On-road vehicles emit the majority of California's transportation-related GHG emissions, representing 172 $MMTCO_2e$ or 36 percent of the State's approximately 475 $MMTCO_2e$ total.[122]

The Urban Land Institute (ULI) notes the "United States is the largest emitter worldwide of the greenhouse gases that cause global warming. Transportation accounts for a full third of CO_2 emissions in the United States, and that share is growing, rising from 31 percent in 1990 to 33 percent today. . .Transportation CO_2 reduction can be viewed as a three-legged stool, with one leg related to vehicle fuel efficiency, a second to the carbon content of the fuel itself, and a third to the amount of driving or VMT. Energy and climate policy initiatives at the federal and state levels have pinned their hopes almost exclusively on shoring up the first two legs of the stool, through the development of more efficient vehicles (such as hybrid cars) and lower-carbon fuels (such as biodiesel fuel). . .Carbon dioxide is more difficult to control through vehicle technology than are conventional air pollutants. Conventional pollutants can be reduced in automobile exhaust with sophisticated emission control systems (catalytic converters, on-board computers, and oxygen sensors). Carbon dioxide, meanwhile, is a direct outcome of burning fossil fuels; there is no practical way to remove or capture it from moving vehicles. At this point in time, the only way to reduce CO_2 emissions from vehicles is to burn less gasoline and diesel fuel."[123]

As indicated by the USEPA: "The physical characteristics and patterns of land development in a region, also known as the urban form, can affect air quality by influencing the travel mode choices citizens have available to them. Certain types of urban form necessitate the use of personal cars and trucks for travel. For example, when jobs and housing are far away from each other, and mass transit is not available, people are dependent on cars for daily travel. Urban forms that make automobile travel a necessity can contribute to air quality problems. However, other options for urban form do exist. For example, development patterns that locate jobs, housing, and recreation in closer proximity to each other can mean shorter and fewer car and truck trips, thus reducing vehicle miles traveled and likely reducing motor vehicle emissions. Other development patterns have the potential to improve or mitigate air quality problems by providing and promoting alternatives to vehicular travel, such as mass transit, walking, or biking."[124]

The USEPA compared the impacts of compact and dispersed development patterns on transportation patterns. Based on a review of 83 of the nation's largest metropolitan areas, the following land-use characteristics were chosen as the key factors contributing to sprawl: population dispersed in low-density residential neighborhoods, a rigid separation of homes,

[121]/ Federal Highway Administration website (http://www.fhwa.dot.gov/ohim/epastat.htm).
[122]/ *Ibid*., p. 13.
[123]/ Ewing, Reid, *et al*., Growing Cooler: The Evidence on Urban Development and Climate Change, Urban Land Institute, September 2007, Executive Summary, unpaginated.
[124]/ *Op. Cit*., EPA Guidance: Improving Air Quality through Land Use Activities, EPA420-R-01-001, p. 15.

shops, and workplaces, a lack of distinct, thriving activity centers (such as a strong downtown or suburban town center), and networks of roads marked by very large block size and poor access from one place to another.[125]

As reported by the California Air Resources Board (CARB) and as illustrated in Figure 4.7-4 (Modes of Travel in California),[126] according to a Statewide survey of travel in California, about 86 percent of personal travel is by automobile, motorcycle, or light-duty truck. Collectively, walking and bicycling comprise about nine percent of total travel, while public transit accounts for only about two percent of all personal travel in the State. The CARB notes that "[r]esearch has shown that the longer a vehicle's engine is shut off, the more emissions are produced when it is started again. In addition, after the engine is shut off, 'hot soak' evaporative emissions continue to be released. On average, 'trip end' emissions such as these comprise nearly one-half of the total pollution produced by a 5-mile rip, and 18 percent of emissions from a 20-mile trip. Making fewer short vehicle trips can help reduce these emissions. A nationwide survey indicates that most of our daily trips are less than 5 miles in length. Some of these trips could be combined or made by walking, bicycling, or transit if destinations are nearby."[127]

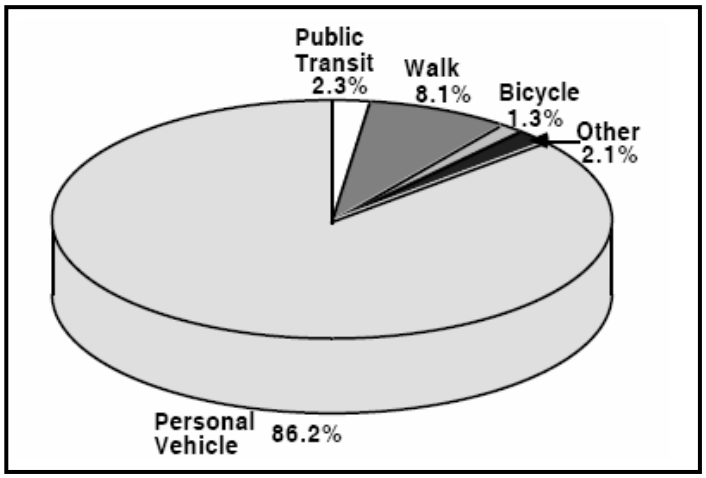

Figure 4.7-4
MODES OF TRAVEL IN CALIFORNIA
Source: California Air Resources Control Board

Land-use strategies that encourage people to walk, bicycle, and/or use public transit rather than rely upon their automobiles for mobility tend to be "better for air quality."[128] Strategies that provide access to and support multi-modal transportation systems can help to reduce automobile use and its associated emissions. At the neighborhood-level, site-specific strategies can be applied to existing and new development projects that promote reductions in driving rates and associated vehicle emissions. Those strategies include mixed-use development, interconnected street networks, traditional neighborhood design, and TOD.

As indicated by the CEC: "A balance of jobs and housing may reduce daily work vehicle miles traveled, which is important in managing congestion, but work trips account for a small and shrinking percentage of total travel. According to the National Household Travel Survey 2001 Highlights Report, 45 percent of daily trips were made for family and personal reasons, such as

[125]/ *Op. Cit.*, LUSCAT Submission to CARB Scoping Plan on Local Government, Land Use and Transportation, pp. 15-16.
[126]/ California Environmental Protection Agency, California Air Resources Board, The Land Use – Air Quality Linkage: How Land Use and Transportation Affect Air Quality, 1997 Edition, Figure 4, p. 3.
[127]/ *Ibid.*, p. 2.
[128]/ *Ibid.*, p. 4.

shopping and running errands; 27 percent were made for social and recreational purposes; and 15 percent were made for commuting to work. 'Nonwork is the major reason for travel even in peak travel periods.' . .Non-work vehicle miles traveled is a large portion of travel, which may not respond to traditional methods of reducing vehicle miles traveled in the same way. Transit-oriented developments, for example, may be more successful if they are designed to facilitate non-auto errand trips as well as transit commutes."[129]

Mixed-use development allows compatible land uses (e.g., shopping, jobs, and housing) to locate closer together, thus decreasing the travel distances between them and encouraging "non-auto errand trips." Development activities combining both residential and non-residential uses can reduce VMT and trips and increase transit ridership, especially during off-peak periods. For example, areas containing restaurants, a theater, and retail stores have a greater potential to generate walking and transit use than areas containing only retail stores.

As indicated by the SCAQMD, at a macro-scale (e.g., jobs-housing ratio) and micro-scale (e.g., the availability of services within walking distance), many references point to the impact of "diversity" (mix of uses) on travel behavior.[130] Key references relating to the direction and magnitude of this relationship include:

- Higher densities are most beneficial to transit ridership when they result in a mix of residential, commercial, and office uses.[131]
- The elasticity of vehicle trips with respect to "diversity" is -0.051. The elasticity of VMT is -0.032. In this case, "diversity" is a measure of how the project affects regional population/employment balance.[132]
- Typical elasticities for vehicle trips with respect to local "diversity" are 0.03 and those of VMT are -0.05.[133]
- A balance of 1.5 jobs per household is estimated to produce a bus mode share two percentage points over the share for a single-use area, although the degree of mix is not a useful estimating variable.[134]
- Suburban activity centers with some on-site housing had 3-5 percent more transit, bike, and walk commute trips.[135]
- The presence of retail reduces auto mode share by 2-5 percent depending on neighborhood density.[136]

[129]/ California Energy Commission, 2007 Integrated Energy Policy Report, CEC-100-2007-008-CMF, 2007, p. 210.

[130]/ South Coast Air Quality Management District (Jones & Stokes Associates), Software User's Guide: URBEMIS2007 for Windows, Version 9.2 – Emissions Estimation for Land Use Development Projects, November 2007, pp. D-15 and D-16.

[131]/ Lund, Hollie, Cervero, Robert, and Willson, Richard, Travel Characteristics of Transit-Oriented Development in California, Final Report, January 2004.

[132]/ Criteron Planner/Engineers and Fehr & Peers Associates, Index 4D Method, A Quick-Response Method of Estimating Travel Impacts from Land-Use Changes, Technical Memorandum, United States Environmental Protection Agency, October 2001.

[133]/ Ewing, Reid, Pedestrian- and Transit-Friendly Design: A Primer for Smart Growth, Smart Growth Network 1999.

[134]/ Messenger & Ewing (1996), cited in Kuzmyak, J. Pratt, Richard H., and Douglas, Bruce G., Traveler Response to Transportation System Changes, Chapter 15 - Land Use and Design, Transportation Research Board, TCRP Report 95, 2003.

[135]/ Cervero (1989), cited in Kuzmyak, J. Pratt, Richard H., and Douglas, Bruce G., Traveler Response to Transportation System Changes, Chapter 15 (Land Use and Design), Transportation Research Board, TCRP Report 95, 2003, p. 15-55.

- At suburban activity centers, the presence of retail in office buildings lowers vehicle trip rates by 6-8 percent.[137]
- Employment sites with "good" nearby retail and commercial services have a vehicle trip rate 21.5 percent below the ambient rate. Sites with "fair" services showed an 8.3 percent reduction and those with "poor" services a 5.3 percent reduction. This is attributable not just to the presence of these services but the fact that they make TDM programs more likely to succeed.[138]

The typical suburban circulation pattern limits the number of available routes between trip origin and destination points, placing many vehicles on major streets and at signalized intersections and resulting in higher levels of traffic congestion, particularly during peak periods. Arterial highways can be difficult and dangerous for pedestrians and bicyclists. Such thoroughfares typically become barriers to walking and bicycling and tend to encourage driving, even for short trips. In contrast, more intersected street patterns provide multiple routes to travelers and can reduce travel distances. Interconnected street patterns provide numerous route choices rather than focusing traffic onto arterials, offer more direct routes for pedestrians and bicyclists, and can slow vehicle speeds. Traditional neighborhood design (TND) is a strategy that combines residential and non-residential uses and interconnected streets patterns to minimize travel distances. A typical neo-traditional neighborhood has a "town center" where services and offices are concentrated. Multi-family units are clustered within walking distance of the town center. Single-family homes are on smaller lots. Front porches are typically included and are closer to the sidewalk.[139]

4.7.3.2 Local Setting

Existing Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the SCAB. The project site is located within Source Receptor Area (SRA) Number 34 (Central San Bernardino Valley 1), which is served by the Fontana-Arrow Highway Monitoring Station located approximately four miles southwest of the project site. Criteria pollutants, including O_3, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$, are monitored at that station. The most recent data available from this monitoring station encompass the period 2003-2007. Data from that monitoring station are presented in Table 4.7-9 (Pollutant Standards and Ambient Air Quality Monitoring Data - Fontana-Arrow Highway Monitoring Station) and described below.

- **Ozone**. The maximum 1-hour O_3 concentration recorded between 2003 and 2007 was 0.18 ppm, recorded in 2003. During that period, the California standard of 0.09 ppm was exceeded between 40-65 times annually, with the highest number of exceedances in 2003. The prior national 1-hour O_3 standard of 0.12 ppm was exceeded between 7-26

[136]/ Parsons Brinkerhoff (1996), cited in Kuzmyak, J. Pratt, Richard H., and Douglas, Bruce G., Traveler Response to Transportation System Changes, Chapter 15 (Land Use and Design), Transportation Research Board, TCRP Report 95, 2003, p. 15-56.

[137]/ NTI (2000), cited in Kuzmyak, J. Pratt, Richard H., and Douglas, Bruce G., Traveler Response to Transportation System Changes, Chapter 15 (Land Use and Design), Transportation Research Board, TCRP Report 95, 2003, p. 15-62.

[138]/ Comsis Corporation (1994), cited in Kuzmyak, J. Pratt, Richard H., and Douglas, Bruce G., Traveler Response to Transportation System Changes, Chapter 15 (Land Use and Design), Transportation Research Board, TCRP Report 95, 2003, pp. 15-66 and 67.

[139]/ *Op. Cit.*, California Air Resources Board, The Land Use – Air Quality Linkage: How Land Use and Transportation Affect Air Quality, 1997 Edition, pp. 4-13.

times annually, with the highest number of exceedances recorded in 2003. The national 8-hour O_3 standard of 0.08 ppm was exceeded between 19-48 times annually, with the highest concentration of 0.15 and the largest number of exceedances recorded in 2003.

- **Particulate matter**. The highest recorded concentration of PM_{10} between 2003 and 2007 was 142 µg/m^3, which was recorded in 2006. During that same time period, the California PM_{10} standard was exceeded between 27-33 times annually, with the highest number of exceedances in 2007. The federal PM_{10} standard was not exceeded during that period. PM_{10} is monitored every six days coincident to a national schedule. PM_{10} exceedances are, therefore, based on the number of days that sampling occurred.

- **Fine particulates**. $PM_{2.5}$ maximum concentrations varied between 52.6-98.1 between 2003 and 2007. During the years from 2003 to 2005, the federal standard of 65 µg/m^3 was exceeded between zero and two day per year. The standard was reduced to 35 µg/m^3 in 2006 and was exceeded 7 times in 2006 and 10 times in 2007.

- **Carbon monoxide**. The maximum recorded 1-hour concentration of CO during the reporting period was 5 ppm, recorded in 2003. The maximum recorded 8-hour CO concentration was 4.6 ppm, also recorded in 2003. During that reporting period, there were no exceedances of the California or federal 1-hour or 8-hour CO standards.

- **Nitrogen dioxide**. The highest recorded 1-hour concentration of NO_2 during the reporting period was 0.12 ppm, recorded in 2003. The highest recorded annual arithmetic mean during the reporting period was 0.031, recorded in both 2003 and 2005. During that period, there were no exceedances of California or federal NO_2 standard.

- **Sulfur dioxide**. A value of 0.01 was recorded during each of the five years reported. The highest recorded 24-hour concentration was 0.006 ppm, recorded in 2004. During that reporting period, no violations of the California or national SO_2 standards were recorded. The highest annual arithmetic mean recorded was 0.0019 ppm, recorded in both 2006 and 2007, which is well below the 0.03 ppm federal standard.

- **Lead** (Pb). Since the SCAB is currently in compliance with State and federal standards for lead, no ambient data for airborne lead is available from the monitoring stations.

Toxic Air Contaminants

In 1999, as part of an urban toxics micro-scale study conducted for the SCAB, the SCAQMD conducted air quality monitoring in the City. The monitoring site within the City (200 W. Valley Boulevard) was selected to assess potential air toxic cancer risks associated with proximity to a freeway setting. At that location, at the time the study was performed, a cancer risk of less than 1 in one million ($<1.0 \times 10^{-6}$) was predicted. The model showed that significant influences from local sources may occur (about 2 in one million [$\approx 2 \times 10^{-6}$]), but that rapid decreases in concentrations occur over relatively short distances.[140] Air toxic cancer risks were primarily associated with diesel PM, polynuclear aromatic hydrocarbons (PAHs),[141] and benzo(a)pyrene.

[140]/ South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-II), March 2000, pp. 6-2 and 6-18.

[141]/ PAHs are believed to be carcinogenic with no identified threshold level below which no adverse health effects occur. In California, the major sources of PAHs are combustion sources. Polycyclic organic matter (of which PAHs are a subset) was identified as TACs by the CARB in April 1993.

Table 4.7-9
POLLUTANT STANDARDS AND AMBIENT AIR QUALITY MONITORING DATA
FONTANA-ARROW HIGHWAY MONITORING STATION

Pollutant/Standard	2003	2004	2005	2006	2007
Ozone (O_3)					
O_3 (1-hour)					
Maximum Concentration (ppm)	0.18	0.15	0.15	0.16	0.144
Days > CAAQS (0.09 ppm)	65	48	49	47	40
Days > NAAQS (0.12 ppm)	26	7	9	12	9
O_3 (8-hour)					
Maximum Concentration (ppm)	0.15	0.12	0.13	0.12	0.122
4th High 8-hour Concentration (ppm)	0.13	0.11	0.11	0.17	0.112
Days > CAAQS (0.07 ppm)	N/A	54	47	49	60
Days > NAAQS (0.08 ppm)	48	28	23	29	19
Particulate Matter (PM_{10})					
PM_{10} (24-hour)					
Maximum Concentration ($\mu g/m^3$)	101	106	108	142	111
Days > CAAQS (50 $\mu g/m^3$)	27	29	29	31	33
Days > NAAQS (150 $\mu g/m^3$)	0	0	0	0	0
PM_{10} (Annual Average)					
Annual Arithmetic Mean (50 $\mu g/m^{3)}$					
Annual Geometric Mean (20 $\mu g/m^3$)	47.2	47.7	50.0	53.5	54.9
Particulates ($PM_{2.5}$)					
$PM_{2.5}$ (24-hour)					
Maximum Concentration ($\mu g/m^3$)	98.1	71.4	96.8	52.6	77.5
Days > NAAQS (65 $\mu g/m^3$)	1	1	1	0	2
Days > NAAQS (35 $\mu g/m^3$)	N/A[1]	N/A[1]	N/A[1]	7	10
$PM_{2.5}$ (Annual)					
Annual Arithmetic Mean (15 $\mu g/m^3$)	21.8	20.0	18.9	17.6	19.0
Carbon Monoxide (CO)					
CO (1-hour)					
Maximum Concentration (ppm)	5	3	3	3	3
Days > CAAQS (20 ppm)	0	0	0	0	0
Days > NAAQS (35 ppm)	0	0	0	0	0
CO (8-hour)					
Maximum Concentration (ppm)	4.6	2.1	2.1	2.0	2.0
Days > CAAQS (9 ppm)	0	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0	0
Nitrogen Dioxide (NO_2)					
NO_2 (1-hour)					
Maximum Concentration (ppm)	0.12	0.06	0.10	0.09	0.09
Days > CAAQS (0.25 ppm)	0	0	0	0	0
NO_2 (Annual)					
Annual Arithmetic Mean (0.053 ppm)	0.031	0.027	0.031	0.027	0.027
Sulfur Dioxide (SO_2)					
SO_2 (1-hour)					
Maximum Concentration (ppm)	0.01	0.01	0.01	0.01	0.01
Days > CAAQS (0.25 ppm)	0	0	0	0	0

Table 4.7-9 (Continued)
POLLUTANT STANDARDS AND AMBIENT AIR QUALITY MONITORING DATA
FONTANA-ARROW HIGHWAY MONITORING STATION

Pollutant/Standard	2003	2004	2005	2006	2007
Sulfur Dioxide (Continued)					
SO_2 (24-hour) Maximum Concentration (ppm) Days > CAAQS (0.04 ppm) Days > NAAQS (0.14 ppm)	 0.004 0 0	 0.006 0 0	 0.004 0 0	 0.003 0 0	 0.003 0 0
SO_2 (Annual) Annual Arithmetic Mean (0.03 ppm)	 N/A	 N/A	 N/A	 0.0019	 0.0019
Lead (Pb)					
Maximum 30-day average (µg/m^3) Maximum calendar quarter (µg/m^3)	-- --	-- --	-- --	-- --	-- --

Notes:
ppm = parts per million; µg/m^3= micrograms per cubic meter; N/A = not applicable; -- = Data not available
1. In September 2006, the 24-hr $PM_{2.5}$ standard was changed from 65 µg/m^3 to 35 µg/m^3. The data representing days above standard for 2002-2005 applies to the old standard. The data representing days above standard for 2006and 2007 apply to the new standard.
2. Ambient data for airborne lead is not included since the SCAB is currently in compliance with State and federal standards for lead.

Source: South Coast Air Quality Management District, Ambient Air Data Summaries, 2003-2007.

Wind rose[142] data for the period March 19, 1999 to April 30, 1999 is presented in Figure 4.7-5 (City of Rialto – Wind Rose Data) and is considered representative of the project site during spring. No area-specific wind rose data for the period May 1 to March 18 is known to the City.

Existing Health Risk in the Surrounding Area

In an ongoing effort to provide a picture of relative risk, the CARB has released a series of maps showing regional trends in estimated outdoor inhalable cancer risk (diesel and non-diesel) from air toxic emissions. The estimates represent the number of potential cancers per million people based on a lifetime exposure (24 hours/day outdoors for 70 years). The 2001 San Bernardino-Riverside map, which is the most recently available map to represent existing conditions, is provided in Figure 4.7-6 (Total Cancer Risk - San Bernardino-Riverside Area).[143] As shown, the project area is located within a cancer risk zone of 100-250 in one million (100-250 x 10^{-6}).

Given the substantial health risks associated with mobile TACs, a number of programs and strategies to reduce diesel PM are in place or are in the process of being developed as part of CARB's "Diesel Risk Reduction Plan." CARB has indicated that "[r]educing diesel particulate emissions is one of [its] highest public health priorities and the focus of a comprehensive statewide control program. . .to reduce diesel PM emissions 85% by 2020."[144] Some applicable CARB programs and strategies include:

[142]/ A wind rose is a graphic tool used to give a succinct view of how wind speed and direction are typically distributed at a particular location. Presented in a circular format, the wind rose shows the frequency of winds blowing from particular directions. The length of each "spoke" around the circle is related to the frequency that the wind blows from a particular direction per unit time. Each concentric circle represents a different frequency, emanating from zero at the center to increasing frequencies at the outer circles.

[143]/ California Air Resources Control Board, Cancer Inhalation Risks: Local Maps by Category, updated August 20, 2004 (http://www.arb.ca.gov/toxics/cti/hlthrisk/cncrinhl/riskmapviewfull.htm).

[144]/ *Op. Cit.*, Air Quality and Land Use Handbook: A Community Health Perspective, p. ES-1.

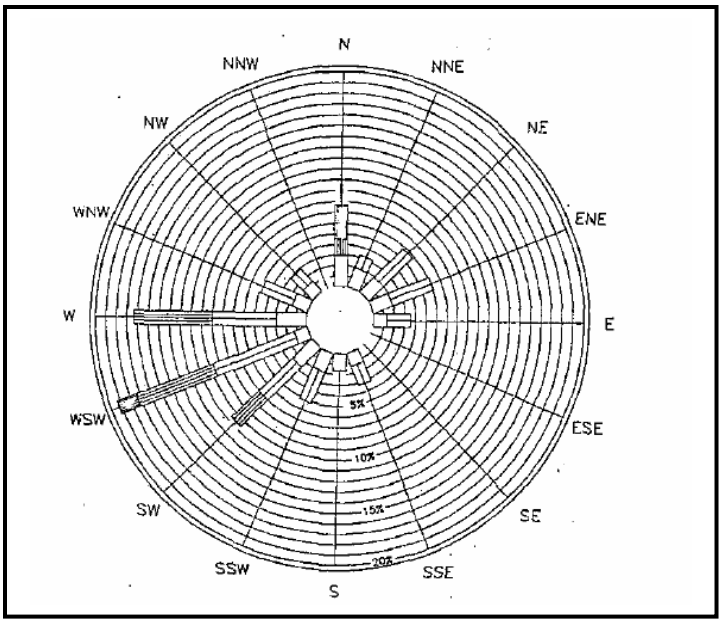

Figure 4.7-5
CITY OF RIALTO WIND ROSE DATA
Source: South Coast Air Quality Management District

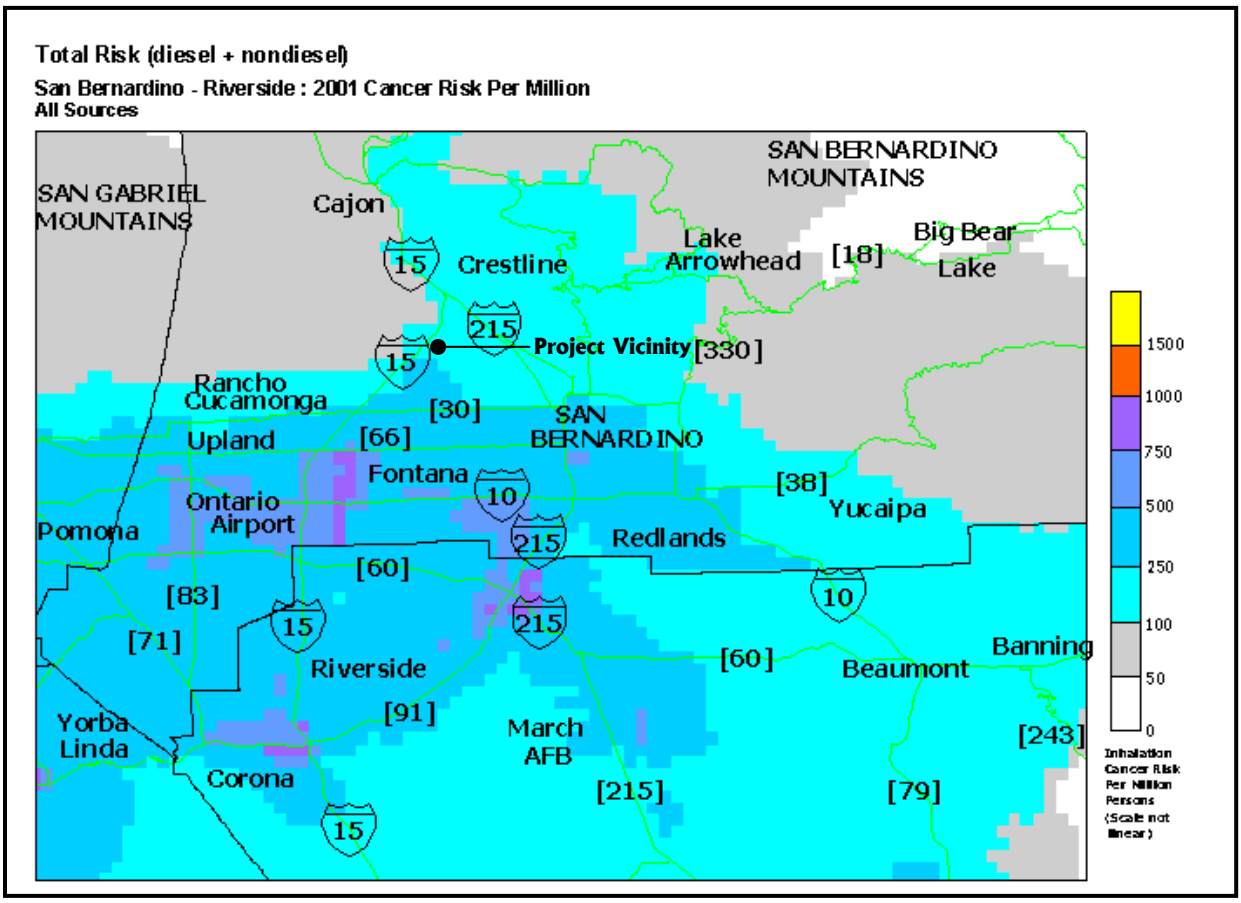

Figure 4.7-6
TOTAL CANCER RISK - SAN BERNARDINO-RIVERSIDE AREA
Source: California Air Resources Board

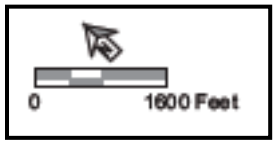

Figure 4.7-7
SENSITIVE OFF-SITE RECEPTOR LOCATIONS RELATIVE TO THE PROJECT SITE
Source: PCR Services Corporation

In 2001, the CARB adopted new PM and NO_X emission standards to clean up large diesel engines that power big-rig trucks, trash trucks, delivery vans and other large vehicles. That PM standard took effect in 2007, reduced emissions to 0.01 gram of PM per brake horsepower-hour (g/bhp-hr), and represented a 90 percent reduction from the previous PM standard. New engines will meet the 0.01 g/bhp-hr PM standard with the aid of diesel PM filters that trap the particulate matter before exhaust leaves the vehicle.

- CARB has worked closely with USEPA on developing new PM and NO_X standards for engines used in off-road equipment, such as backhoes, graders, and farm equipment. USEPA has proposed new standards that would reduce the emission from off-road engines to similar levels as the on-road engines discussed above by 2010–2012. When approved by USEPA, CARB will adopt these as the applicable State standards for new off-road engines. These standards will reduce diesel PM emission by over 90 percent from new off-road engines currently sold in California.

- CARB has adopted several regulations that will reduce diesel emissions from in-use vehicles and engines throughout California. In some cases, the PM reduction strategies also reduce smog-forming emissions such as NO_X. These regulations include:

  - ◊ Waste collection trucks. The waste collection vehicle rule (adopted 2003) offers a variety of strategies that owners must select and apply to each truck in a phased-in schedule from 2004 through 2010 to achieve PM reductions of up to 85 percent. The rule includes compliance flexibility. A key benefit of the rule is the reduction of PM emissions in residential neighborhoods.

  - ◊ Fleet rule for transit agencies. This regulation (adopted 2000) cuts NO_X and PM emissions from about 10,000 buses operated by transit agencies. The fleet rule for transit agencies moves forward in steps over 10 years, requiring cleaner engines, cleaner fuel, and retrofitting of older buses.

  - ◊ School bus idling restrictions. To reduce the exposure of children to toxic PM emissions, the CARB enacted a rule (adopted 2002) to stop the prolonged idling of diesel school buses and other diesel vehicles near schools. Buses and commercial diesel vehicles are required to turn off their engines after arriving at a school and are allowed to start the engine no more than 30 seconds before departing, unless required for safety or work.

  - ◊ Transport refrigeration units. Transport refrigeration units (TRUs) are diesel-powered refrigeration units that cool temperature-sensitive products while they are being shipped in trucks, trailers, shipping containers, and rail cars. Although the diesel engines powering TRUs tend to be relatively small, there are about 40,000 of them operating in California. The CARB enacted a rule (adopted 2004) requiring that PM emissions from TRUs be reduced by 65 percent by 2010 and by 92 percent by 2020.

Studies have shown that "vegetation is highly effective in removing some of the most toxic components in the ambient atmosphere, namely diesel and smoking car exhaust."[145] Trees,

[145]/ Fujii, Erin *et al.,* Removal Rates of Particulate Matter onto Vegetation as a Function of Particle Size, Final Report to Breathe California of Sacramento-Emigrant Trails Health Effects Task Force (HETF) and Sacramento Metropolitan Air Quality Management District, April 30, 2008, p. 7.

especially non-deciduous trees with high surface area, may be able to remove particles, especially very fine particles, in air that passes through vegetation, while tending to force pollutants up and away from ground-level receptors.[146] At low wind speeds, landscaping has been shown to reduce PM emissions by at least 55 percent for particles with a diameter of 0.17 microns or micrometres (µm). Greater removal rates are predicted for very fine (<0.25 µm in diameter) and ultra-fine particles (<0.1 µm in diameter).[147]

Sensitive Receptor Locations

With regard to air quality, residential areas are considered to be sensitive to air pollution because residents, including children and the elderly, tend to be at home for extended periods of time, resulting in sustained exposure to pollutants. Places where children congregate, such as schools, daycare centers, and play areas, are also considered especially sensitive to air pollution as children's lungs are not as fully developed as those of adults.

Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise may place a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time and leave after the completion of their shifts. In addition, the working population is generally the healthiest segment of the public.

Sensitive off-site receptor locations, relative to the project site, are displayed in Figure 4.7-7 (Sensitive Off-Site Receptors Locations Relative to the Project Site). Future on-site sensitive receptors, such as children attending proposed on-site schools and elderly residents in Neighborhood II) have not been illustrated therein.

4.7.4 Threshold of Significance Criteria

Air Quality

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant air quality impact if the project or if project-related activities were to:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

[146]/ Cahill, Thomas A. *et al*., An Addendum to the Final Report – American Lung Association of Sacramento-Emigrant Trails Health Effects Task Force, The Sacramento/Interstate 5 Transect Study, Part 2: January 2004 – March 2005, p. 34 (http://www.sacbreathe.org/Local%20Studies/HETF%20Study%20March%2005.pdf).

[147]/ *Op. Cit.*, Removal Rates of Particulate Matter onto Vegetation as a Function of Particle Size, Final Report to Breathe California of Sacramento-Emigrant Trails Health Effects Task Force (HETF) and Sacramento Metropolitan Air Quality Management District, p. 29.

- Result in a cumulatively considerable[148] net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standards.
- Expose sensitive receptors to substantial air pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.[149]

The State CEQA Guidelines define a significant effect on the environment as "a substantial adverse change in the physical condition which exists in the area affected by the proposed project." In order to determine whether or not the proposed project would cause a significant effect on the environment, the impact of the project must be determined by examining the types and levels of emissions generated. For air quality, the City has not adopted specific Citywide significance thresholds but instead relies on the following regional significance thresholds identified by the SCAQMD in the SCAQMD's "CEQA Air Quality Handbook"[150] (CEQA Handbook) and "Final Localized Significance Threshold Methodology."[151]

- Construction Thresholds for Mass Emissions
  - The SCAQMD currently recommends that projects with construction-related mass daily emissions that exceed any of the following emissions thresholds should be considered significant: (1) 75 pounds per day of VOC; (2) 100 pounds per day of NO_X; (3) 550 pounds per day of CO; (4) 150 pounds per day of SO_X; (5) 150 pounds per day of PM_{10}; and (6) 55 pounds per day of $PM_{2.5}$.

- Construction Thresholds for Localized Criteria Pollutant Concentrations
  - The SCAQMD currently recommends that projects with site-specific construction-related emissions that generate the following localized pollutant concentrations at existing human receptors should be considered significant: (1) 10.4 micrograms per cubic meter ($\mu g/m^3$) of PM_{10} averaged over a 24-hour period; (2) 1.0 $\mu g/m^3$ of PM_{10} averaged over an annual period; and (3) 10.4 $\mu g/m^3$ of $PM_{2.5}$ averaged over a 24-hour period.
  - Because the Basin is currently in attainment of the national and State ambient air quality standards for NO_2 and CO, the SCAQMD currently recommends that projects with construction-related emissions that cause the following ambient air quality standards to be exceeded or contributes substantially to an exceeded standard at existing human receptors should be considered significant: (2) 0.18 parts per million (339 $\mu g/m^3$) NO_2 averaged over a 1-hour period (State standard); (2) 0.03 parts per million (57 $\mu g/m^3$) of NO_2 averaged over an annual period (State standard); (3) 20 parts per million (23,000 $\mu g/m^3$) of CO averaged over a 1-hour period (State standard); or (4) 9.0 parts per million (10,000 $\mu g/m^3$) of CO averaged over an 8-hour period (national and State standard).

[148]/ Referencing Section 21083(b) of CEQA, "'cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."
[149]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section III (Air Quality).
[150]/ South Coast Air Quality Management District, SCAQMD CEQA Air Quality Handbook, April 1993.
[151]/ South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, June 2003, revised July 2008.

- Construction Thresholds for Toxic Air Contaminants

The SCAQMD recommends that projects that could emit carcinogenic or toxic air contaminants (TAC) that exceed the maximum individual cancer risk of 10 in one million or a hazard index of 1.0 be considered significant.

- Operations Thresholds for Mass Emissions

  - The SCAQMD currently recommends that projects with operational mass daily emissions that exceed any of the following emissions thresholds should be considered significant: (1) 55 pounds/day of VOC; (2) 55 pounds/day of NO_X; (3) 550 pounds/day of CO; (4) 150 pounds/day of SO_X; (5) 150 pounds/day of PM_{10}; or (6) 55 pounds/day of $PM_{2.5.}$

- Operational Thresholds for Localized Criteria Pollutant Concentrations

  - The SCAQMD currently recommends that projects with site-specific operational emissions that generate the following localized pollutant concentrations at existing human receptors should be considered significant: (1) 2.5 µg/m^3 of PM_{10} averaged over a 24-hour period; (2) 1.0 (µg/m^3 of PM_{10} averaged over an annual period; or (3) 2.5 µg/m^3 of $PM_{2.5}$ averaged over a 24-hour period.

  - Because the Basin is currently in attainment of the national and State ambient air quality standards for NO_2 and CO, the SCAQMD currently recommends that projects with site-specific operational emissions that cause the following ambient air quality standards to be exceeded or contributes substantially to an exceeded standard at existing human receptors should be considered significant: (1) 0.18 parts per million (339 µg/m^3) NO_2 averaged over a 1-hour period (State standard); (2) 0.03 parts per million (57 µg/m^3) of NO_2 averaged over an annual period (State standard); (3) 20 parts per million (23,000 µg/m^3) of CO averaged over a 1-hour period (State standard); (4) 9.0 parts per million (10,000 µg/m^3) of CO averaged over an 8-hour period (national and State standard); or (5) 1 microgram per cubic meter (µg/m^3) of sulfate averaged over a 24-hour period.

- Operational Thresholds for Toxic Air Contaminants

  - The SCAQMD recommends that projects that could emit carcinogenic or TACs that exceed the maximum individual cancer risk of 10 in one million or a hazard index of 1.0 be considered significant.

- Additional Significance Threshold Considerations

  - The SCAQMD further recommends that the following “additional indicators” should be used as screening criteria with respect to air quality. Additional factors relevant to the proposed project, as identified in the SCAQMD’s CEQA Handbook, include the following significance criteria. In accordance therewith, the proposed project would normally be judged to produce a significant or potentially significant air quality effect if the project or project-related activities were to:

- Interfere with the attainment of the federal or State AAQS by either violating or contributing to an existing or projected air quality violation. Result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Generate vehicle trips that cause a localized CO concentration that exceeds: (1) State 1-hour CO standard of 20.0 ppm; and/or (2) State 8-hour CO standard of 9.0 ppm at an intersection or roadway within one-quarter mile of a sensitive receptor.
- Create or be subjected to an objectionable odor over 10 dilution to threshold that could impact sensitive receptors.
- Emit toxic emissions or acutely hazardous materials posing a threat to public health and safety.
- Emit an air toxic contaminant regulated by SCAQMD rules or that is on a federal or State air toxic list that exceeds the maximum individual cancer risk of 10 in one million or a hazard index of 1.0.[152]
- Result in occupation by sensitive receptors within a quarter mile of an existing facility that emits air toxics identified in SCAQMD Rule 1401[153] or near CO hot spots.
- Emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in one million (10×10^{-6}) or an acute or chronic hazard index of 1.0.[154]

With regards to CO concentrations, the significance of localized impacts depends on whether ambient CO levels in the vicinity of the proposed project are above or below State and federal CO standards. If ambient levels are below those standards, the proposed project would normally be considered to produce a significant air quality impact if project-related emissions were to result in an exceedance of one or more of those standards. If ambient levels already exceed a State or federal standard, then project-related emissions would normally be considered significant if they were to increase ambient concentrations by a measurable amount. The SCAQMD defines a measurable amount as 1.0 ppm or more for the 1-hour CO concentration or 0.45 ppm or more for the 8-hour CO concentrations.

While offensive odors rarely cause any public harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments. In accordance with the general nuisance rule (Section 41700, H&SC) and SCAQMD Rule 402, the proposed project would normally be judged to produce a significant or potentially significant air quality effect if the project or project-related activities were to:

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[152]/ The referenced threshold standard neither contains a quantification of the TAC emissions so released nor equates those emissions to a specific health-based standard. Intended for stationary point sources requiring SCAQMD permits and evaluated pursuant to Rule 1401, the SCAQMD-recommended threshold standard suggests that the threshold is achieved by any release of a TAC and not by a TAC release above a pre-specified level. As such, the threshold appears overly restrictive. Since regulations promulgated by the California Health and Welfare Agency, under Proposition 65, define a significant cancer risk as any risk exceeding ten in one million (10×10^{-6}), the threshold standard used herein is ten excess cancer risks per 1,000,000 exposed individuals over a continuous 70-year period.

[153]/ SCAQMD Rule 1401 specifies limits for maximum individual cancer risk, cancer burden, and non-cancer acute and chronic health index for new permit units, relocations, or modifications to existing permit units that emit TACs listed in the rule. Except as may be required for incident construction operations, the proposed project does not appear to contain a "permit unit" nor includes activities that would require a written permit.

[154]/ *Op. Cit.*, CEQA Air Quality Handbook, pp. 6-2 and 6-3.

- Generate odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public or which may endanger the comfort, repose, health, or safety of any such person or the public or which may cause or have a natural tendency to cause injury or damage to business or property.

In 2005, the SCAQMD published "Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, A Reference for Local Governments within the South Coast Air Quality Management District"[155] (Guidance Document) in order to aid in the determination of the consistency review. The Guidance Document contained recommended policies that local governments could use to prevent or reduce potential air pollution impacts and protect public health in their general plans or through local planning and presents goals and objectives that are designed in accordance with the goals and objectives of the 2007 AQMP (i.e., reduce air pollution while protecting the populace from its effects). As such, projects that comply with the goals and objectives of the Guidance Document will generally be found consistent with the 2007 AQMP. Conversely, the proposed project would normally be judged to produce a significant or potentially significant air quality effect if the project or project-related activities were to:

- Conflict with the current AQMP through actions that would prevent or substantially impede the attainment of the goals and objectives contained in the SCAQMD's Guidance Document.

Greenhouse Gas Emissions and Global Climate Change

Until the passage of California Global Warming Solutions Act of 2006 (AB 32), CEQA documents generally did not evaluate greenhouse gas emissions or impacts on global climate change attributable to proposed actions.[156] The primary focus of air pollutant analysis in CEQA documents was the emission of criteria pollutants, or those identified in the State and federal Clean Air Acts as being of most concern to the public and government agencies. With the passage of AB 32, a more detailed analysis of GHG emissions is recommended in CEQA documents; however, the analysis of GHGs is different from the analysis of criteria pollutants. Since the half-life of CO_2 is about 100 years, GHGs affect the global climate over a relatively long time period. Conversely, for criteria pollutants, significance thresholds are based on daily emissions and the determination of attainment or nonattainment is based on the daily exceedance of applicable ambient air quality standards (e.g., 1-hour and 8-hour exposures).

The OPR Advisory recognizes that CEQA guidelines have not been adopted to provide guidance as to how climate change is to be addressed under CEQA. OPR also notes that it is

[155]/ South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, A Reference for Local Governments Within the South Coast Air Quality Management District, May 6, 2005.

[156]/ Senate Bill 97 directs OPR to develop "'guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions by July 1, 2009,' and directs the California Resources Agency to certify and adopt the guidelines by June 30, 2010. An agency may also believe there is insufficient information to support selecting one specific threshold over another. . .[A]ir districts have historically set CEQA thresholds for air pollutants in the context of the local clean air plan, or within the framework of a rule or policy that manages risks and exposures due to toxic pollutants. There is no current framework that would similarly manage impacts of greenhouse gas pollutants, although the CARB is directed to establish one by June 30, 2009, pursuant to AB 32. A local agency may decide to defer any consideration of thresholds until this framework is in place" (Source: California Air Pollution Control Officers Association, CEQA and Climate Change – Evaluating and Addressing Greenhouse Gas Emissions form Projects Subject to the California Environmental Quality Act, January 2008).

continuing to consult with the CARB regarding appropriate thresholds of significance to use for climate change analysis (but that such guidance is not yet available). OPR has provided the following "informal guidance" regarding the following steps for addressing climate change impacts under CEQA: (1) identify and quantify the GHG emissions; (2) assess the significance of the impact on climate change; and (3) if significant, identify alternatives and/or mitigation measures that will reduce impacts below significance.[157]

Although project-specific GHG emissions can be calculated, neither the SCAQMD nor the City nor the County have established any programmatic or project-level significance thresholds for GHG emissions.[158] At this time, GHGs (primarily CO_2) are not regulated as a criteria pollutant and there are no broadly recognized significance criteria for these emissions. The thresholds of significance criteria set forth in the current version of Appendix G of the State CEQA Guidelines are not applicable for use in the analysis of GHG emissions.[159],[160] Similarly, the 2007 AQMP does not set forth CEQA targets that can be used to determine any potential threshold values for GHG emissions.

Due to the complex physical, chemical, and atmospheric mechanisms involved in global climate change, it is speculative to identify the specific impact, if any, to global climate change from one project's incremental increase in global GHG emissions. Pending the establishment of Statewide thresholds of significance for GHG emissions, the Lead Agency has elected to evaluate significance on a case-by-case basis. Because a single project's GHGs emissions to affect global climate change is highly speculative, significance analysis is more properly assessed on a cumulative basis.[161] Assessing the significance of a project's contribution to

[157]/ *Op. Cit.*, CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act Review, p. 5.

[158]/ In January 2008, the CAPCOA published a "white paper" evaluating and addressing GHG emissions under CEQA. As specified therein, the CAPCOA document "is intended as a resource, not a guidance document." As indicated by the CAPCOA: "The CEQA statutes do not require an air district or any lead agency to establish significance thresholds under CEQA for any pollutant. While there are considerations that support the establishment of thresholds, there is no obligation to do so. An air district or other lead agency may elect not to establish significance thresholds for a number of reasons. The agency may believe that the global nature of the climate change problem necessitates a Statewide or national framework for consideration of environmental impacts" (Source: California Air Pollution Control Officers Association, CEQA and Climate Change – Evaluating and Addressing Greenhouse Gas Emissions form Projects Subject to the California Environmental Quality Act, January 2008).

[159]/ Appendix G of the State CEQA Guidelines addresses criteria pollutants regulated by the AQMP and other State and federal regulations and standards. GHGs are not criteria pollutants, and therefore, the thresholds presented in Appendix G are not applicable.

[160]/ On April 13, 2009, as required by SB 97, OPR submitted to the Secretary for Natural Resources proposed amendments to the State CEQA Guidelines for GHG emissions. These proposed amendments would provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The California Natural Resources Agency will conduct formal rulemaking in 2009, prior to certifying and adopting the amendments. Proposed amendments include, but are not limited to revisions to Appendix G of the State CEQA Guidelines. As proposed therein, a project would result in a potentially significant impact if the project would: "(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment" and "(b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases" (http://opr.ca.gov/ceqa/pdfs/PA_CEQA_Guidelines.pdf).

[161]/ Until such time as State guidance is available on thresholds of significance for GHG emissions, OPR recommends that compliance with CEQA include: (1) a determination as to whether GHGs may be generated by a proposed project, and if so, quantify or estimate the GHG emissions by type and source; (2) assess whether those emissions are individually or cumulatively significant; when assessing whether a project's effects on climate change are "cumulatively considerable," even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects; and (3) if the lead agency determines that the GHG emissions from the project, as proposed, are potentially significant, investigate and implement ways to avoid, reduce, or otherwise mitigate the impacts of those emissions

cumulative global climate change involves: (1) determining an inventory of the project's GHG emissions; and (2) considering project consistency with applicable emission reduction strategies and goals, such as those set forth by the Global Warming Solutions Act of 2006 (AB 32).

The CARB's "Climate Change Scoping Plan" quantified the Statewide 1990 GHG emission total to be 427 $MMTCO_2e$ and forecast that the 2020 level would be 596 $MMTCO_2e$ if the State continued to conduct "business-as-usual" under the federal and State laws in effect as of the plan's adoption. To achieve the reduction to 1990 levels specified by AB 32, the plan concludes that total reduction of 174 $MMTCO_2e$ (28.3 percent) is required. With regards to GHGs and global climate change, the proposed project would, therefore, normally be judged to produce a significant or potentially significant effect if the project or project-related activities were to:

- Impede the State's ability to achieve the reduction to 1990 levels in GHG emissions required by California Global Warming Solutions Act of 2006 (AB 32). An impediment to the achievement of the GHG reduction goals of AB 32 would occur if project-wide emissions are not reduced to achieve a 28.3 percent reduction of GHG emissions over 2020 forecasted BAU conditions.

On October 24, 2008, the CARB released a "Preliminary Draft Staff Proposal for Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act."[162] The draft CARB thresholds propose a framework for developing thresholds of significance that rely upon the incorporation of a variety of performance measures to reduce GHG emissions associated with a project, as well as a numerical threshold of significance above which a project must include detailed GHG analysis in an EIR and incorporate all feasible mitigation measures. Although CARB proposed a threshold of 7,000 $MMTCO_2e$ per year for operational emissions (excluding transportation) and performance standards for construction and transportation emissions for industrial projects,[163] a numerical threshold for commercial and residential projects was not proposed but remains under development. In addition, the draft CARB thresholds incorporate SB 375 by providing that commercial and residential projects that comply with a previously approved plan, which, essentially, satisfies SB 375 and for which a certified final CEQA document has been prepared, is presumed to have a less-than-significant impact related to climate change. This proposal is the first step by CARB toward developing recommended Statewide interim thresholds of significance for GHGs that may be adopted by local agencies under CEQA. CARB intends to make its final recommendations on thresholds in 2009. Pending their adoption, the CARB's "interim significance thresholds" are not presented as threshold of significance criteria herein.

On December 5, 2008, the SCAQMD adopted an interim CEQA GHG significance threshold for projects where the SCAQMD is the lead agency. Currently, the SCAQMD has only adopted thresholds relevant to industrial (stationary source) projects. To achieve a policy objective of capturing 90 percent of GHG emissions from new residential and commercial development projects and implement a "fair share" approach to reducing emission increases from each sector, SCAQMD staff has proposed combining performance standards and screening thresholds. The performance standards suggested have primarily focused on energy-efficiency

(Source: Governor's Office of Planning and Research, CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act Review, Technical Advisory, June 19, 2008).

[162]/ California Air Resources Board, Preliminary Draft Staff Proposal for Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act, October 24, 2008.

[163]/ *Ibid*., p. 9.

measures beyond Title 24 Part 6, California's building energy-efficiency standards, and a screening level of 3,000 metric tonnes CO_2e per year based on direct operational emissions. Above this screening level, project design features, formulated to reduce GHGs, must be implemented to reduce the impact to below a level of significance.

At this time, the SCAQMD is performing additional analysis to further define the performance standards, as well as coordinating with CARB's interim GHG proposal. The SCAQMD is waiting for CARB's recommendations for the residential and commercial sector. Once the CARB adopts a Statewide significance thresholds, SCAQMD staff will report back to its Governing Board regarding any recommended changes or additions to the SCAQMD's interim threshold.[164] Pending adoption of residential and commercial standards, SCAQMD's "interim CEQA GHG significance thresholds" are not presented as threshold of significance criteria herein.

Besides the significance criteria identified in Appendix G of the State CEQA Guidelines, the threshold of significance recommendations formulated by the SCAQMD, and the GHG threshold criteria identified herein, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or other environmental documents and used as a basis for assessing the significance or potential significance of project-related and cumulative air quality impacts.

4.7.5 Impact Analysis

4.7.5.1 Construction Impacts

Construction Impacts (Air Quality)

Environmental Impact 7-1*. During construction, with regards to criteria pollutants, the projected maximum daily emissions of carbon monoxide (CO), oxides of nitrogen (NO_X), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and volatile organic compounds (VOC) could exceed SCAQMD recommended threshold standards.*

Preliminary Determination 7-1*. Significant and unavoidable impact.*[165]

For planning and analytical purposes, it is assumed that construction will be conducted in four broad phases (neighborhoods) over an approximately 20-year time period.[166] For the purpose of impact assessment, construction activities, by phase, including duration, acreage, and the amount and type of development, is included in Table 4.7-10 (Construction Phasing Schedule).

[164]/ SCAQMD website (http://www.aqmd.gov/hb/2008/December/081231a.htm).

[165]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) produce construction emissions exceeding (a) 75 pounds/day for ROG, (b) 100 pounds/day for NO_X, (c) 550 pounds/day for CO, (d) 150 pounds/day for PM_{10}, (e) 150 pounds/day of SO_X, (f) 55 pounds/day for $PM_{2.5}$, and (g) 3 pounds/day for lead; (2) conflict with or obstruct implementation of the applicable air quality plan; and (3) violate any air quality standard or contribute substantially to an existing or projected air quality violation.

[166]/ Each neighborhood is comprised of individual planning areas. Each planning area will be separately developed and have its own commencement and completion of construction dates. Since it is not possible to know, with any degree of certainty, the development schedule for individual planning areas, the analysis is based on the Applicant-established schedule for each of the project's four neighborhoods.

Table 4.7-10
CONSTRUCTION PHASING SCHEDULE

Neighborhood	Site Preparation/Grading			Building Construction				
	Start Date	End Date	Grading (acres/day)	Start Date	End Date	Residential (DU)	School (acres)	Commercial (KSF)
I	1/2009[1]	10/2012	50	6/2009	8/2015	924	-	19.0
II	6/2009	8/2015	50	4/2010	5/2018	2,430	-	39.5
III	6/2011	1/2025	50	3/2012	2/2020[1]	2,691	24	764.1
IV	7/2017	9/2020	50	4/2018	6/2021	2,362	-	26.9
Total	-	-	-	-	-	8,407	24	849.4

Notes:
1. Depending upon when construction commences in PA 78, this date may extend to 2025.

Source: PCR Services Corporation

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from grading, demolition, and construction activities.[167] Mobile source emissions, primarily PM and NO_x, would result from the use of construction equipment such as dozers, loaders, and cranes. During the finishing phase, paving operations and the application of architectural coatings and other building materials would release VOCs.

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. Since construction emissions are directly related to the intensity of construction activities, in order to present a reasonable "worst-case" analysis, it is assumed that all construction activities would be completed in the minimum timeframe feasible. If actual construction were to proceed at a less intensive pace, daily construction emissions would be reduced.

The number of pieces of construction equipment used and the duration of construction activity could have a substantial effect upon construction emissions, pollutant concentrations, and the potential for resulting impacts. As such, the emissions forecasts presented herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. As presented in Table 4.7-11 (Unmitigated Proposed Project – Estimate of Regional Construction Emissions), maximum CO, NO_x, PM_{10}, $PM_{2.5}$, and VOC construction-related daily (short-term) emissions would result in a significant impact prior to the incorporation of mitigation measures.

[167]/ It is mandatory for all construction projects in the SCAB to comply with SCAQMD Rule 403 for fugitive dust control. Specific requirements of the Rule 403 include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Mandatory compliance with dust control measures prescribed under Rule 403 would reduce particulate matter emissions associated with construction activities and was, therefore, assumed in the emissions calculation discussed below. In addition, the construction site would qualify as a large site as there would be more than 50 acres of disturbed surface area. The construction contractor must submit a "large operation notification" (Form 403) to the SCAQMD and implement the applicable actions specified in Rule 403. Those actions specified include maintaining minimum required soil moisture content and various other dust suppression techniques. Construction activities would also comply with SCAQMD Rule 442, which requires use of solvents and coatings with low-VOC content. Compliance with this rule is incorporated into the emission calculations discussed herein.

Table 4.7-11
UNMITIGATED PROPOSED PROJECT
ESTIMATE OF REGIONAL CONSTRUCTION EMISSIONS[1]
(pounds per day)

	CO	NO_X	PM_{10}[2]	$PM_{2.5}$[2]	VOC[3]	SO_X
Regional Emissions (On-Site + Off-Site)						
Neighborhood I	352	377	879	196	56	<1
Neighborhood II	1,036	563	893	207	103	1
Neighborhood III	608	406	883	199	83	<1
Neighborhood IV	194	215	870	189	39	<1
Maximum Overlapping[4]	2,194	1,206	2,066	475	232	3
SCAQMD Daily Significance Thresholds	550	100	150	55	75	150
Over/Under	1,644	1,106	1,916	420	157	(147)
Exceed Threshold?	Yes	Yes	Yes	Yes	Yes	No

Notes:
1. Emission quantities are rounded to whole number values. As such, the total values presented herein may be one unit more or less than actual values. Exact (non-rounded) values are provided in the URBEMIS model printout sheets and/or calculations, included in Appendix III-F (Air Quality Analysis).
2. PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.
3. VOC emissions estimates are based on compliance with SCAQMD Rule 442 requirements for low VOC solvents and coatings.
4. Maximum regional NO_X, PM_{10}, and $PM_{2.5}$ emissions occur during combined site preparation and building construction of Neighborhoods I, II, and III in 2012. Maximum regional CO and VOC emissions occur during combined construction of Neighborhoods II and III in 2015.

Source: PCR Services Corporation

To ensure that construction-related emissions are reduced to the maximum extent feasible, a number of mitigation measures (Mitigation Measure 7-1 through Mitigation Measure 7-9) have been incorporated.[168] These measures stipulate the watering of active grading areas, ensure that construction equipment is properly tuned and maintained, ensure that equipment engines be turned off when not in use, that construction activities be phased to avoid emissions peaks, require the use of electricity from power poles rather than generators when possible, prohibit construction vehicles from idling in excess of five minutes, restrict grading to 10 acres per day maximum when grading within 1,000 feet of residential and other sensitive receptors, include in construction contracts the control measures required and recommended by the SCAQMD at the time of development, and ensure that contractors use architectural coatings that contain VOCs with a rating of 75 grams/liter of VOC or less.

Prior to the grading of any portion within the project site, a grading plan will be submitted to and approved by the City. Additionally, a "Notice of Intent" (NOI) will be submitted to the California Regional Water Quality Control Board, Santa Ana Region (SARWQCB) and a site-specific storm water pollution and prevention plan (SWPPP), that includes appropriate BMPs, will be created in accordance with RWQCB guidelines. The site will be appropriately watered (via water

[168]/ Certain recommended mitigation measures presented herein replicate language contained in SCAQMD's Rule 403 (Fugitive Dust) which are presently only applicable to "large operators" (e.g., "Dust Control Measures for Large Operators [Table 2]), defined as active operations on property which contains 50 or more acres of disturbed surface area. Many of the proposed PAs could be less than 50 acres in size. As a result those provisions which are presently only applicable to "large operators" would not otherwise apply to those smaller PAs. The inclusion of those measures herein serves to extend certain provisions of Rule 403 to each of the proposed project's PAs, irrespective of the size of those areas.

trucks or other watering system) to ensure dust control is maintained within the SCAQMD standards and the SWPPP will ensure that runoff from the watering will avoid or effectively minimize water quality impacts due to construction-related activities.

With implementation of the recommended mitigation measures, daily emissions of CO, NO_x, PM_{10}, $PM_{2.5}$, and VOC from heavy-duty construction equipment would be reduced by a minimum of five percent. Implementation of those measures would reduce localized PM_{10} emissions by about 15 percent (from 80.2 to 69.0 µg/m^3) and $PM_{2.5}$ emissions by about 14 percent (from 17.9 to 15.2 µg/m^3). Daily construction activities would, however, continue to exceed the SCAQMD's recommended daily emission thresholds for regional CO, NO_x, PM_{10}, $PM_{2.5}$, and VOC after implementation of all feasible mitigation measures. Construction of the project would, therefore, have a significant and unavoidable impact on regional air quality. As discussed in Section 4.7.2 (Regulatory and Policy Setting) and Section 4.7.3 (Environmental Setting), increased emissions of criteria pollutants has the potential to result in human health impacts.

Construction operations, including asphalt paving operations, may produce perceptible odors. Dust and diesel odors are typical near construction sites. Large diesel-powered vehicles are frequently present during construction activities. Diesel exhaust from vehicles is not typically a health concern unless vehicles operate or idle in close proximity to structural air intakes, pedestrian areas, or close to sensitive receptors. The operation of diesel-powered construction equipment could generate nuisance diesel odors at nearby receptors.

In accordance with Sections 2480 and 2485 in Title 13 of the CCR, the idling of all diesel-fueled commercial vehicles (weighting over 10,000 pounds) shall be limited to 30 seconds at a school or five minutes at any location. With regards to the operation of any stationary, diesel-fueled, compression-ignition engines, Section 93115 in Title 17 of CCR specifies fuel and fuel additive requirements and emission standards.[169] In addition, the implementation of recommended emission control measures (Mitigation Measure 7-2 through Mitigation Measure 7-5, Mitigation Measure 7-7, and Mitigation Measure 7-8), which include the use of line power where feasible, restricting the idling of construction equipment, emissions controls, minimum setbacks for stationary equipment, and regular equipment maintenance, would minimize potential nuisance problem to a less-than-significant level.

Other potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. SCAQMD Rule 1113 limits the amount of VOCs from architectural coatings and solvents. As a result of the Applicant's mandatory compliance with applicable SCAQMD rules and regulations, in combination with a recommended mitigation measure (Mitigation Measure 7-9), no construction activities or materials are proposed which would create objectionable odors.

Environmental Impact 7-2. *Maximum PM_{10} and $PM_{2.5}$ concentrations, as primarily associated with grading activities, are projected to be 80.2 µg/m^3 and 17.9 µg/m^3, respectively, and would occur in the vicinity of those residential areas located to the south*

[169]/ The CARB adopts airborne toxic control measures (ATCMs) to reduce emissions of TACs. On February 26, 2004, the CARB adopted an ATCM for stationary compression-ignition (CI) engines (17 CCR 93115) to control diesel particulate matter (diesel PM), which was declared a TAC in 1998. The ATCM applies to all stationary diesel-fueled engines greater than 50 brake-horsepower installed before January 1, 2005 and all new stationary diesel engines installed on or after January 1, 2005. The purpose of this ACTM is to protect public health by reducing emissions of diesel PM, with a goal of reducing overall diesel PM in 2020 from this source category by 80 percent from 2002 baseline emissions.

of the project site. Substantially lower PM_{10} and $PM_{2.5}$ concentrations would occur in the vicinity of those residential areas located to the east of the project site.

***Preliminary Determination 7-2**. Significant and unavoidable impact.*[170]

The SCAQMD provides screening-level mass emission thresholds for project sites up to five acres. Since the project's construction phases would be expected to exceed 5 acres in size, the localized effects from the on-site construction emissions of CO, NO_x (NO_2), PM_{10} and $PM_{2.5}$ were analyzed using the USEPA's Industrial Source Complex Short Term (ISCST3) dispersion model that has served as the industry standard and is still deemed acceptable by the SCAQMD for use in dispersion modeling. The results of the dispersion modeling are presented in Table 4.7-12 (Unmitigated Proposed Project – Localized Construction Dispersion Analysis). As shown therein, PM_{10} and $PM_{2.5}$ localized impacts would exceed the SCAQMD recommended threshold of significance criteria. As discussed in Section 4.7.2 (Regulatory and Policy Setting) and Section 4.7.3 (Environmental Setting), increased emissions of criteria pollutants has the potential to result in human health impacts.

The most common regulated forms of particulate matter are PM_{10} (particulate matter with a diameter of 10 microns or less in size) and $PM_{2.5}$ (particulate matter with a diameter of 2.5 microns or less in size). The maximum PM_{10} and $PM_{2.5}$ concentrations of 80.2 $\mu g/m^3$ and 17.9 $\mu g/m^3$, respectively, would occur in the vicinity of those residential areas located to the south of the site and would occur primarily during site grading activities. Localized CO and NO_2 concentrations would remain below their corresponding thresholds.

The majority of PM_{10} emissions associated with the project's grading/site preparation phase are associated with fugitive dust and not diesel PM. During the building construction phase, most PM_{10} emissions are attributable to diesel sources. Building construction activities, however, will likely occur at a greater distance from near-site receptors.

Prior to the grading of any portion within the project site, a grading plan will be submitted to and approved by the City. A NOI will be submitted to the SARWQCB and a site-specific SWPPP, including appropriate BMPs, will be created in accordance with SARWQCB guidelines. The site will be appropriately watered (via water trucks or other watering system) to ensure dust control is maintained within the SCAQMD standards.

Construction activities conducted with the SCAB are required to comply with applicable SCAQMD rules and regulations. As required under Section 39614 of the H&SC, the CARB was required to adopt a list of the most readily available, feasible, and cost-effective control measures to reduce $PM_{2.5}$ and PM_{10} emissions.

Presented in Table 4.7-13 (CARB List of Readily Available, Feasible, and Cost-Effective Fugitive Dust Control Measures)[171] are a number of fugitive PM source categories and the corresponding SCAQMD rule that serves to implement those measures. In addition to the

[170]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) produce construction emissions exceeding (a) 75 pounds/day for ROG, (b) 100 pounds/day for NO_X, (c) 550 pounds/day for CO, (d) 150 pounds/day for PM_{10}, (e) 150 pounds/day of SO_X, (f) 55 pounds/day for $PM_{2.5}$, and (g) 3 pounds/day for lead; (2) conflict with or obstruct implementation of the applicable air quality plan; and (3) violate any air quality standard or contribute substantially to an existing or projected air quality violation.

[171]/ California Air Resources Board, Staff Report – Proposed List of Measures to Reduce Particulate Matter – PM_{10} and $PM_{2.5}$ (Implementation of Senate Bill 656, Sher 2003), approved, November 18, 2004, Appendix C.

implementation of applicable SCAQMD rules and regulations, a number of exhaust control-related mitigation measures (Mitigation Measure 7-2 through Mitigation Measure 7-5, Mitigation Measure 4-7, and Mitigation Measure 4-8) have been formulated. Implementation of those measures would reduce localized PM_{10} emissions by about 15 percent (from 80.2 to 69.0 µg/m^3) and $PM_{2.5}$ emissions by about 14 percent (from 17.9 to 15.2 µg/m^3).

Table 4.7-12
UNMITIGATED PROPOSED PROJECT
LOCALIZED CONSTRUCTION DISPERSION ANALYSIS

Pollutant and Averaging Period[1]	**Residential Receptor** (South)[5]	**Residential Receptor** (East)[5]
PM_{10} (24-hour) (µg/m^3)		
Project Incremental Concentration	80.2	29.5
LST Threshold	10.4	10.4
Over/Under	69.8	19.1
Exceed Threshold?	Yes	Yes
$PM_{2.5}$ (24-hour) (µg/m^3)		
Project Incremental Concentration	17.9	6.6
LST Threshold	10.4	10.4
Over/Under	7.5	(3.8)
Exceed Threshold?	Yes	No
CO (1-hour) (ppm)		
Combined Concentration[2]	3.09	3.04
LST Threshold	20	20
Over/Under	(16.91)	(16.96)
Exceed Threshold?	No	No
CO (8-hour) (ppm)		
Combined Concentration[3]	2.14	2.11
LST Threshold	9.0	9.0
Over/Under	(6.86)	(6.89)
Exceed Threshold?	No	No
NO_2 (1-hour) (ppm)		
Combined Concentration[4]	0.110	0.104
LST Threshold	0.18	0.18
Over/Under	(0.070)	(0.076)
Exceed Threshold?	No	No

Notes:
1. Maximum localized construction CO, NO_x, PM_{10}, and $PM_{2.5}$ concentrations occur during combined site preparation and building construction of Neighborhoods I, II, and III during 2012.
2. Includes a background concentration of 3.0 ppm.
3. Includes a background concentration of 2.1 ppm.
4. Includes a background concentration of 0.10 ppm. Presented concentration is based on NO_x while the standard is based on NO_2. Because NO_2 is a subset of NO_x, NO_2 concentrations would be lower than presented in the table and would not be significant.
5. All maximally impacted receptors are within 100 meters of the project site.

Source: PCR Services Corporation

Even with the incorporation of the recommended mitigation measures, the project's air quality impacts are predicted to exceed the SCAQMD threshold for $PM_{2.5}$ and PM_{10} and, therefore, remain significant.

Table 4.7-13
CARB LIST OF READILY AVAILABLE, FEASIBLE, AND COST-EFFECTIVE FUGITIVE DUST CONTROL MEASURES

Fugitive PM Source Category	Applicable SCAQMD Rule
Construction: Earth Moving/Demolition/Grading	Rule 403
Inactive Disturbed Land	Rule 403
Bulk Material: Handling/Storage	Rule 403
Carry-Out and Track-Out	Rule 403
Disturbed Open Areas	Rule 403
Paved Road Dust: New/Modified Public and Private Roads	Rule 1186
Paved Roads: Street Sweeping	Rule 1186
Unpaved Parking Lots/Storage Areas	Rule 1186
Weed Abatement Activities	Rule 403
Windblown Dust: Construction/Earth Moving	Rule 403
Windblown Dust: Disturbed Areas	Rule 403
Windblown Dust: Bulk Materials/Storage Piles	Rules 403 and 403.1

Source: South Coast Air Quality Management District

Environmental Impact 7-3*. Construction activities will yield a maximum incremental increase in off-site individual cancer risk of about 4.2 in one million (4.2 x 10^{-6}) over the duration of construction. The maximum impact occurs at residential uses south of the project site.*

Preliminary Determination 7-3*. Less-than-significant impact.*

The greatest potential for TAC emissions would be related to diesel PM emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk," defined as the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime outdoors will contract cancer, based on the use of standard risk-assessment methodology.

Unlike diesel PM, since CARB has not assigned a toxicity factor for fugitive dust emissions, fugitive dust was not included in the health risk assessment. Fugitive dust is atmospheric dust resulting from both natural and anthropogenic disturbance of soil and other granular material. Fugitive dust particles are comprised mainly of soil minerals (i.e., oxides of silicon, aluminum, calcium, and iron) but can also consist of sea salt, pollen, spores, and other materials. Common sources of fugitive dust during construction include use of unpaved roads and construction operations. Fugitive dust may contribute to a range of adverse health effects as it is comprised of PM_{10} and $PM_{2.5}$. As described above, CARB and the USEPA have recognized the potential adverse health effects associated with PM_{10} and $PM_{2.5}$ emissions.

An assessment of diesel PM emissions was conducted to assess this potential risk using the same assumptions used for the localized analysis. As such, this analysis includes all diesel exhaust emissions associated with on-site heavy equipment and haul trucks during the construction period. The results of this analysis for the construction of the project yield a maximum incremental increase in off-site individual cancer risk of about 4.2 in one million (≈4.2

x 10^{-6}) over the duration of construction, with the maximum impact occurring at the residential areas located to the south of the project site.

As the project will not emit carcinogenic or toxic air contaminants that individually or collectively exceed the maximum individual cancer risk of ten in one million (<10 x 10^{-6}), potential project-related toxic emission impacts from construction activities will be less than significant and no mitigation is required or recommended.

4.7.5.2 Operational Impacts

Operational Impacts (Air Quality)

Environmental Impact 7-4*. The increase in daily emissions resulting from operation of the proposed project are expected to exceed the SCAQMD thresholds for VOC, CO, PM_{10}, $PM_{2.5}$, and NO_X.*

Preliminary Determination 7-4*. Significant and unavoidable impact.*[172]

Stationary sources built and operated as a result of this project are subject to comply with the applicable rules and regulations of the SCAQMD. Emission calculations associated with the operation of the proposed project assume mandatory compliance with applicable standards, prohibitions, and emission limits, such as the inclusion of Best Available Control Technology (BACT) and other measures to reduce pollutant emissions. For example, the SCAQMD has promulgated rules to lower emissions associated with the use of building materials, cleaning solvents, architectural coatings, and wood-burning fireplaces. In addition the proposed development plans allow for certain businesses, such as dry cleaners, retail gasoline stations, and restaurant operations (charbroilers), which are subject to SCAQMD rules.

The unmitigated daily operational emissions reported in Table 4.7-14 (Estimate of Unmitigated Project Operational Emissions) are based on compliance with applicable SCAQMD rules relative to individual on-site land uses.

Daily air pollutant emissions associated with proposed project's operations would be generated by the consumption of electricity and natural gas and by the operation of on-road vehicles. Pollutant emissions associated with energy demand (i.e., electricity generation and natural gas consumption) are classified by the SCAQMD as regional stationary source emissions. Electricity is considered an area source since it is produced at various locations within and outside of the SCAB. Since it is not possible to isolate where electricity is produced, these emissions are conservatively considered to occur within the SCAB and are regional in nature. Criteria pollutant emissions associated with the production and consumption of energy were calculated using emission factors from the CEQA Handbook (Appendix to Chapter 9).

[172]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) produce operational emissions exceeding the following SCAQMD-recommended thresholds(a) 55 pounds/day of ROG, (b) 55 pounds/day of NO_X, (c) 550 pounds/day of CO, (d) 150 pounds/day of PM_{10}, (e) 150 pounds/day of SO_X, (f) 55 pounds/day for $PM_{2.5}$, and (g) 3 pounds/day for lead; (2) conflict with or obstruct implementation of the applicable air quality plan; and (3) violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Table 4.7-14
ESTIMATE OF UNMITIGATED PROJECT OPERATIONAL EMISSIONS[1]
(pounds per day)

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
On Road Mobile Sources[2]	394	436	3,755	10	1,596	311
Stationary Sources[3]	2	220	38	23	8	8
Area Source[4]	495	116	211	<1	<1	<1
Total Project	395	657	3793	33	1604	319
Daily Significance Threshold	55	55	550	150	150	55
Over/Under	340	602	3,245	(117)	1,454	264
Significant?	Yes	Yes	Yes	No	Yes	Yes

Notes:
1. All emission calculations include reductions associated with SCAQMD rules requiring BACT.
2. Mobile emissions calculated using the URBEMIS 2007 emissions model and the project's traffic impact assessment. Model output sheets are provided in Appendix III-F (Air Quality Analysis).
3. Based on guidance provided in the SCAQMD's CEQA Handbook.
4. Based on URBEMIS 2007 natural gas consumption, consumer product, reapplication of architectural coatings, and landscaping emissions.

Source: PCR Services Corporation

Excluding regional stationary source emissions, operational emissions are primarily a function of vehicle trips. The increase in residential and non-residential uses and the increase in vehicle trips were analyzed. According to the traffic analysis, the project would result in an increase of 81,660 daily trips over existing conditions. In addition to direct pollutant emissions, including carbon monoxide (CO), ozone (O_3), and particulate matter (PM_{10} and $PM_{2.5}$), motor vehicles emit precursors that contribute to pollutant concentrations, including nitrogen oxides (NO_X), volatile organic compounds (VOCs), sulfur oxides (SO_X), and ammonia (NH_3). Mobile-source emissions were calculated using the current URBEMIS 2007 emissions inventory model (Version 9.2.4), which multiplies an estimate of the increase in daily vehicle miles traveled (VMT) by applicable EMFAC2007 emissions factors. As shown in Table 4.7-13 (Estimate of Unmitigated Project Operational Emissions), the increase in daily emissions resulting from operation of the proposed project are expected to exceed the SCAQMD thresholds for VOC, CO, PM_{10}, $PM_{2.5}$, and NO_X. As discussed in Section 4.7.2 (Regulatory and Policy Setting) and Section 4.7.3 (Environmental Setting), increased emissions of criteria pollutants has the potential to result in human health impacts.

As more thoroughly discussed later in this section, in May 2005, the SCAQMD published the "Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, A Reference for Local Governments within the South Coast Air Quality Management District"[173] (Guidance Document). The Guidance Document presents goals and objectives that are designed in accordance with the goals and objectives of the 2007 AQMP (i.e., reduce air pollution while protecting the populace from its effects). As a goal, the SCAQMD recommended "a reduction in air pollution from mobile sources (Goal 2). Goal attainment is promoted by the following objectives: "Reduce motor vehicle trips and vehicle miles traveled (Objective 2-1).

The residential and non-residential development pattern proposed under the LCRSP has the potential to allow residents, employees, and others to travel shorter distances between work,

[173]/ South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, A Reference for Local Governments Within the South Coast Air Quality Management District, May 6, 2005.

their residences, employment, shopping, and other destinations. Shorter travel distances result in fewer VMT by personal automobile, reduce transportation-related GHG emissions, and, if not encourage, at least allow for alternative forms of transportation (e.g., walking and bicycling) between destinations. Because the project would be located along an existing bus route (Route 22), transit connections will be provided between the project site and the existing Rialto Metrolink Station, thus encouraging the use of public transportation. Public transit is substantially less energy intensive on a per capita level than traveling by personal automobile.

As indicated by the Federal Highway Administration (FHWA): "Strategies that reduce vehicle miles traveled (assuming no other effects) will reduce emissions of all pollutants. Each mile that a vehicle travels, it emits more pollution, so reducing vehicle travel mileage will reduce emissions of all seven gases. However, in conducting emissions analysis, it is important to examine not only the reduction in vehicle miles traveled (VMT), but also the reduction in the number of vehicle trips."[174] Because operational emissions are primarily a function of vehicle trips and VMT and because mobile source emissions exceed identified threshold standards, a number of mitigation measures have been formulated which promote a reduction in vehicle trips and/or VMT. To ensure that mobile source emissions are reduced, a mitigation measure (Mitigation Measure 7-10 has been formulated which requires, to the extent feasible, that deliveries be scheduled during off-peak periods to reduce trips during congested periods.

The combined residential and non-residential land-use pattern created under the proposed LCRSP will result in greater use of alternative transportation modes and a shortening of the remaining vehicle trips. The detail design of the project should be conducive to achieving a high rate of use of the alternative transportation modes. To increase the use of alternative transportation modes and further reduce VMT, a mitigation measure (Mitigation Measure 7-11) has been formulated recommending that the project's on-site proposed bicycle and pedestrian facilities extend through and link the residential neighborhoods, commercial areas, and accessible recreational facilities. A mitigation measure (Mitigation Measure 7-12) has also been formulated requiring that subsequent site plan reviews consider the provision of safe and convenient access to public transportation.

Park-and-ride facilities and associated transit services along with park-and-pool facilities formalize and make readily available the option of mixed-mode travel. The combination they facilitate allows use of a low-occupancy mode, most often driving alone, where travel densities are low and high-occupancy modes are inconvenient, allowing transfer to a high-occupancy mode (e.g., transit, vanpools, and carpools) where travel densities become higher and more supportive of high-occupancy mode efficiencies.[175]

In order to promote ridesharing and reduce total VMT, a mitigation measure (Mitigation Measure 7-13) has been formulated requiring, to the extent feasible, the development of a park-and-ride/park-and-pool facility[176] near the intersection of Sierra and Riverside Avenues or in such other on-site or off-site location as may be mutually agreed to by the City and the

[174]/ Federal Highway Administration, Multi-Pollutant Emissions Benefits of Transportation Strategies, Final Report, FHWA-HEP-07-004, November 14, 2006, Section 2.

[175]/ Kuzmyak, J., Pratt, Richard H., and Douglas, Bruce T., Traveler Response to Transportation System Changes, Chapter 3 (Park-and-Ride/Pool), Transportation Research Board, TCRP Report 95, 2003, p. 3-1.

[176]/ The Transportation Research Board has identified the following types of park-and-ride/park-and-pool facilities: (1) rail park-and-ride facilities; (2) busway and HOV-lane park-and-ride facilities; (3) express and local bus park-and-ride facilities; (4) park-and-pool facilities; and (5) peripheral park-and-ride facilities (Source: TCRP Report 95, 2003, pp. 3-5 and 6). As such, park-and-ride/park-and-pool facilities can serve a variety of purposes, particularly when combined with accessibility to public transit.

Applicant.[177,178] In order to promote use of public transportation, a mitigation measure (Mitigation Measure 7-14) has been formulated requiring the construction of bus shelters both at the park-and-ride/park-and-pool facility and at other locations throughout the project site. However, even with the implementation of the recommended measures, daily operational emissions will continue to exceed the SCAQMD daily emission threshold for regional CO, NO_x, PM_{10}, $PM_{2.5}$, and VOC. The proposed project will, therefore, have a significant and unavoidable operational air quality impact.

Environmental Impact 7-5*. Increased traffic along project area roadways has the potential to result in the creation of carbon monoxide (CO) "hot spots" at any intersections projected to operate at a LOS "D" or worse.*

Preliminary Determination 7-5*. Less-than-significant impact.*

CO is produced in the greatest quantities from vehicle combustion and is usually concentrated at or near ground level because it does not readily disperse into the atmosphere. As a result, potential air quality impacts to sensitive receptors are typically assessed through an analysis of localized CO concentrations. Areas of vehicle congestion have the potential to create pockets of CO. These CO "hot spots" typically occur at intersections where vehicle speeds are reduced and idle time is increased. These "hot spots" have the potential to exceed the State ambient 1-hour standard of 20 ppm and/or the 8-hour standard of 9.0 ppm. In contrast, federal levels are based on 1-hour and 8-hour standards of 35 and 9 ppm, respectively. An exceedance condition would, therefore, occur based on the State prior to any exceedance of the federal standard.

During the operational phase, project traffic would have the potential to create localized CO impacts. The SCAQMD recommends a "hot-spot" evaluation of potential localized CO impacts when: (1) V/C ratios are increased by two percent at intersections with a LOS "D" or worse; and/or (2) an intersection decreases in service level by one level, beginning when the level of service changes from an LOS "C" to LOS "D." Intersections were selected for analysis based on information provided in the traffic impact assessment.

Local area CO concentrations were projected using the CALINE4 traffic pollutant dispersion model. The analysis of CO impacts followed the protocol recommended by Caltrans[179] and is consistent with procedures identified through the SCAQMD's CO modeling protocol, with all four corners of each intersection analyzed to determine whether proposed project development would result in a CO concentration that exceeds federal or State CO standards. Pursuant to these guidelines, receptor locations for the 1-hour analysis were located three meters from each intersection corner and receptor locations for the 8-hour analysis were located seven meters

[177]/ One possible alternative location evaluated herein is SCE's existing on-site Lugo-Mira Loma 500-kV transmission line right-of-way (ROW). Subject to California Public Utilities Commission (CPUC) authorization, the Applicant may be able to secure a long-term leasehold or other possession interest to lands located in that ROW for park-and-ride purposes. Section 851 of the Public Utilities Code requires utilities to file such an application with the CPUC prior to the sale, lease, or other encumbrance of utility property. This process allows the CPUC to determine whether the proposed transaction is in the public interest and whether the intended use of the property would interfere with the purpose and obligations of the utility to maintain safe and reliable facilities. The Applicant's ability to secure SCE authorization cannot be determined since it is subject to SCE consent and CPUC authorization.

[178]/ As authorized under Section 66475.2 of the CGC, pursuant to local ordinance, the Subdivision Map Act (Section 66410 *et seq*., CGC) provides enabling authority for local agencies to obtain exactions for local transit facilities such as bus turnouts, benches, shelters, and similar items when the subdivision has the potential for 200 or more dwelling units, covers 100 or more acres, or when transit services are or will be available to it.

[179]/ California Department of Transportation, Transportation Project-Level Carbon Monoxide Protocol, December 1997.

from each intersection corner. Projected future ambient background CO concentrations were selected for the appropriate SRA from SCAQMD's recommended background concentrations tables.[180] The SCAQMD recommends these projected background levels for use in horizon year impact analyses, as they account for CO concentrations expected to result from future traffic volumes, which may be higher than current monitored pollutant levels. The recommended background levels span the period from 1999 to 2020. Emissions remain the same beyond the year 2010 and were used to represent background concentrations for the year 2030 analysis.

The proposed project's CO concentrations for 1-hour and 8-hour CO levels during the AM and PM peak travel periods are presented Table 4.7-15 (Local Area Carbon Monoxide Dispersion Analysis). As shown therein, the proposed project would not have a significant impact upon 1-hour or 8-hour local CO concentrations due to mobile source emissions. Because significant impacts would not occur at the intersections with the highest traffic volumes that are located adjacent to sensitive receptors, no significant impacts are anticipated to occur at any other locations in the study area as the conditions yielding CO hot-spots would not be worse than those occurring at the analyzed intersections. Consequently, on-site and off-site sensitive receptors would not be significantly affected by CO emissions generated by the net increase in traffic that would occur as a result of the proposed project.

Environmental Impact 7-6*. The introduction of new retail commercial and other non-residential land uses in close proximity to existing and proposed residential areas could place odor-generating uses near odor-sensitive uses. Additionally, since new development will occur adjacent to existing land uses, new on-site receptors could be impacted by any off-site odors generated by those uses.*

Preliminary Determination 7-6*. Less-than-significant impact.*

According to the SCAQMD's CEQA Handbook, land uses associated with odor complaints typically include agriculture (farming and livestock), chemical plants, composting operations, dairies, fiberglass molding, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants.[181] The SCAQMD, however, acknowledges that "almost any source may emit objectionable odors."[182] As reported by the SCAQMD, between 1997 and 2006, odor complaints were received with regards to a number of sources, including sewerage (3 percent), dry cleaners (3 percent), restaurants (1 percent), and coffee roasting (1 percent).[183]

The project's proposed residential and non-residential development will create opportunities for commercial and residential uses to co-exist. As such, odor-generating land uses, such as restaurants and coffee shops, may be located in close proximity to odor-sensitive land uses. Similarly, trash receptacles, as well as the parking and loading areas associated with those uses, present other potential sources of odors.[184]

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[180]/ South Coast Air Quality Management District, Carbon Monoxide, Average Annual Day CO Emissions in the South Coast Air Basin (http://www.aqmd.gov/ceqa/handbook/CO/CO.html), accessed February 2008.

[181]/ South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning - A Reference for Local Governments within the South Coast Air Quality Management District, May 6, 2005, p. 2-2.

[182]/ *Ibid*.

[183]/ Coy, Carol, Odors in the Community – The Air Quality Regulatory Challenge, Odor Detection, Mitigation, and Control Technology Forum, South Coast Air Quality Management District, October 30, 2007, p. 8.

[184]/ Although the proposed LCRSP includes no additional provisions addressing nuisance odors, as specified, in part, in Section 18.61.050 (Site Design – Commercial and Industrial) in the City Municipal Code: "When a commercial use is adjacent to residential or other sensitive uses, appropriate design techniques shall be provided to

While the provisions of the City Municipal Code offer general guidance, no specific design techniques (e.g., remote placement of exhaust hoods and fans discharging air from objectionable sources away from dwellings and outdoor living areas) are specifically called out.

The proposed LCRSP includes provisions for a "Precise Plan of Design (Design Review)" which is designed "to promote an orderly and aesthetically pleasing environment within the City of Rialto and to ensure that development complies with all City ordinances and regulations." Through that process, issues of odor-intrusion and the selection of appropriate design techniques can be addressed on a site-specific basis rather than a general prohibition with regards to specific land uses that may be odor generators. Implementation of the proposed design-review process will help to ensure that potential odor nuisance impacts are reduced to the maximum extent feasible.

Environmental Impact 7-7*. The project will locate sensitive receptors within an area of localized cancer risk in excess of the SCAQMD significance threshold of 10 in one million (10 x 10^{-6}).*

Preliminary Determination 7-7*. Significant and unavoidable impact.*[185]

TACs are of particular concern with regard to sensitive receptors. As indicated below, potential air toxic impacts were evaluated from on-site sources to off-site populations. In addition, the proposed project is introducing sensitive land uses (e.g., residential and educational) into an area where potential off-site sources of air toxics may potentially impact proposed on-site sensitive uses.

- **Operational Impacts from On-Site TACs to Off-Site Population**. This section evaluates potential impacts to off-site neighboring properties that may result from TAC emissions associated with long-term operation of the proposed project. The primary sources of potential air toxics associated with the project's operations include diesel PM from delivery trucks (e.g., truck traffic on local streets and on-site truck idling) and emergency backup generators. The SCAQMD recommends that a HRA be conducted for substantial sources of diesel PM (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[186]

  As proposed, the LCRSP would allow or conditionally allow for the development and operation of wholesale/distribution centers, general warehouses, and other "industrial" uses within the "Village Center Commercial (VC)" and "General Warehousing Overlay" districts. Those land uses may be located within 1,000 feet of new on-site and/or existing off-site residential uses and other sensitive receptors.

mitigate any negative effects of the commercial use. Noise, traffic, or odor generating activities and hazardous activities shall be located adjacent to similar activities on adjacent properties, whenever possible. The location of these activities within close proximity to residential or other sensitive uses shall always be avoided."

[185]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) expose sensitive receptors to substantial air pollutant concentrations; (2) emit toxic emissions or acutely hazardous materials posing a threat to public health and safety; (3) emit an air toxic contaminant regulated by SCAQMD rules or that is on a federal or State air toxic list; (4) emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million (10 x 10^{-6}) or an acute or chronic hazard index of 1.0; and (5) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

[186]/ South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.

In 2004, CARB adopted an ATCMs to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs and air pollutants. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds which are licensed to operate on highways, regardless of where they are registered. This ATCM does not allow diesel fueled commercial vehicles to idle for more than five minutes at any given time.

In addition to ATCMs, CARB adopted various recommendations regarding the siting of new sensitive land uses near sources of TACs. As indicated in Table 4.7-5 (California Air Resources Board – Recommendations on Siting Sensitive Land Uses), the CARB's advisory recommendations include the siting of sensitive land uses outside 1,000 feet of major distribution centers[187] and 500 feet of a freeway or other urban road with 100,000 vehicles per day.[188]

The methodology for estimating potential health impacts from diesel truck idling was based on data from various locations within the State.[189] Using a worst-case scenario to create a conservative estimate, the HRA evaluated risk using an emission factor for diesel truck idling representative of the 2007 truck fleet. The study concluded that 100 hours of daily idle would create a health risk greater than 10 in one million ($>10 \times 10^{-6}$) within approximately 250 meters (820 feet) of the loading area. The threshold distance of 250 meters would increase approximately 50 meters (164 feet) with every 50 additional diesel idle hours.

Localized air toxic impacts from diesel PM emissions associated with a potential distribution center may, therefore, be substantial if it is located within approximately 1,000 feet of a sensitive land use. Unlike a freeway, this determination is more speculative due to the low level of detail about future development (such as specific location of the distribution center, orientation of loading docks, and activity level) known at this time. Based on the studies conducted by the CARB, however, a sensitive land use could be exposed to a cancer risk of 10 in one million (10×10^{-6}) or greater if located within 1,000 feet of a large distribution center. Since a distribution center is authorized as a conditionally permitted use with the "Village Center Commercial (VC)" district and identified as a permitted use in the "General Warehousing Overlay" and could be sited in close proximity to residential or other sensitive receptors, the inclusion of that or similar uses could create a substantial health risk and would, therefore, be deemed significant.

As further indicated in the proposed LCRSP, gasoline service stations, automobile repair shops, welding, machine, and metal plating shops, manufacture and assembly facilities, research and development facilities, printing and blueprinting shops, warehouse and distribution centers, and other similar uses are identified as a permitted or conditionally permitted use within the "Village Center Commercial (VC) district and "General Warehousing Overlay." As indicated in Table 4.7-6 (Examples of Other Facility Types that Emit Air Pollutants of Concern), the CARB has defined many of those uses as "facility types that emit air pollutants of concern."

[187]/ Defined, by the CARB, as operating 100 or more truck trips per day, 40 or more daily truck trips with transport refrigeration units (TRUs), or trucks operating RTUs that idle for a total of 300 hours per week or more.

[188]/ *Op. Cit*., Air Quality and Land Use Handbook: A Community Health Perspective, Table 1-1, p. 4.

[189]/ California Air Resources Control Board, Methodology for Estimating Premature Deaths Associated with Long-Term Exposures to Find Airborne Particulate Matter in California, Draft Staff Report, May 22, 2008, Appendix C (Methodology for Estimating the Potential Health Impacts from Diesel Truck Idling Operations).

Table 4.7-15
LOCAL AREA CARBON MONOXIDE DISPERSION ANALYSIS

Location	Peak Period[1]	Maximum 1-Hour 2030 Base Concentration[2] (ppm)	Maximum 1-Hour 2030 w/ Project Concentration[3] (ppm)	Maximum 8-Hour 2030 Base Concentration[5] (ppm)	Maximum 8-Hour 2030 w/ Project Concentration[6] (ppm)	Significant 1 Hour or 8-Hour Impact[6]
Glen Helen Parkway and Cajon Boulevard	AM PM	3.9 4.0	3.9 4.1	3.04 3.11	3.04 3.11	No No
I-15 SB On/Off Ramps and Sierra Avenue	AM PM	4.1 4.1	4.2 4.2	3.18 3.11	3.18 3.18	No No
I-215 NB On/Off Ramps and University Parkway	AM PM	3.9 4.2	4.2 4.5	3.04 3.18	3.18 3.32	No No
I-215 SB On/Off Ramps and Palm Avenue	AM PM	4.4 4.6	4.4 4.6	3.25 3.39	3.25 3.39	No No
Lytle Creek Road and Sierra Avenue	AM PM	4.2 4.3	4.4 4.4	3.11 3.18	3.18 3.25	No No
Casmalia Street and Alder Avenue	AM PM	3.9 4.0	4.0 4.1	3.04 3.11	3.11 3.11	No No
I-15 NB On/Off Ramps and Sierra Avenue	AM PM	4.0 4.2	4.2 4.5	3.04 3.18	3.18 3.32	No No
I-15 SB On/Off Ramps and Summit Avenue	AM PM	4.0 4.1	4.0 4.1	3.11 3.18	3.11 3.18	No No
Riverside Avenue and Linden Avenue	AM PM	4.0 3.9	4.2 4.3	3.11 3.11	3.18 3.25	No No
Riverside Avenue and Sierra Avenue	AM PM	4.1 4.1	4.4 4.6	3.11 3.11	3.32 3.39	No No
SR-210 Freeway EB On/Off Ramps and State Street	AM PM	4.0 4.2	4.0 4.2	3.04 3.18	3.11 3.18	No No
Highland Avenue/Easton Street and Alder Avenue	AM PM	4.2 4.3	4.2 4.3	3.18 3.25	3.25 3.25	No No
Highland Avenue and State Street	AM PM	4.3 4.3	4.5 4.4	3.25 3.25	3.25 3.32	No No
SR-210 Freeway EB On/Off Ramps and Riverside Avenue	AM PM	4.3 4.4	4.3 4.5	3.32 3.32	3.32 3.11	No No

Table 4.7-15 (Continued)
LOCAL AREA CARBON MONOXIDE DISPERSION ANALYSIS

Location	Peak Period[1]	Maximum 1-Hour 2030 Base Concentration[2] (ppm)	Maximum 1-Hour 2030 w/ Project Concentration[3] (ppm)	Maximum 8-Hour 2030 Base Concentration[5] (ppm)	Maximum 8-Hour 2030 w/ Project Concentration[6] (ppm)	Significant 1 Hour or 8-Hour Impact[6]
SR-210 Freeway EB On/Off Ramps and Riverside Avenue	AM PM	3.9 4.0	4.0 4.1	3.04 3.04	3.18 3.04	No No
Baseline Road And Alder Avenue	AM PM	4.0 4.2	4.0 4.2	3.04 3.18	3.04 3.18	No No
Easton Street And Ayala Drive	AM PM	4.1 4.3	4.1 4.3	3.11 3.25	3.11 3.25	No No
Easton Street And Riverside Avenue	AM PM	4.0 4.2	4.1 4.2	3.11 3.18	3.11 3.18	No No

Notes:
ppm = parts per million.
1. Peak-hour traffic volumes are based on the traffic impact assessment.
2. SCAQMD 2030 1-hour ambient background concentration (3.6 ppm) + 2030 base traffic CO 1-hour contribution.
3. SCAQMD 2030 1-hour ambient background concentration (3.6 ppm) + 2030 with project traffic CO 1-hour contribution.
4. SCAQMD 2030 8-hour ambient background concentration (2.9 ppm) + 2030 base traffic CO 8-hour contribution.
5. SCAQMD 2030 8-hour ambient background concentration (2.9 ppm) + 2030 with project traffic CO 8-hour contribution.
6. The most restrictive standard for 1-hour CO concentrations is 20 ppm and for 8-hour concentrations is 9.0 ppm.

Source: PCR Services Corporation

Although no "heavy industrial" or "heavy manufacturing" uses are contemplated, the proposed LCRSP authorizes certain types of "industrial," "manufacturing," and "warehousing, storage, and heavy commercial" uses as either permitted or conditionally permitted land uses within the "Village Center Commercial (VC)" district and "General Warehousing Overlay."[190] However, the proposed LCRSP does not, however, provide any explicit definitions (or use-based performance standards) of what would generally constitute a "light" or "heavy" (or "medium") industrial and/or commercial land use.[191]

As a result, a mitigation measure (Mitigation Measure 7-15) has been formulated which would preclude the development of certain land uses that would have an increased potential of emitting toxic pollutants, including: (1) heavy industrial; (2) landfills and transfer stations; (3) hazardous waste and medical waste incinerators; and (4) chrome plating facilities.

Specific retail and light or medium industrial facilities that may be allowed under the proposed LCRSP could still pose airborne risks to nearby sensitive receptors. For example, dry cleaners[192] and gasoline stations[193] routinely handle chemicals and similar products. Those substances, in the regular course of business, can cause TACs to be emitted into the atmosphere. CARB has prepared recommended siting guidelines and all new sources of TACs and other acutely hazardous materials (AHMs) would be subject to permit processes which include review and approval from responsible agencies, such as the SCAQMD and the San Bernardino County Fire Department, acting in its role as the Certified Unified Protection Agency (CUPA). Those agencies would, through the review of individual development applications and processing of individual permits, require demonstration of compliance with all applicable regulatory requirements (e.g., T-BACT). As such, the Lead Agency can reasonably anticipate that all permitted or conditionally permitted industrial, manufacturing, and warehouse-related land uses would fully comply (with respect to siting, design, and operation) with those applicable standards adopted for the purpose of minimizing potential adverse environmental effects potentially associated with those uses.

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[190]/ The terms "heavy industrial," "heavy manufacturing," and "heavy commercial" are not specifically defined in either the City Municipal Code or the proposed LCRSP, other than through listing of the permitted, conditionally permitted, or prohibited uses comprising that categorization.

[191]/ As indicated by the County of San Bernardino: "Industrial is often divided into 'heavy industrial' uses, such as construction yards, quarrying, and factories; and 'light industrial' uses, such as research and development and less intensive warehousing and manufacturing" (County of San Bernardino, Draft Goals and Policies report, September 14, 2005, p. 24).

[192]/ As reported by the SCAQMD: "A majority of dry cleaning facilities in the district use perc in their dry cleaning operations. Perc, whose product name is tetrachloroethylene, is a non-flammable, colorless liquid with mildy sweet, chloroform-like odor, available in many forms, from worm pills to dry-cleaning grades containing various stabilizers. Perc is harmful if swallowed or inhaled. Exposure to perc can occur in the workplace or in the environment following releases to the air. A number of properties may cause a substance to be hazardous, including toxicity, ignitability, corrosivity, and reactivity. Based on the hazard rating from 0 to 4 (0 = no hazard; 4 = extreme hazard) on the Material Safety Data Sheet (MSDS) for perc, health is rated 3 (severe, cancer causing), contact is rated 3 (severe, life), flammability is rated 0 (none) and reactivity is rated 0 (none)" (Source: South Coast Air Quality Management District, Final Environmental Assessment for: Proposed Amended Rule 1421 – Control of Perchloroethylene Emissions from Dry Cleaning Systems, October 18, 2002, Summary of Chapter 3, Hazards).

[193]/ As reported by the CAPCOA: "The results of these calculations show that benzene in gasoline can cause a cancer risks to people living near gasoline stations greater than 10 per million when large amounts of gasoline are dispensed" (California Air Pollution Control Officer's Association, Gasoline Service Station Industrywide Risk Assessment Guidelines, November 1997, p. v.).

- **Operational Impacts from TACs to On-Site Population**. The CARB's "Air Quality and Land Use Handbook: A Community Health Perspective" provides important air quality information about certain types of facilities that should be considered when siting sensitive land uses. A key air pollutant common to these sources is exhaust emissions from diesel engines. CARB identifies diesel PM as both a carcinogen and long-term chronic TAC. Gasoline exhaust also results in additional TAC emissions (e.g., 1,3-butadiene, benzene, formaldehyde). Because living too close to such air pollution sources may increase cancer and non-cancer health risks, CARB recommends that proximity be considered in the siting of new sensitive land uses. CARB's recommendations are based primarily on data showing that the air pollution exposure can be reduced as much as 80 percent with the recommended separation distances. The CARB recommends that site-specific project design improvements may help reduce air pollution exposures and should be considered when siting new sensitive land uses.[194]

  Where possible, CARB recommends a minimum separation between new sensitive land uses and existing sources. This is not, however, always possible, particularly where there is an elevated health risk over large geographical areas (e.g. urbanized areas of southern California). As indicated in Table 4.7-5 (California Air Resources Board – Recommendations on Siting Sensitive Land Uses), the CARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles per day. Among other siting recommendations, the CARB's "advisory recommendations" state that sensitive receptors should not be sited within 300 feet of a large gasoline dispensing stations (defined as a facility with a throughput of 3.6 million gallons per year or greater), 50 feet for typical gasoline dispensing facilities, or within 300 feet of a dry cleaning facility (500 feet for operations with two or more machines) that uses perchloroethylene, among other siting recommendations.

  In addition, the SCAQMD notes that the siting of school and child-care facilities should include consideration of proximity to roads with heavy traffic and other sources of air pollution. New sensitive uses should be located to avoid "hot spots" of localized pollution. Other recommendations for appropriate distances between schools and other sensitive receptors and various mobile source emissions from relevant documents include: (1) Section 21151.8 of the PRC essentially requires assessment of hazardous pollutants within ¼ mile (400 meters) of any public school; (2) SB 352 requires specific responses assessing health risks for schools within 500 feet (150 meters) of busy roadways; (3) SCAQMD's HRA CEQA guidelines for diesel idling establishes a 300 meter (1,000 foot) "buffer" between sensitive receptor locations and sources of truck traffic emissions as a mitigation measure; (4) CARB's air quality and land-use handbook recommends 500 feet (150 meters) between busy roadways and sensitive receptor locations, 1,000 feet (300 meters) form busy distribution centers and rail yards, and generally downwind of busy ports; (5) California's Office of Environmental Health Hazard Assessment (OEHHA) study on schools and busy roads uses a threshold of 500 feet (150 meters) to define close proximity to roadways; and (6) Based on safety considerations, the California Department of Education (CDE) site selection and approval guide recommends distances of two nautical miles between schools and airport runways and as high as 2,500 feet (760 meters) from railways and major roadways.

[194]/ The CARB's recommendations are advisory and should not be interpreted as defined State-mandated "buffer" zones between uses. In addition, the CARB recognizes that site-specific analysis is preferred over use of the recommended siting distances, which is similar to a screening-level approach.

Based on the recommendations from the above documents, the SCAQMD recommends that a general buffer zone of no less than 500 feet (150 meters) and possibly as much as 1,000 feet (300 meters) between major roadways and school sites should be considered to protect the health of students and school employees and meet State guidelines on location of mobile source emissions. New school sites should not be located closer than 1,000 feet (300 meters) from other major mobile sources and possibly further depending on the source.[195]

According to a visual site survey and search on the SCAQMD Facility Information database (FIND), three gasoline stations (Arco, Valero, and Tesoro) are located approximately 160 feet southwest of the project site boundary along Sierra Drive (e.g., Nealey's Corner). These gasoline stations are not categorized as "large" (i.e., throughput greater than 3.6 million gallons per year). Existing gasoline stations within the general project area are located more than 50 feet from the closest proposed on-site sensitive receptors (separated by the Sierra Avenue/Lytle Creek Road right-of-way).

With the exception of Monier Lifetile (3511 North Riverside Avenue, Rialto), Cemex USA's Lytle Creek Plant (3221 N. Riverside Drive, Rialto), and Vulcan Materials Company's (formally Calmat) San Bernardino Sand and Gravel Plant (2400 W. Highland Avenue, Rialto), the proposed project would not be located near any existing industrial uses generating air emissions potentially affecting future on-site receptors.

As indicated in Table 4.6-6 (Regional Transportation System - Existing (2007) Freeway LOS Summary), traffic volumes along the I-15 Freeway, between Glen Helen Parkway and Sierra Avenue, are approximately 134,700 vehicles per day. The I-15 Freeway is located within the CARB's 500-foot "advisory recommendation" distance from residential receptors. The associated on-site health risk would be attributable to vehicle emissions generated from traffic traveling along the freeway.

In addition, Cemex USA and Vulcan Materials Company operate aggregate processing or staging facilities and concrete-batch plants along North Riverside Avenue and Highland Avenue, respectively. Heavy-duty diesel-powered equipment and/or haul truck activities associated with those activities will occur within each operator's facility site and along roadways proximal to proposed on-site residential uses. As the proposed project would introduce residential uses within the CARB siting distances for potential air toxic sources, on-site sensitive receptors may potentially be exposed to high levels of TACs. Additional analysis was, therefore, conducted based on CARB's and SCAQMD's guidance to assess the potential health risks that future residents may experience due to the proposed project's proximity to existing air toxic sources.

Cancer risk is often expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to a specific cancer-causing substance after a 24-hour a day, 365 days a year exposure outdoors at the same concentration over a lifetime of 70 years.[196] For purposes of this analysis,

[195]/ South Coast Air Quality Management District, Air Quality Issues in School Site Selection, Guidance Document, June 2005, revised May 2007, p. ES-4.

[196]/ This cancer risk represents the probability that a person develops some form of cancer and does not represent mortality rates. The risk described in these calculations reflects a level of exposure that would be virtually impossible to experience and, that for most individuals, exposure to a particular contaminant, such as diesel PM, would be considerably less due to shorter duration of residence in the area, the amount of time spent at the residence daily and throughout the year, and the split between time spent indoors versus outdoors.

shorter periods of thirty and nine years were also considered. These shorter periods correspond to the "central tendency" and "high-end estimates" for residency time at a single location and are recommended for analysis by USEPA study methodology. This probability is usually expressed in terms of the number of people who will develop cancer per one million (10^{-6}) people who are also exposed.

The cancer risk from vehicular exhaust (e.g., diesel PM) occurs exclusively through inhalation and, for the proposed project, was calculated using the USEPA Industrial Source Complex – Short Term (ISCST3) dispersion model. Output from the dispersion analysis was used to estimate the TAC concentrations. The cancer risk was then calculated based on those estimated diesel PM concentrations using the risk methodology derived from the California Office of Environmental Health Hazard Assessment (OEHHA). The risk assessment guidelines established by SCAQMD are designed to produce conservative (high) estimates of the risk posed by TAC. The conservative nature of the analysis is due to the following factors:

- ◊ As a conservative measure, the SCAQMD does not recognize indoor adjustments for residents. Studies have, however, shown that the typical person spends approximately 87 percent of their time indoors, 5 percent of their time outdoors, and 7 percent of their time in vehicles. In addition, residential interiors are expected to have lower levels of exposure to diesel PM. A diesel PM exposure assessment showed that the average indoor concentration is 2.0 $\mu g/m^3$, compared with an outdoor concentration of 3.0 $\mu g/m^3$.[197]
- ◊ The exposure to diesel PM is assumed to be constant for the period analyzed. Emissions of diesel PM are, however, expected to decrease substantially in the future due to emission control programs and technological advancements and improvements.
- ◊ The ISCST3 air dispersion model as applied in this study is designed to provide conservative estimates of air pollutant concentrations.

The threshold for significance used to evaluate the exposure to TAC is 10 excess cancer cases per one million people (10×10^{-6}). This is the threshold recommended by the SCAQMD and the CARB explicitly to determine impacts attributable to projects that introduce new sources of TAC emissions in an area. In contrast, the proposed project is a predominantly residential development that will not, with the exception of certain permitted or conditionally permitted land uses, add substantial new sources of TAC to the project vicinity and will not increase the cancer risk faced by people who already live in the project vicinity.

The results of the calculations determining estimated cancer risks are listed in Table 4.7-16 (Estimated Excess Cancer Risks per One Million People). The estimated cancer risks represent the range of potential cancer risks to residents of the proposed project. The additional exposure durations of thirty and nine years are useful since very few people can be expected to occupy the same residence for 70 consecutive years.

The cancer risk exceeds the 10 in one million (10×10^{-6}) threshold, with freeway truck traffic being the major source of TAC exposure. A constant 70-year exposure would

[197]/ South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, 2002.

result in a cancer risk as high as 224 cases in one million (224 x 10^{-6}) for the maximum on-site receptor. This high level declines to less than 13 cases in one million (<13 x 10^{6}) for the average on-site receptor with a constant nine-year exposure. Because reducing diesel PM is one of CARB's highest public health priorities, these outcomes may overstated potential cancer risks.[198]

Table 4.7-16
ESTIMATED EXCESS CANCER RISKS PER ONE MILLION PEOPLE

Receptor[1]	70-Year Exposure	30-Year Exposure	9-Year Exposure
Maximum On-Site Residence	224	96	29
Average On-Site Residence	102	44	13

Notes:
1. Maximum on-site residence represents the highest concentration (closest to freeway). Average on-site residence represents average concentration throughout project site.

Source: PCR Services Corporation

Given the substantial health risks associated with mobile TACs, a number of programs and strategies to reduce diesel PM are in place or are in the process of being developed as part of the CARB's "Diesel Risk Reduction Program." The CARB has indicated that "[r]educing diesel particulate emissions is one of [its] highest public health priorities and the focus of a comprehensive statewide control program…to reduce diesel PM emissions 85% by 2020."[199] Some applicable programs and strategies are summarized below:

◊ In 2001, the CARB adopted new particulate matter and NO_X emission standards to clean up large diesel engines that power big-rig trucks, trash trucks, delivery vans, and other large vehicles. The new standard for particulate matter took effect in 2007 and reduced emissions to 0.01 gram of PM per brake horsepower-hour (g/bhp-hr.), representing a 90 percent reduction from the previous standard. New engines will meet the 0.01 g/bhp-hr PM standard with the aid of diesel particulate filters that trap the diesel PM before the exhaust leaves the vehicle.

◊ CARB has worked closely with the USEPA on developing new PM and NO_X standards for engines used in off-road equipment, such as backhoes, graders, and farm equipment. The USEPA has proposed new standards that would reduce the emission from off-road engines to similar levels to the on-road engines discussed above by 2010 – 2012. Once approved by the USEPA, CARB will adopt these as the applicable State standards for new off-road engines. These standards will reduce diesel PM emission by over 90 percent from new off-road engines currently sold in California.

◊ CARB has adopted several regulations that will reduce diesel emissions from in-use vehicles and engines throughout California. In some cases, the PM reduction strategies also reduce smog-forming emissions, such as NO_X. These regulations include:

[198]/ *Op. Cit.*, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, p. 2-8.

[199]/ *Op. Cit.*, Air Quality and Land Use Handbook: A Community Health Perspective, p. ES-1.

- Transport refrigeration units (adopted 2004): Transport refrigeration units (TRUs) are diesel-powered refrigeration units that cool temperature-sensitive products while they are being shipped in trucks, trailers, shipping containers and rail cars. Although the diesel engines powering TRUs tend to be relatively small, there are about 40,000 of them operating in California. Their PM emissions will be reduced by 65 percent by 2010 and by 92 percent by 2020.

- Waste collection trucks (adopted 2003): The waste collection vehicle rule offers a variety of strategies that owners must select and apply to each truck in a phased-in schedule from 2004 through 2010 to achieve PM reductions of up to 85 percent. The rule includes compliance flexibility. A key benefit of the rule is the reduction of PM emissions in residential neighborhoods.

- School bus idling restrictions (adopted 2002): To reduce the exposure of children to toxic PM emissions, the CARB enacted a rule to stop the prolonged idling of diesel school buses and other diesel vehicles near schools. Buses and commercial diesel vehicles are required to turn off their engines after arriving at a school and are allowed to start the engine no more than 30 seconds before departing, unless required for safety or work.

- Fleet rule for transit agencies (adopted 2000): This regulation cuts NO_X and PM emissions from about 10,000 buses operated by transit agencies. The fleet rule for transit agencies moves forward in steps over 10 years, requiring cleaner engines, cleaner fuel, and retrofitting of older buses.

Despite regional efforts to reduce diesel PM emissions, emissions from vehicle traffic on the I-15 Freeway have the potential to adversely impact future on-site and near-site residents. As discussed in Section 4.7.3.1 (Regional Setting), CARB published the CARB Handbook to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TACs, including freeways. Studies cited by the CARB Handbook provide evidence of an association between living in close proximity to a freeway and certain adverse non-cancer health effects and increased cancer risks.

Generally, cancer risk will drop off with distance from a ground-level pollution source, such as a freeway. Harmful freeway pollutants were found to decrease dramatically within a short distance from the freeway. The SCAQMD reports that a "downwind distance of 328 feet will reduce cancer risk by over 60 percent."[200,201] A study cited by the CARB Handbook showed concentrations of traffic-related pollutants declining by 70 percent at a distance of 500 feet from the freeway.[202] CARB staff performed air quality

[200]/ *Op. Cit*., Guidance Document for Addressing Air Quality Issued in General Plans and Local Planning: A Reference for Local Governments within the South Coast Air Quality Management District, p. 2-5.

[201]/ Another study demonstrated that vehicle-related PM concentrations decreased substantially at a distance of 300 feet from the I-710 and I-405 Freeways in Los Angeles (Source: Zhu, Y, *et al.*, Study of Ultra-Fine Particles Near a Major Highway with Heavy Duty Diesel Traffic, Atmospheric Environment, 2002, 26:4323-4335).

[202]/ *Op. Cit*., Traffic Related Air Pollution in City Districts near Motorways, The Science of the Total Environment, 1999, 235:339-341.

analyzes and risk modeling that confirmed the findings of these studies.[203] As a result, the CARB Handbook established a recommendation to avoid siting residential receptors within 500 feet of a freeway to minimize the adverse effects associated with freeway vehicle pollutants.[204]

The proposed project may involve the siting of residential receptors within 500 feet of the I-15 Freeway, Cemex USA's Lytle Creek Plant (3221 N. Riverside Drive, Rialto), and Vulcan Materials Company's San Bernardino Sand and Gravel Plant (2400 W. Highland Avenue, Rialto). To minimize impacts to these potential future on-site residents, the proposed project, as an Applicant-proposed project design features, will install tiered vegetative landscaping between the I-15 Freeway, the Cemex USA quarry, and Vulcan Materials Company plant and any residential unit located within 500 feet thereof.

As illustrated in Figure 4.7-6 (Total Cancer Risk - San Bernardino-Riverside Area), a large portion of the County is within an area that presently experiences cancer risks of between 250 and 750 per million (250-750 x 10^{-6}). The HRA performed for the proposed project demonstrates that the project's most exposed sensitive receptors, defined as those receptors located adjacent to the I-15 Freeway, would be exposed to cancer risks at levels similar to those now experienced by many County residents. As illustrated in Figure 4.7-6 (Total Cancer Risk - San Bernardino-Riverside Area), there is an inherent health risk associated with living in urbanized areas of the County. Nevertheless, the proposed project would result in locating sensitive receptors within an area of localized cancer risk in excess of the SCAQMD significance threshold of 10 in one million (10 x 10^{-6}) and, therefore, the project would result in a significant air quality impact prior to the incorporation of mitigation measures.

To quantify non-carcinogenic impacts, the hazard index approach was used. The approach assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). For each discrete chemical exposure, target organs presented in regulatory guidance were utilized. To calculate the hazard index, each chemical's concentration or dose is divided by the appropriate toxicity value. For compounds affecting the same toxicological endpoint, this ratio is summed. Where the total is equal to or exceeds one, a health hazard is presumed to exist. The analysis for the proposed project resulted in a chronic hazard index for the maximum exposed receptors of 0.22, which is approximately 22 percent of the SCAQMD recommended threshold. Non-cancer health risks would, therefore, be considered a less-than-significant impact.

The project includes plans for two new public schools (one elementary and one middle school) to be located in Neighborhood III. Section 17213 of the CEC requires all new schools to perform a detailed HRA before the selection of a site and final design are approved. At this stage in the planning process, details needed to perform a refined HRA are not known with sufficient certainty. According to the proposed locations of the two school sites, as presented in the LCRSP, the sites are consistent with CARB's siting recommendations regarding existing compatible adjacent and near-site land-uses.

Because on-site sensitive receptors could be exposed to off-site air toxic emissions (e.g. diesel exhaust from the I-15 Freeway, Cemex USA quarry, and Vulcan Materials

[203]/ *Op. Cit*., Air Quality and Land Use Handbook: A Community Health Perspective, p. 9.
[204]/ *Ibid*., Table 1-1, p. 4.

Company plant) in excess of the SCAQMD significance threshold, a mitigation measure (Mitigation Measure 7-16) has been formulated specifying certain disclosure requirements for properties within 500 feet of the I-15 Freeway, the Cemex USA quarry, and Vulcan Materials Company plant.

In addition, a mitigation measure (Mitigation Measure 7-17) has been formulated specifying the use of air filtration systems within 500 feet of the I-15 Freeway right-of-way, the Cemex USA quarry, and Vulcan Materials Company plant. With respect to potential impacts to on-site sensitive receptors from off-site sources of TACs, the recommended air handling systems would substantially reduce carcinogenic exposure. Pollutant concentrations within residential buildings are best reduced by installing an air cleaning system to reduce the concentration of particulates associated with the infiltration of outside air. Air filters are commonly described and rated by the American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE) based upon their collection efficiency, pressure drop (or airflow resistance), and particulate-holding capacity. An air filtration system with a minimum efficiency reporting value (MERV) rating of 12 would reduce particles in the range of 1 to 3 microns by a minimum of 80 percent. This mitigation measure would reduce the carcinogenic risk but the risk would remain significant and unavoidable.

The recommended use of air filtration systems would likely serve to achieve the equivalent PM reduction to those residents within 500 feet of the I-15 Freeway, Cemex USA quarry, and Vulcan Materials Company plant as would be achieved in those residential areas located outside the 500-feet area absent those systems. However, even with the implementation of the recommended mitigation measures, the siting of sensitive receptors within 500 feet of those off-sites uses has the potential to cause a significant, adverse health effects. No feasible mitigation measures are available to reduce these impacts to a less-than-significant level. When evaluating this significant impact, however, it is important to consider that the risk of the impact will likely be substantially reduced by the time construction is complete and may be reduced to a less-than-significant level at some point during the life of the proposed project based on the CARB's efforts to cut diesel PM emissions, as discussed above.

Air Quality Management Plan

Environmental Impact 7-8*. Projects that exceed the assumptions in the current AQMP, based on the year of the project's build-out, or fail to demonstrate compliance with the criteria outlined in the Guidance Document could result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, and/or delay the attainment of State and federal air quality standards.*

Preliminary Determination 7-8*. Significant and unavoidable impact.*[205]

[205]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) conflict with or obstruct implementation of the applicable air quality plan; (2) result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year; and (3) conflict with the current AQMP through actions that would prevent or substantially impede the attainment of the goals and objectives contained in the SCAQMD's Guidance Document.

The purpose of the 2007 AQMP is to bring the SCAB into compliance with State and federal ambient air quality standards. A significant impact may, therefore, occur if a proposed project is not consistent with the 2007 AQMP or would, in some way, represent a substantial hindrance to employing the policies or obtaining the goals of that plan.

In the past consistency was based on two key indicators, these being (1) whether the project will result in an increase in the frequency or severity of existing air quality violations, contribute to new violations, or delay timely attainment of the air quality standards or interim emission reductions specified in the current AQMP; and (2) whether the project will exceed the assumptions of the AQMP in 2010 or increments thereof based on the year of project build-out or phase.

The first of these indicators is if the project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations. Because CO is released in the greatest quantities from vehicle exhaust and does not readily disperse into the atmosphere, this first indicator is addressed through the CO modeling performed at major intersections in the general project area. As demonstrated, with regards to CO, the project does not produce significant CO impacts and, therefore, is in compliance with this first indicator.

The second indicator is addressed by determining whether the project is consistent with the assumptions included in the 2007 AQMP for the build-out year (2030). The 2007 AQMP estimates that the population within the four-county area will grow from its 1997 level of 13,954,000 to 19,615,000 persons in 2030, yielding a growth of 5,661,000 individuals or a 40.57 percent growth rate for this period.[206] At the more local level, the County area located within the SCAB, will grow from its 1997 level of 1,250,000 to 2,133,000 persons in 2030, yielding a growth of 883,000 individuals or a 70.64 percent over this period. The project includes 8,407 residential units. In accordance with the URBEMIS model, each residential unit would have three occupants, resulting in a total of about 25,221 residents.[207] This value represents about 0.45 percent of the growth anticipated in the SCAG region and about 2.86 percent of the projected County growth.

Since these population estimates represent relatively small portions of the projected growth within the SCAG region and the County through 2030, the proposed project would not be exceed the assumptions in the 2007 AQMP, based on the year of the project's build-out.

In 2005, the SCAQMD published "Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, A Reference for Local Governments within the South Coast Air Quality Management District"[208] (Guidance Document) in order to aid in the determination of the consistency review. The Guidance Document contained recommended policies that local governments could use to prevent or reduce potential air pollution impacts and protect public health in their general plans or through local planning.

The Guidance Document presents goals and objectives that are designed in accordance with the goals and objectives of the 2007 AQMP (i.e., reduce air pollution while protecting the

[206]/ *Op. Cit.*, 2007 Air Quality Management Plan, AQMP Appendix III, Table 2-4, p. III-2-10.

[207]/ As indicated in Section 4.2 (Population and Housing) herein, in addition to the URBEMIS default value, based on differing sets of assumptions, a range of project-related population estimates are presented.

[208]/ South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, A Reference for Local Governments Within the South Coast Air Quality Management District, May 6, 2005.

populace from its effects). As such, projects that comply with the goals and objectives of the Guidance Document will generally be found to be consistent with the 2007 AQMP. Each of these goals, as well as the project's application of those goals, is discussed below.

Goal 1 Land use policies that address the relationship between land use and air quality to protect public health and minimize impacts on existing land use patterns and future land use development.

Objective 1.1 Through land use plans provide heightened consideration of policies and strategies to minimize exposure of sensitive receptors and sites (e.g., schools, hospitals, and residences) to health risks related to air pollution.

Policies/Strategies to protect sensitive receptors from health risks related to air pollution potentially applicable to the proposed project:

AQ 1.1.3 Encourage site plan designs to provide the appropriate set-backs and/or design features that reduce TAC at the source.

The project incorporates both residential and non-residential development and includes an extensive pedestrian and bicycle trail system to promote linkages and connectivity between different on-site land uses.

In addition, Mitigation Measure 7-16 requires that future purchasers of real property located within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the property boundary of the Cemex USA quarry and Vulcan Materials Company plant shall, in accordance with the disclosure requirements of the California Department of Real Estate, receive notification that residential occupants and other sensitive receptors may be exposed to excess cancer risks as a result of long-term exposure to TACs, including diesel PM, associated with diesel-powered vehicles traveling along and operating within those areas.

Mitigation Measure 7-17 requires the installation of air filtration systems meeting specified performance standards on all residential dwelling units located within a 500-foot distance of the I-15 Freeway right-of-way, the Cemex USA quarry, and the Vulcan Materials Company plant.

In order to further protect sensitive receptors, including children and the elderly, Mitigation Measure 7-18 prohibits the development of any sensitive public recreational uses (e.g., active outdoor playground) within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the property boundary of the Cemex USA quarry and the Vulcan Materials Company plant.

AQ 1.1.4 Encourage the applicants for sensitive land uses (e.g., residences schools, daycare centers, playgrounds and medical facilities) to incorporate design features (e.g., pollution prevention, pollution

reduction, barriers, landscaping, ventilation systems, or other measures) in the planning process to minimize the potential impacts of air pollution on sensitive receptors.

Although the proposed LCRSP includes no specific provisions addressing air pollutants on sensitive receptors, a number of mitigation measures have been formulated that specifically address this issue. For example, Mitigation Measure 1-6 will ensure that appropriate separation is provided in connection with the approval of any tentative subdivision maps for residential uses adjoining active mining areas.

Mitigation Measure 7-8 requires that if stationary equipment (e.g., generators for ventilation fans) must be operated continuously, such equipment shall be located at least 100 feet from homes or schools, where possible.

Mitigation Measure 7-15 requires that the proposed LCRSP be modified to explicitly prohibit the on-site development of the following land uses: (1) heavy industrial and heavy manufacturing uses; (2) landfills and transfer stations; (3) hazardous waste and medical waste incinerators; and (4) chrome plating facilities.

Mitigation Measure 7-17 requires the installation of air filtration systems meeting specified performance standards on all dwelling units located within a 500-foot distance of the I-15 Freeway right-of-way, the Cemex USA quarry, and the Vulcan Materials Company plant. As further indicated in Mitigation Measure 7-18, excluding pedestrian and bicycle trails, sensitive public recreational uses, such as active outdoor playground, shall be prohibited within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the property boundary of the Cemex USA quarry and the Vulcan Materials Company plant.

AQ 1.1.5 Promote and support mixed-use land patterns that allow the integration of retail, office, institutional, and residential uses.

The project is both residential and non-residential development and is, therefore, consistent with this goal.

AQ 1.1.9 Consider all feasible alternatives to minimize emissions from diesel equipment (e.g., trucks, construction equipment, and generators).

Although the proposed LCRSP includes no specific provisions addressing diesel emissions, a number of mitigation measures have been formulated that specifically address this issue. For example, Mitigation Measure 7-4 requires the Applicant to use line power instead of diesel- or gas-powered generators at all construction sites where line power is reasonably available.

Mitigation Measure 7-5 requires that, during construction, unless required for safety reasons, equipment operators limit the idling of all mobile and stationary construction equipment to no more than five minutes. The use of diesel auxiliary power systems and main engines shall also be limited to no more than five minutes when within 100 feet of homes or schools while the driver is resting.

Mitigation Measure 7-7 requires the Applicant to implement measures to reduce the emissions of pollutants generated by heavy-duty diesel-powered equipment operating at the project site throughout the project's construction. The Applicant shall include in construction contracts the control measures required and recommended by the SCAQMD at the time of development. These measures include the following: (1) use of Tier II (2001 or later) heavy-duty diesel-powered equipment at the project site; (2) application of NO_x control technologies, such as fuel injection timing retard for diesel engines and air-to-air cooling, and diesel oxidation catalysts as feasible; and (3) general contractors shall maintain and operate construction equipment so as to minimize exhaust emissions and keep all construction equipment in proper tune in accordance with manufacturer's specifications.

Mitigation Measure 7-8 requires that if stationary equipment (e.g., generators for ventilation fans) must be operated continuously, such equipment shall be located at least 100 feet from homes or schools, where possible.

AQ 1.1.11 Where decisions on land use may result in emissions of air contaminants that pose significant health risks, consider options, including possible relocation, recycling, redevelopment, rezoning, process changes, incentive programs, and other types of measures.

Although the proposed LCRSP includes no specific provisions addressing air pollutants on sensitive receptors, a number of mitigation measures have been formulated that specifically address this issue. For example, Mitigation Measure 1-1 specifies that development applications involving the construction of any of the permitted land uses identified in the proposed LCRSP and listed in the "Land-Use Compatibility Matrix" (Table 4.1-4) be accompanied by the submittal to the City's Development Services Director (Director) of a site-specific and project-specific analysis that addresses the potential land-use conflicts identified therein and identifies the design measures (such as landscaping, screening, etc.), site planning measures (such as setbacks, massing), development standards in the LCRSP, and such other measures that will be employed to ensure compatibility among adjacent land uses.

Mitigation Measure 7-15 requires that the specific plan shall be modified to prohibit the on-site development of the following land uses: (1) heavy industrial and heavy manufacturing uses; (2) landfills

and transfer stations; (3) hazardous waste and medical waste incinerators; and (4) chrome plating facilities. In addition, excluding pedestrian and bicycle trails, Mitigation Measure 7-18 prohibits sensitive public recreational uses, such as active outdoor playground, within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the property boundary of the Cemex USA quarry and the Vulcan Materials Company plant.

Objective 1.2 Reduce mobile source emissions by reducing vehicle trips and vehicle miles traveled associated with land use patterns.

Policies/Strategies to reduce vehicle miles traveled potentially applicable to the proposed project:

AQ 1.2.1 For planned high density and mixed use developments, project proponents should consult with the local transit agency and incorporate all appropriate and feasible transit amenities into the plans.

Public transportation is substantially less energy intensive on a per capita level than traveling by personal automobile. The project would be located near an existing bus route (Omnitrans' Route 22) with connections to the Rialto Metrolink Station, thus encouraging the use of both transit and fixed-rail public transportation systems. As mitigated, the project would provide both a park-and-ride/park-and-pool facility (Mitigation Measure 7-13) and should the local transit authority change existing and/or add new bus routes within the project site or along public roadways abutting the project site, covered benches at additional transit stops within the project site (Mitigation Measure 7-14).

AQ 1.2.2 Establish a Mixed-Use Zoning District that offers incentives to mixed use developments.

The project includes both residential and non-residential development and is, therefore, consistent with this goal.

AQ 1.2.3 Encourage through the land use entitlement process or business regulation, design of commercial and residential areas to foster pedestrian circulation.

See response under AQ 1.2.10 below.

AQ 1.2.9 Ensure that development projects and zoning codes create the maximum opportunity for the use of bicycles as an alternative work transportation mode.

See response under AQ 1.2.10 below.

AQ 1.2.10 Encourage "walkable neighborhoods" by siting parks and community centers near residential areas.

As indicated in Table 2-1 (Lytle Creek Ranch Specific Plan Land-Use Plan Summary), about 50 percent of the subject property will be retained in some form of open space use, thus encouraging compact development on the remainder of the project site. Compact development allows people to travel shorter distances between work and their residences, as well as shopping and other destinations. Shorter travel distances result in fewer VMT by personal automobile, which reduces transportation-related emissions, as well as encourages alternative forms of transportation between destinations, such as public transit, walking, and bicycling.

By including parks, paseos, and recreational centers, bicycle and pedestrian trails, and by providing physical linkages and connectivity between residential, commercial, and recreational land uses, the project would promote walking and bicycling as alternatives to automobile-dependent travel.

Objective 1.3 Reduce mobile source emissions by increasing population densities within one-half mile of clean transit nodes.

Policies/Strategies to increase population densities potentially applicable to the proposed project:

AQ 1.3.1 Increase residential and commercial densities around clean rail and bus transit stations and corridors. Clean rail and bus transit nodes and corridors are those that are served by rail and buses that are powered by electricity, alternative fuels (i.e., CNG and LNG), or that meet or exceed SULEV emission standards.

The project would be located near an existing bus route (Omnitrans' Route 22) with connections to the Rialto Metrolink Station, thus encouraging the use of transit and fixed-rail public transportation systems. As mitigated, the project would provide both a park-and-ride/park-and-pool facility (Mitigation Measure 7-13) and covered benches at a number of bus stops within the project site (Mitigation Measure 7-14).

Goal 2 A reduction in air pollution from mobile sources.

Objective 2.1 Reduce motor vehicle trips and vehicle miles traveled.

Policies/Strategies to reduce motor vehicle trips and VMT potentially applicable to the proposed project:

AQ 2.1.2 Work with large employers and commercial/industrial complexes to create Transportation Management Associations and to implement trip/VMT reduction strategies.

See response under AQ 2.1.4 below.

AQ 2.1.3 Cooperate with surrounding jurisdictions to provide incentives, adopt regulations, and develop transportation demand management programs that reduce and eliminate vehicle trips and VMT.

See response under AQ 2.1.4 below.

AQ 2.1.4 Collaborate with local transit agencies to: develop programs and educate employers about employee rideshare and transit; establish mass transit mechanisms for the reduction of work related and non-work related vehicle trips; promote mass transit ridership through careful planning of routes, headways, origins, and destinations, and types of vehicles

Section 18.59.030 (Design Standards) of the City Municipal Code requires that new and revised non-residential and multi-family developments of ten or more units incorporate specific transportation control measures (TCMs), including bicycle parking facilities, on-site pedestrian walkways and bicycle facilities, and transit improvements. In addition, the project would be located near an existing bus route (Omnitrans' Route 22) with connections to the Rialto Metrolink Station, thus encouraging the use of transit and fixed-rail public transportation systems. As mitigated, the project would provide both a park-and-ride/park-and-pool facility (Mitigation Measure 7-13) and covered benches at a number of bus stops within the project site (Mitigation Measure 7-14).

AQ 2.1.5 Identify and develop non-motorized transportation corridors (e.g., bicycling & walking trails).

As indicated in Table 2-1 (Lytle Creek Ranch Specific Plan Land-Use Plan Summary), about 50 percent of the subject property will be retained in some form of open space use, thus encouraging compact development on the remainder of the project site. Compact development allows people to travel shorter distances between work and their residences, as well as shopping and other destinations. Shorter travel distances result in fewer VMT by personal automobile, which reduces transportation-related emissions, as well as encourages alternative forms of transportation between destinations, such as public transit, walking, and bicycling.

By including parks, paseos, and recreational centers, bicycle and pedestrian trails, and by providing physical linkages and connectivity between residential, commercial, and recreational land uses, the project would promote walking and bicycling as alternatives to automobile-dependent travel.

AQ 2.1.8 Provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).

The proposed LCRSP stipulates that, in retail, commercial, and office developments, individual development projects shall provide a limited number of preferred parking spaces for hybrid vehicles, fuel cell vehicles, electric vehicles, and other fuel efficient vehicles. In addition, Section 18.59.030 (Design Standards) of the City Municipal Code requires that new and revised non-residential and multi-family developments of ten or more units incorporate specific TCMs, including preferential parking.

Through the creation of an on-site pedestrian and bicycle trail system and the incorporation of both residential and non-residential development, the proposed project promotes and encourages alternative travel modes.

Objective 2.7 Reduce emissions from idling vehicles.

Policies/Strategies to reduce emissions from idling vehicles potentially applicable to the proposed project:

AQ 2.7.2 Adopt an ordinance that restricts vehicle engine idling for the purpose of controlling or mitigating vehicle emissions or abating a nuisance.

Mitigation Measure 7-5 requires that during construction, equipment operators shall limit the idling of all mobile and stationary construction equipment to no more than five minutes. The use of diesel auxiliary power systems and main engines shall also be limited to no more than five minutes when within 100 feet of homes or schools while driver is resting.

Goal 3 A reduction of air pollution emissions from stationary sources.

Objective 3.1 Coordinate with the AQMD and operators of stationary source equipment or processes to minimize air pollution emissions.

Policies/Strategies related to reduction of emissions from stationary sources potentially applicable to the proposed project:

AQ 3.1.1 Assist small businesses by developing training programs related to clean, innovative technologies to reduce air pollution (e.g., wet cleaning or CO_2 cleaning in lieu of perchloroethylene), and provide incentives to those businesses that use clean air technologies.

Use of perchloroethylene is primarily regulated under SCAQMD Rule 1421 (Control of Perchloroethylene Emissions from Dry Cleaners). With respect to proximity to existing and proposed dry cleaning operations, a mitigation measure (Mitigation Measure 1-1) has been formulated to ensure that any potential impacts remain at a less-than-significant level.

AQ 3.1.2 Encourage the use of building materials and methods that minimize air pollution.

As indicated in Table 4.7-17 (Sustainable Design Features), the proposed LCRSP includes a number of stipulations relating to the use of building materials that minimize air pollution, including the selection of construction materials and interior finish products with zero or low emissions, the provision of adequate ventilation and high-efficiency, in-duct filtration systems, and selection of materials resistant to microbial growth.[209] Construction practices will also incorporate the use of construction materials that contain reused and recycled content meeting Section 01350 emission requirements.[210] Building materials are currently available that meet Section 01350 emission requirements for formaldehyde and other TACs.[211]

AQ 3.1.3 Support, through the use of development standards, the use of fuel efficient heating equipment, and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, boiler units, and low or zero-emitting architectural coatings. Provide incentives to encourage the use of clean air technology beyond what is required by AQMD. For example, encourage the use of fuel and material substitution, cleaner fuel alternatives, product reformulation, change in work practices, and air pollution control measures identified in the latest AQMP.

As indicated in Table 4.7-17 (Sustainable Design Features), the proposed LCRSP includes a number of Applicant-proposed energy-efficiency measures relating, either directly or indirectly, to electrical

[209]/ TACs are air pollutants "which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health" (Section 39655, H&SC). Once a compound has been identified as a TAC, the CARB determines the need and appropriate degree of regulation for the compound. Regulations have been implemented to control the release of numerous TACs to outdoor air. Regulations do not, however, presently exist to control their release to indoor air. Foremost among these pollutants are formaldehyde, VOCs, environmental tobacco smoke, radon, and polycyclic aromatic hydrocarbons (PAHs). Formaldehyde is a pungent smelling gas emitted from numerous indoor sources. These include many building materials (e.g., pressed wood, carpet and vinyl flooring, paint), most carpets, composite wood furnishings, consumer products, personal care products and cosmetics, permanent pressed clothing, and combustion sources. Formaldehyde is listed as a TAC and a Proposition 65 substance based on its potential carcinogenicity. Emission studies have shown that building materials, particularly composite wood products, are likely the greatest contributors to formaldehyde in indoor air. These products, as commonly used in home construction, cabinetry, and furniture, display formaldehyde emission rates ranging from 8.6 to 1,580 $\mu g/m^3$/hour.

[210]/ "Special Environmental Requirement (Section 01350)" are standard specification developed by the State of California to cover key environmental performance issues related to the selection and handling of building materials. Section 01350 contains specification language on environmental and public health considerations for building projects. This specification establishes goals and provides an overview of special environmental requirements. It covers guidelines for energy, materials, and water efficiency, indoor air quality (IAQ), nontoxic performance standards for cleaning and maintenance products, and sustainable site planning and landscaping considerations, among other measures. Some key elements of Section 01350 are procedures to ensure good indoor air quality to protect human health (http://ciwmb.ca.gov/GreenBuilding/Specs/Section01350/). Under Section 01350, emissions from a single building material cannot exceed one half of the chronic Reference Exposure Level (REL) for toxic air contaminants. Formaldehyde is an exception; emissions from a single product cannot exceed one half of the interim 8-hour REL for formaldehyde.

[211]/ California Integrated Waste Management Board, Building Material Emissions Study, CIWMB Publication No. 433-03-015, November 2003.

consumption. Those measures include passive design strategies, use of high-performance windows, installation of high-efficiency lighting systems with advanced lighting controls, and use of high-solar reflective roofing materials in commercial applications.

In addition, the project is already required to install low-flow showerheads, low-flush toilets, and other water conserving fixtures. As the transport and treatment of water requires energy, water conservation measures, will reduce the emissions associated with the project. Low-flow faucets and showers use up to 50 percent less water than their counterparts, while low-flow toilets use approximately 70 percent less water than traditional toilets.

Goal 4 Achieve ambient levels of particulate matter that meet State and federal clean air standards.

Objective 4.1 Reduce the amount of fugitive dust that is re-entrained into the atmosphere from unpaved areas, parking lots and construction sites.

Policies/Strategies related to controlling fugitive dust emissions potentially applicable to the proposed project:

AQ 4.1.1 Where fugitive dust is causing a chronic public nuisance or the air quality is in exceedance of the PM_{10} standards, consider adopting a dust control policy that requires preparation and approval of a dust control plan.

Localized modeling shows that site construction would result in a substantial increase, defined as $\geq$10.4 µg/m^3 of PM_{10} and $PM_{2.5}$ averaged over a 24-hour period.[212] As such, the project adds cumulatively to an exceedance of particulate standards. Since the goal of the 2007 AQMP is to protect receptors from exceedance conditions, with regards to projected short-term particulate emissions, the project would not appear to comply with that provision of the 2007 AQMP.

Although the proposed LCRSP does not include specific provisions addressing fugitive dust emissions, a number of measures have been formulated that specifically address this issue. For example, Mitigation Measure 7-6 stipulates that grading would be required to encompass no more than 10 acres on a daily basis within 1,000 feet of any residential units. In addition, under SCAQMD policies and procedures, the construction site would qualify as a large site as there would be more than 50 acres of disturbed surface area. In accordance therewith, the construction contractor must submit a "large operation notification" (Form 403) to the SCAQMD and implement those applicable actions specified under Rule 403,

[212]/ *Op. Cit*., Final Localized Significance Threshold Methodology, June 2003, revised July 2008, p. 1-5.

including maintaining minimum required soil moisture content and various other dust suppression techniques.

Goal 5 Reduction in air pollution resulting from greater energy efficiency and conservation, and the use of renewable resources.

Objective 5.1 Increase energy efficiency of city facilities and private developments.

Policies/Strategies related to energy conservation potentially applicable to the proposed project:

AQ 5.1.1 Utilize source reduction, recycling and other appropriate measures, to reduce the amount of solid waste disposed in landfills.

As indicated in Table 4.7-17 (Sustainable Design Features), the proposed LCRSP includes a number of Applicant-proposed measures promoting source reduction and recycling, including the selection of sustainable construction materials and products, use of recycled-content products, use of dimensional planning and other material efficiency strategies, use of recycled base and asphalt, and requiring plans for managing materials through deconstruction. In addition, the proposed LCRSP stipulates design with adequate space to facilitate recycling collection and incorporation of a solid waste management program that prevents waste generation. Construction practices will also incorporate the use of construction materials that contain reused and recycled content meeting Section 01350 emission requirements.

AQ 5.1.3 Promote energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling.

As indicated in Table 4.7-17 (Sustainable Design Features), the proposed LCRSP includes a number of Applicant-proposed energy-efficient design features, including promotion of passive design strategies (e.g., building shape and orientation, passive solar design, and use of natural lighting), support of the Energy Star program, and use of light colored roofing material with a high solar reflectance.

AQ 5.1.4 Promote or provide incentives for “Green Building” programs that go beyond the requirements of Title 24 of the California Administrative Code and encourage energy efficient design elements as appropriate to achieve “green building” status.

The proposed LCRSP includes a number of “sustainable design strategies,” including compact development, reduced pervious surfaces, improved water detention, preservation of habitat areas, combined residential and non-residential development, and pedestrian and bicycle amenities.

AQ 5.1.5 Promote the use of automated time clocks or occupant sensors to control central heating and air conditioning.

Timers and motion sensors save energy by reducing energy waste associated with unnecessary lighting. As indicated in Table 4.7-17 (Sustainable Design Features), the proposed project incorporates motion sensors or timers on exterior fixtures to reduce energy usage.

With the inclusion of the noted mitigation measures, it can be demonstrated that the project generally complies with the goals of the Guidance Document and with the 2007 AQMP.

In the Guidance Document, prepared to assist local government agencies integrate regional air quality goals and objectives with local general plans and project-level decision making, "jobs-housing balance" is identified as a strategy to reduce vehicle trips and VMT. SCAQMD notes: "The concept of a 'jobs/housing balance' is based on the premise that the number of vehicle trips and vehicle miles traveled (VMT) can be reduced when sufficient jobs are available locally to balance the employment demands of the community, and when commercial services are convenient to residential areas. Achieving a good balance requires planning the location and nature of jobs and housing in order to encourage a reduction in vehicle trips and VMT while increasing mass transit ridership and alternative modes of transportation, such as bicycles and walking. The AQMD and the SCAG both embrace jobs/housing balance as a viable tool available to local governments to reduce air pollution."[213]

The degree to which the proposed project serves to promote the attainment of the region's job-housing balance and reduce VMT is presented below and again discussed in Section 4.1 (Land Use and Planning) and Section 4.2 (Population and Housing) herein. As noted, SCAG explicitly stated that the "[t]he distribution of population, housing, and employment to subregions and cities constitute a forecast that public entities are currently anticipating, and do not imply a regional growth distribution policy intervention."[214] Whether with regards to the 2004 Compass Blueprint, 2008 RTP, and/or 2008 RCP, SCAG's policies should be construed as advisory and not a regional policy intervention with regards to local decision making. The Guidance Document does not require that all new projects demonstrate an internal jobs-housing balance. Attainment of a specified balance at a project level would generally be unrealistic because it would necessitate that all development activities combine residential and non-residential components, independent of whether such combination was both appropriate and desirable by the local agency. It would, therefore, be inappropriate to category all housing projects in "housing poor" areas and/or all job-producing projects in "jobs rich" areas as inconsistent with the 2007 AQMP. Similarly, there exists no consensus as to what a "jobs/housing balance" entails. As indicated by the County, a "ratio of 1.0 indicates a balance. A ratio greater than 1.0 indicates a net in-commute; less than 1.0 indicates a net out-commute."[215] In contrast, the County Housing Element states that the County seeks to "[f]acilitate a job/housing balance with the objective of a ratio of 1.2 jobs to 1 dwelling unit."[216] The County also stated that a "ratio of 1.5 is considered to be the standard measurement threshold for determining an employment-rich versus a housing-rich community."[217]

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[213]/ *Op. Cit.*, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, p. 2-13.

[214]/ *Op. Cit.*, Regional Comprehensive Plan and Guide, Growth Management, p. 3-5.

[215]/ *Op. Cit.*, Draft Goals and Policies Report, September 14, 2005, p. A-25.

[216]/ *Op. Cit.*, County of San Bernardino Housing Element, Housing Program 13-d, p. 171.

[217]/ *Op. Cit.*, Initial Study Environmental Checklist Form – County of San Bernardino Housing Element Update: 2000-2005, p. 5.

Table 4.7-17
SUSTAINABLE DESIGN FEATURES

Applicant-Nominated Sustainable Design Features	Project Description or Mitigation Measure
Site Planning	-
Provide physical linkages between land uses that promote walking and bicycling and provide alternatives to automobile use.	Project Description (Section 4.4.1[A], LCRSP)
Encourage compact development that concentrates residential areas close to public amenities such as schools, parks, retail, golf, recreation centers, etc.	Project Description (Section 4.4.1[B], LCRSP)
Include a range of housing types and/or densities within each neighborhood in Lytle Creek Ranch.	Project Description (Section 4.4.1[C], LCRSP)
Create an interconnected street network that has a high level of connections with cul-de-sacs that include pedestrian or bicycle through connections.	Project Description (Section 4.4.1[D], LCRSP)
Incorporate “green” practices in developing buildings and infrastructure, particularly for storm water runoff (e.g., bioswales).	Project Description (Section 4.4.1[D], LCRSP)
Encourage design of landscape areas that capture and direct storm water runoff.	Project Description (Section 4.4.1[E], LCRSP)
Stabilize slopes to limit erosion as part of the Stormwater Management Plan and erosion control plan.	Project Description (Section 4.4.1[F], LCRSP)
Minimize the amount of paved areas for roads, parking, and patios, particularly in residential areas.	Project Description (Section 4.4.1[G], LCRSP)
Development plans for Neighborhoods III or IV shall be revised to incorporate an Applicant constructed and maintained park-and-ride/park-and-pool facility in proximity to the intersection of Sierra Avenue and Riverside Avenue (in the vicinity of PA 33) or in an alternative on-site or off-site location and of a specified size acceptable to the City.	Mitigation Measure 7-13
Energy Efficiency	-
Passive design strategies can dramatically affect building energy performance. These measures include building shape and orientation, passive solar design, and the use of natural lighting.	Project Description (Section 4.4.2[A], LCRSP)
Develop strategies to provide natural lighting. Studies have shown that natural lighting has a positive impact on productivity and well being.	Project Description (Section 4.4.2[B], LCRSP)
Incorporate the use of Low-E windows or use Energy Star windows.	Project Description (Section 4.4.2[C], LCRSP)
Install high-efficiency lighting systems with advanced lighting controls. For non-residential buildings, include motion sensors tied to dimmable lighting controls. Task lighting reduces general overhead light levels.	Project Description (Section 4.4.2[D], LCRSP)
Where feasible, incorporate motion sensors on exterior fixtures to reduce energy usage.	Project Description (Section 4.4.2[E], LCRSP)
Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Consider utilizing light colors for roofing and wall finish materials; install high R-value wall and ceiling insulation.	Project Description (Section 4.4.2[F], LCRSP)
Minimize the electric loads from lighting, equipment, and appliances.	Project Description (Section 4.4.2[G], LCRSP)
Individual developments within Lytle Creek Ranch are encouraged to implement some of the strategies of the EnergyStar program, which is an energy performance rating system developed by the U.S. Department of Energy and the Environmental Protection Agency, which certifies products and buildings that meet strict energy-efficiency guidelines. Involvement in the EnergyStar program will be completely optional at the discretion of each individual developer/builder.	Project Description (Section 4.4.2[H], LCRSP)

Table 4.7-17 (Continued)
SUSTAINABLE DESIGN FEATURES

Applicant-Nominated Sustainable Design Features	Project Description or Mitigation Measure
Energy Efficiency (Continued)	-
For retail, commercial, office, and light industrial/manufacturing uses, promote the use of light colored roofing with a high solar reflectance in order to reduce the heat island effect from roofs.	Project Description (Section 4.4.2[I], LCRSP)
In retail, commercial, and office developments, provide a limited number of preferred parking spaces for hybrid vehicles, fuel cell vehicles, electric vehicles, and other fuel efficient vehicles.	Project Description (Section 4.4.2[J], LCRSP)
Material Efficiency	-
Select sustainable construction materials and products by evaluating several characteristics such as reused and recycled content, zero or low off gassing of harmful air emissions, zero or low toxicity, sustainably harvested materials, high recyclability, durability, longevity, and local production. Such products promote resource conservation and efficiency. Using recycled-content products also helps develop markets for recycled materials that are being diverted from California's landfills, as mandated by the Integrated Waste Management Act.	Project Description (Section 4.4.3[A], LCRSP)
Encourage the use of low VOC paints and wallpapers within Lytle Creek Ranch.	Project Description (Section 4.4.3[B], LCRSP) Mitigation Measure 7-9
Encourage the use of low VOC Green Label carpet within Lytle Creek Ranch.	Project Description (Section 4.4.3[C], LCRSP)
Use dimensional planning and other material efficiency strategies. These strategies reduce the amount of building materials needed and cut construction costs. For example, consider designing rooms on four foot multiples to conform to standard-sized wallboard and plywood sheets.	Project Description (Section 4.4.3[D], LCRSP)
Consider using recycle base, crushed concrete base, recycle content asphalt , shredded tires in base and asphalt in roads, parking areas, and drive aisles, if feasible and economically viable. Re-using materials keeps materials out of landfills and costs less.	Project Description (Section 4.4.3[E], LCRSP)
Require plans for managing materials through deconstruction, demolition, and construction.	Project Description (Section 4.4.3[F], LCRSP)
Design with adequate space to facilitate recycling collection and to incorporate a solid waste management program that prevents waste generation.	Project Description (Section 4.4.3[G], LCRSP)
Establish a construction waste recycling program with a local waste management company to recycle up to 30% of the construction waste.	Project Description (Section 4.4.3[H], LCRSP)
Water Efficiency	-
Minimize wastewater by using ultra low-flush toilets, low-flow shower heads, and other water conserving fixtures.	Project Description (Section 4.4.4[A], LCRSP)
Use recirculating systems for centralized hot water distribution.	Project Description (Section 4.4.4[B], LCRSP)
Use a water budget approach that schedules irrigation using the California Irrigation Management Information System data for landscaping.	Project Description (Section 4.4.4[C], LCRSP)
Meter the landscape separately from buildings. Use micro-irrigation (which excludes sprinklers and high-pressure sprayers) to supply water in non-turf areas.	Project Description (Section 4.4.4[D], LCRSP)
Use state-of-the-art irrigation controllers and self-closing nozzles on hoses.	Project Description (Section 4.4.4[E], LCRSP)

Source: Environmental Impact Sciences

As indicated in the City General Plan, a "community is considered 'balanced' when these distributions are approximately equal."[218] The phrase "approximately equal" should not be considered synonymous with "equal."

SCAG notes that a jobs-housing balance for the region can "be defined as an area extending about 14 miles around an employment center [or a residence] with a ratio between jobs and households on the order of 1.0-1.29 jobs per household."[219] Based on the broad range of agency interpretations as to what constitutes a "jobs-housing balance," no single standard can be deemed applicable to any project.

From a regional perspective, as noted in Table 3-4 (Population, Household, and Employment Forecasts for the County of San Bernardino – 2008 Regional Transportation Plan) and Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, generally reflecting the build-out period of the LCRSP, the jobs-housing ratio in the County will decrease from 1.27 to 1.24 while that in the City will have a modest increase from 0.96 to 1.08. By 2030, based on SCAG's growth projections, the City and the combined incorporated and unincorporated portions of the County are both projected to exceed the minimal declared "jobs-housing balance" (≥1.0).

In contrast, as indicated in Table 4.2-21 (Population, Household, and Employment Forecasts for Unincorporated San Bernardino County – 2008 Regional Transportation Plan), between 2010 and 2030, the jobs-housing ratio in the unincorporated portion of the County will decrease from only 0.93 to 0.79. As a result, at no time during the period 2010-2030 is the jobs-housing ratio in unincorporated County areas projected to achieve the minimal declared "balance" (≥1.0).

As indicated in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, representing a time period generally reflecting the build-out period of the LCRSP, absent the proposed project, the jobs-housing ratio in the City will improve from only 0.96 to 1.08. However, with the annexation of the unincorporated portion of the project site and the introduction of the proposed project, the jobs-housing ratio within the City will remain virtually unchanged between 2010 and 2030 (0.96).

Regional trends are based not on a single development application but on overall areawide growth. As indicated in Table 3-6 (Related Projects Summary), 103 additional related projects have been identified in the general project area. It can be reasonably assumed that none of those 103 related projects were explicitly included in SCAG's growth forecasts. Many of those projects (e.g., Rialto Renaissance Specific Plan) constitute proposed job centers containing few or any associated residential development. Because the 2008 RTP projects that job growth within the City will outpace housing development, in recognition of the 20-year build-out horizon associated with the proposed project (such that all units will not come on-line during any single year), the LCRSP would, from an areawide perspective, not be expected to substantially impede the furtherance of any broad-based (and not project-specific) policies with regards to jobs-housing balance. With the possible exception of construction-term particulate emission, it can, therefore, be concluded that the proposed project generally complies with the goals of the Guidance Document and with the 2007 AQMP.

[218]/ *Op. Cit.*, City of Rialto General Plan, Conservation Element, p. X-9.
[219]/ *Op. Cit.*, The New Economy and Jobs/Housing Balance in Southern California., p. 15.

However, localized modeling shows that site construction would result in a substantial increase, defined as ≥10.4 µg/m^3 of PM_{10} and $PM_{2.5}$ averaged over a 24-hour period.[220] As such, the project adds cumulatively to an exceedance of particulate standards. Since the goal of the 2007 AQMP is to protect receptors from exceedance conditions, with regards to projected short-term particulate emissions, it can be interpreted that the proposed project would not fully comply with that provision of the 2007 AQMP.

Greenhouse Gas Emissions and Global Climate Change

Due to the complex physical, chemical, and atmospheric mechanisms involved in global climate change, it is speculative to identify the specific impact, if any, to global climate change from one project's incremental increase in global greenhouse gas emissions. The proposed project's greenhouse gas emissions and the resulting level of significance of the project's potential impacts are more properly assessed in terms of the project's contribution to the cumulative impact of global GHG emissions on climate change. That discussion is set forth in Section 4.7.5.3 (Cumulative Impacts) below. A quantified analysis of the GHG emissions anticipated to result from the project's construction and operational activities is included as part of the cumulative impact analysis. As part of that analysis, the project's GHG emissions are analyzed on a project-specific basis with respect to its impacts on global climate change.

Worldwide emissions of GHGs in 2004 were 26.8 billion tonnes of CO_2e per year.[221,222] In 2004, the United States emitted about 7 billion tonnes of CO_2e.[223] Over 80 percent of the GHG emissions in the United States are comprised of CO_2 emissions from energy-related fossil fuel combustion. In 2004, California emitted 0.480 billion tonnes of CO_2e or about 7 percent of the United States emissions. The proposed project would generate 98,127 tonnes of CO_2e per year, representing approximately 0.00039 percent of worldwide emissions, 0.00149 percent of the United State's emissions, and 0.0218 percent of California's annual GHG emissions. Standing alone this impact would not be considered significant in terms of its potential to affect global climate change; however, because these emissions will contribute to an overall condition of GHG emissions that are being produced on a global basis, the project's impact on global climate change is discussed in terms of the whether the proposed project's contribution to the cumulative impact of global GHG emissions on climate change is cumulatively considerable.

4.7.5.3 Cumulative Impacts

Air Quality

***Environmental Impact 7-9**. Since the project will exceed SCAQMD regional emission thresholds during construction, even with the incorporation of all feasible mitigation measures, the project will contribute to a significant cumulative air quality impact.*

[220]/ *Op. Cit*., Final Localized Significance Threshold Methodology, June 2003, revised July 2008, p. 1-5.

[221]/ United Nations Framework on Climate Change, Sum of Annex I and Annex II countries without counting Land-Use, Land-Use Change, and Forestry (LULUCF). For countries that 2004 data was unavailable, the most recent year was used (http://unfccc.int/ghg_emissions_data/predefined_queries/items/3814.php).

[222]/ The year 2004 was initially chosen to have a consistent comparison for the worldwide, United States, and California inventories. While a more recent inventory for California (2006) is available, this statement is provided for context and does not need to be as current as possible.

[223]/ United States Environmental Protection Agency, 2006 Inventory of U.S. Greenhouse Gas Emissions and Sinks (http://www.epa.gov/climatechange/emissions/downloads06/06_Complete_Report.pdf).

***Preliminary Determination 7-9**. Significant and unavoidable impact.*

As indicated in the TIA, there exists a large inventory of related projects within the proposed project's study area. Since the Applicant has no control over the timing or sequencing of those related projects, any quantitative analysis conducted to ascertain daily construction emissions attributable to the development of multiple, concurrent, construction projects would be speculative. Similarly, there are no established criteria to assess the significance of cumulative health risks. Due to the variable nature of construction with respect to activity level, duration, and location, it would be speculative to analyze potential health impacts resulting from possible concurrent construction. As such, those analyses are not presented herein.

Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. Since the project would exceed SCAQMD regional emission thresholds during construction, even with the incorporation of all feasible mitigation measures, the proposed project will incrementally contribute to the creation of a significant cumulative air quality impact.

Since the project's recommended mitigation measures will not adequately mitigate for the project's projected exceedance of the SCAQMD's suggested threshold of significance standards for construction-term CO, NO_X, PM_{10}, $PM_{2.5}$, and VOC emissions, implementation of those recommended mitigation measures would not reduce the project's potential cumulative air quality impact to a less-than-significant level. No additional mitigation measures, formulated specifically to address the project's potential incremental contribution to cumulative construction-related air quality impacts, are deemed to be reasonably feasible.

***Environmental Impact 7-10**. The project area is out-of-attainment for both ozone (O_3) and particulate (PM_{10} and $PM_{2.5}$) emissions. Peak daily emissions of operation-related pollutants would exceed SCAQMD regional significance thresholds. By applying SCAQMD's cumulative air quality impact methodology, implementation of the proposed project would result in an addition of criteria pollutants such that cumulative impacts, in conjunction with related projects in the region, would occur. The emissions generated by project operation would be deemed cumulatively considerable.*

***Preliminary Determination 7-10**. Significant and unavoidable impact.*[224]

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the SCAB is currently classified as non-attainment for O_3, PM_{10}, and $PM_{2.5}$, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, Sections 15064(h)(3) of the State CEQA Guidelines provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that: "A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen

[224]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standards; and (2) interfere with the attainment of the federal or State ambient air quality standards by either violating or contributing to an existing or projected air quality violation.

the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency."

For purposes of the cumulative air quality analysis with respect to Section 15064(h)(3), the project's incremental contribution to cumulative air quality impacts is determined based on compliance with the adopted 2007 AQMP.

The project incorporates certain features, both by design and as required mitigation, that further the goals and objectives of the SCAQMD's Guidance Document. The Guidance Document was prepared by the SCAQMD as a reference for cities and counties within SCAQMD's jurisdiction and provides suggested policies that local governments can use to prevent or reduce potential air pollution impacts and protect public health in their general plans and local planning. The objective of the Guidance Document is to facilitate a stronger collaboration between local governments and the SCAQMD to reduce community exposure to source-specific and cumulative air pollution impacts. Projects that show a compliance with the goals and objectives of the Guidance Document would also be in compliance with the goals and objectives of the 2007 AQMP. Based on discussion presented above, the proposed project is considered to generally comply with these goals and, therefore, with the 2007 AQMP.

However, SCAQMD no longer recommends relying solely upon consistency with the 2007 AQMP as an appropriate methodology for assessing cumulative air quality impacts. Instead, SCAQMD's approach in determining cumulative air quality impacts for criteria air pollutants is to first determine whether or not the proposed project would result in a significant project-level impact to regional air quality based on SCAQMD significance thresholds. If not, then the lead agency needs to consider the additive effects of related projects only if the proposed project is part of an ongoing regulatory program or is contemplated in a program EIR and the related projects are located within approximately one mile of the proposed project site. If there are related projects within the vicinity (one-mile radius) of the proposed project site, (i.e., that are part of an ongoing regulatory program or are contemplated in a program EIR) then additive effects of the related projects should be considered.

As the proposed project is not part of an ongoing regulatory program, the SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As indicated herein, peak daily emissions of operation-related pollutants would exceed SCAQMD regional significance thresholds for VOC, CO, PM_{10}, $PM_{2.5}$, and NO_X emissions. By applying SCAQMD's cumulative air quality impact methodology, the implementation of the proposed project, even with the incorporation of all feasible mitigation measures, would result in an addition of criteria pollutants such that cumulative impacts, in conjunction with related projects in the region, would occur. The emissions generated by project operation would be cumulatively considerable.

Since the project's recommended mitigation measures will not adequately mitigate for the project's projected exceedance of the SCAQMD's suggested threshold of significance standards for operational VOC, CO, PM_{10}, $PM_{2.5}$, and NO_X emissions, implementation of those recommended mitigation measures would not reduce the project's potential cumulative air quality impact to a less-than-significant level. No additional mitigation measures, formulated specifically to address the project's potential incremental contribution to cumulative operational air quality impacts, are deemed to be reasonably feasible.

Greenhouse Gas Emissions and Global Climate Change

***Environmental Impact 7-11**. The proposed project will result in both one-time and annual greenhouse gas emissions that are expected to occur after build-out, producing an estimated 256,432 tonnes of CO_2e one-time greenhouse gas emissions and calculated annual emissions of 93,985 tonnes of CO_2e. If the one-time emissions were annualized, the total annual emissions from the proposed project would be approximately 100,396 tonnes per year.*

***Preliminary Determination 7-11**. Less-than-significant impact.*

Assessing the significance of a project's contribution to cumulative global climate change involves: (1) determining an inventory of project GHG emissions; and (2) considering project consistency with applicable emission reduction strategies and goals, such as those set forth by the Global Warming Solutions Act of 2006 (AB 32). Pending the establishment of thresholds of significance for GHG emissions, the Lead Agency will evaluate significance on a case-by-case basis.[225] Additional information and analysis regarding GHG emissions is presented in Appendix III-G (Climate Change Technical Report) herein.

- **Methodology**. This section describes the methods that were used to estimate GHG emissions from the proposed project after development and full build-out.

  - ◊ **Annualized emissions**. The proposed project will result in both one-time emissions of greenhouse gases and annual GHG emissions that are expected to occur after build-out. The discussion below describes how GHG emissions from the proposed project were calculated to arrive at a total figure representing annual emissions (i.e., emissions from vehicular emissions from vehicle trips; emissions resulting from energy use associated with residential and non-residential buildings, and emissions from municipal sources, such drinking water and wastewater supply and treatment, lighting in public areas, and municipal vehicles). Based on the calculations conducted for the proposed project, on an annual basis, these sources will result in an estimated 98,127 tonnes per year of GHG emissions. In addition to these annual emissions, construction activities will result in GHG emissions as well. Construction emissions are considered one-time emissions. The proposed project's construction activities will generate an estimated 256,432 tonnes of GHG emissions. These construction emissions were then annualized (assuming a 40-year development life[226]), resulting in annual emissions of approximately 6.411 tonnes or about seven percent of the overall emissions from the proposed project. These 6,411 tonnes of annualized construction emissions were then added to the 98,127 tonnes of annual operational emissions, resulting in annualized emissions of 104,538 tonnes of GHG emissions per year.

[225]/ The information and analysis presented herein is derived from "Climate Change Technical Report – Lytle Creek Ranch" (Environ International Corporation, November 19, 2009).

[226]/ Life-cycle assessment studies typically assume building life spans of beween 50 to 100 years. For this analysis a 40-year building life span was conservatively assumed (Sources: Scheuer, C., Keoleian, G. A., and Reppe, P., Life Cycle Energy and Environmental Performance of a New University Building: Modeling Challenges and Design implications, Energy and Buildings, Vol. 35, No. 10, 2003; p. 1049; Keoleian, G.A., Blanchard, S., and Reppe, P., Life-Cycle Energy, Costs, and Strategies for Improving a Single Family House, Journal of Industrial Ecology, Vol. 4, No., 2, 2000, p. 135; Sartori, I. and Hestnes, A.G., Energy Use in the Life Cycle of Conventional and Low-Energy Buildings: A Review Article, Energy and Buildings, Vol. 39, No. 3, 2007, p. 249).

The analysis of GHG emissions includes some aspects that are fully within the control of the Applicant (such as grading and the placement of utilities), some aspects that are in the control of the subsequent developer/builder (such as construction emissions), and some aspects for which control over emissions is shared by the Applicant, the subsequent developer/builder, and individual residents (such as energy use in the built environment and emissions from traffic by the development's future residents and employees).[227]

In addition, an estimate of "life-cycle" GHG emissions (i.e., GHG emissions from the processes used to manufacture and transport materials used in the buildings and infrastructure) is presented in the analysis. This estimate should be used for comparison purposes only and is not included in the final inventory as these emissions would be attributable to other industry sectors under the Global Warming Solutions Act of 2006 (AB 32). The inventory does not consider GHG emissions from most sources outside of the proposed project that may indirectly service the residents (e.g., a landfill) or whether the emissions from the development are "new" in the sense that, absent the development, the emissions may not occur. Each aspect of the GHG inventory is described in this section. Actual GHG emissions at full build-out are expected to be substantially lower due to regulatory developments; therefore, the GHG emissions reported in this section constitute a conservative estimate.

◊ **GHG emissions baseline**. The physical environmental conditions evident at the time of publication of the NOP were used as the environmental baseline for the calculation of GHG emissions. At the time of the NOP's publication, the project site was undeveloped with the exception of an existing El Rancho Verde Royal Vista golf course and one industrial source (Monier Lifetile). The analysis assumed that GHG emissions from these sources are de minimis.

◊ **"New" emissions**. Given the global nature of GHG impacts, it is difficult to determine which emissions from a given project are "new" on a global scale. As described in this section, there are methods of estimating emissions from certain aspects of projects, such as that from the additional vehicle travel associated with the project. It is, however, not clear how to determine what proportion of those emissions are truly additional or new in the global sense or what proportion of those emissions would have occurred globally without the proposed project.

Analyses for evaluating the airborne criteria pollutant impacts of new projects for inclusion in environmental documents have already, in a sense, addressed the issue of what is "new". However, the impacts of GHG emissions differ from those

[227]/ As reported in the "Proceedings of the National Academy of Sciences of the United States": "Direct energy use by households accounts for approximately 38% of overall US CO_2 emissions, or 626 million metric tons of carbon (MtC) in 2005. This is approximately 8% of global emissions and larger than the emissions of any entire country except China. National policy initiatives have addressed households only indirectly, mainly through setting motor vehicle, lighting, and appliance efficiency standards. Recent reviews of the available research suggest a large near-term potential for emissions reductions from behaviorial changes involving the adoption and altered use of available in-home and personal transportation technologies, without waiting for new technologies or changing household lifestyle" (Dietz, Thomas, Gardner, Gerald T., Gilligan, Jonathan, Stern, Paul C., and Vandenbergh, Michael P., Household Actions can Provide Behavioral Wedge to Rapidly Reduce US Carbon Emissions, Proceedings of the National Academy of Sciences of the United States, November 3, 2009, Vol. 106, No. 44, pp. 18452-18456). Most "behaviorial changes" are outside the ability of the Applicant to directly influence.

of criteria pollutants in that they are a function of global concentrations rather than local concentrations and, therefore, specific locations of where emissions occur is less important than for criteria pollutants.

One of the goal of estimating emissions of criteria pollutants from projects is to understand whether there are significant new emissions in those air basins which have a limited ability to absorb additional criteria pollutant emissions without adverse air quality impacts. A review of how air quality analyses typically address the issue of whether emissions are "new" is instructive as to how to address the emissions of greenhouse gases. Unlike criteria pollutants, however, the impacts of GHG emissions are a function of their global concentrations, rather than local concentrations. Thus, the question of whether or not a project's GHG impacts are significant, both at the project level and on a cumulative basis, must be asked based on global rather than basin-wide considerations.

When evaluating the air quality impacts for a new project, such as a residential development, the vehicular emissions associated with the residents as they work and shop within the basin are counted as new emissions in traditional air quality analyses, even if those new residents would have moved from another house in the same air basin. The typical rationale for this approach is that the new residential development represents growth in the basin. As a result, all emissions associated with its residents' vehicle travel should be counted as new emissions, even if this might lead to some over-counting of criteria pollutant emissions from the project.

World rankings of nations' GHG emissions generally depend on which gases are accounted for and whether land-use changes are considered. Without considering land-use changes, in recent years, the United States has been the top GHG-emitting country in the world. When all of the developing countries are grouped together, they contribute approximately 52 percent of the worldwide GHG emissions.[228]

To understand the global-scale impact of GHG emissions, it is useful to understand that the increase of new GHG emissions globally is caused by economic and population growth. Emission growth rates are the highest among developing countries. While GHG emissions in developed countries were unchanged over the 1990-2002 period, emissions increased by 47 percent in developing countries. This increase in developing countries' GHG emissions is due to the increasing demand for higher standards of living as a result of gross domestic product growth, requiring more vehicles and greater electricity demand. In addition, developing countries often lack the technology or capital to utilize energy-efficient products or to construct cleaner burning power plants.

In the developed world, GHG emission increases are directly tied to population growth. It, therefore, makes sense to consider operational emissions (including vehicular emissions) from new residences as growth, as residences are rarely removed from the housing supply once constructed. As in the case when one

[228]/ Baumert, K.A., T. Herzog, J. Pershing, Navigating the Numbers: Greenhouse Gas Data and International Climate Policy, 2005 (http://www.wri.org/climate/pubs_description.cfm?pid=4093).

housing development replaces another, there are exceptions and, in those cases, the replacement residential development need not be considered growth.

It is not, however, clear always whether non-residential (i.e., office space, retail space, and industrial buildings) development should be considered new growth for vehicular travel purposes. To the extent that non-residential development serves existing residential development, its vehicular travel may not be new. For instance, if the new non-residential area serves an area with a high residential/ non-residential balance, then this new non-residential growth will reduce shopping and work trip lengths and will reduce GHG emissions associated with mobile sources. If, however, the new non-residential area results in longer trips for its workers and shoppers than they would have previously made, then non-residential development would adds GHG emissions. Non-residential development that could potentially increase VMT include facilities that draw trips from farther away that otherwise would not be made (such as a theme park).

This analysis assumes that the proposed project's new non-residential area serves an area with a high residential/non-residential balance. The new non-residential growth would, therefore, reduce shopping and work trip lengths from existing residences and reduce GHG emissions associated with mobile sources.

The approach described above is different than that for criteria emissions. For criteria pollutants, if new emissions move into the basin, although there is a reduction in criteria emissions elsewhere, these emissions are new to the basin and are, therefore, counted. For GHG emissions, if the emissions simply moved from one basin to another, the emissions would not be new on a global scale. To evaluate the sustainability of new non-residential developments, one must first ask if the shoppers' and workers' travel distances to the new non-residential development are longer or shorter than the distances those same individuals currently travel to their non-residential areas.

To the extent that new non-residential development serves new residential development, much of the non-residential vehicle travel would already be counted in the evaluation of the new residential development. Although the vehicle trips would already be counted elsewhere, the operational emissions from heating/cooling the non-residential areas would be considered new, as there are new non-residential buildings that go along with growth in residential areas.

Accordingly, GHG emissions from VMT serving non-residential areas will only be counted if the non-residential areas contribute to greater VMT as a result of their locations. If the non-residential development lowers VMT, then it will be considered to have a zero or negative GHG emissions contribution as a result of the fact that it has generated shorter operational vehicle trip lengths than would have otherwise occurred. Since the proposed project combines both residential and non-residential development, this issue does not directly affect the project's VMT calculations since all VMT from the proposed project's residents are calculated regardless of internal or external destinations or trip purpose.

◊ **Units of measurement** (tonnes of CO_2 and CO_2e). GHGs include those gases that contribute to the natural greenhouse effect (such as CO_2, CH_4, N_2O, and

water), as well as gases that are only man-made and that are emitted through the use of modern industrial products (such as HFCs and CFCs). The most important greenhouse gas in human-induced global warming is CO_2. While many gases have much higher GWPs than carbon monoxide, CO_2 is emitted in such vastly higher quantities that it accounts for about 85 percent of the GWP of all GHG emissions emitted by the United States.[229]

The effect each of these gases has on global warming is a combination of the volume of their emissions and their GWP. GWP indicates, on a pound for pound basis, how much a gas will contribute to global warming relative to how much warming would be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent than CO_2, with GWPs of 21 and 310, respectively. GHG emissions are typically measured in terms of mass of CO_2e. CO_2e are calculated as the product of the mass of a given GHG and its specific GWP.

In this analysis, emissions are presented in units of CO_2e either because the GWPs of CH_4 and N_2O were accounted for explicitly or the CH_4 and N_2O are assumed to contribute a negligible amount of GWP when compared to the CO_2 emissions from that particular emissions category. Exact totals presented in all tables and in this analysis may not equal the sum of components due to the rounding of numbers.

◊ **Resources relied upon**. To estimate GHG emissions from the proposed project, the analysis directly or indirectly relied primarily on the following five different types of resources: (1) emissions estimation guidance from government-sponsored organizations; (2) government-commissioned studies of energy use patterns; (3) energy surveys by other consulting firms; (4) emissions estimation software; and (5) building energy modeling software. These sources are each described below.

- **Emissions estimation guidance**. This inventory was developed using guidance from two government-sponsored organizations to assist in the estimation of GHG emissions. The first is the California Climate Action Registry (CCAR), which was established by the California Legislature to assist willing parties in estimating and recording their GHG emissions to use as a baseline for meeting future emission reduction requirements. Publications by the CCAR include not only recommendations on how to compile a GHG emissions inventory but also relevant data on energy use and emissions that are utilized in this protocol. The second organization is the Intergovernmental Panel on Climate Change (IPCC) which was established in 1988 by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO). The IPCC's main role is to assess information on climate change which is synthesized in IPCC reports, including methodology reports. These reports also include relevant emission factors and specific scientific data that can be used to estimate GHG activities from various activities.

[229]/ *Op. Cit.*, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2004 (http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/RAMR6MBSC3/$File/06_Complete_Report.pdf).

- **Emissions and energy use studies**. For estimating emissions based on electrical and natural gas energy use, literature information on patterns of energy use must often be employed. Studies commissioned by the United States Department of Energy - Energy Information Administration (EIA) and the California Energy Commission (CEC) provide data on energy use patterns associated with municipal activities, natural resource distribution, and other activities that will take place in the proposed project. These data were used to estimate energy use patterns which were applied to the specific characteristics of the proposed project to estimate GHG emissions. In addition to EIA and CEC studies, studies performed by individual municipalities or scientific organizations were also used in this analysis.

- **Emissions estimation software**. The CARB, the SCAQMD, and other public and private organizations have developed several software programs to facilitate the calculation of emissions from construction, motor vehicles, and urban developments by streamlining emissions estimation from these sources. This inventory was developed using several models to estimate GHG emissions from the proposed project. These are the OFFROAD2007 model, the EMFAC model, the URBEMIS model, the United States Department of Energy - National Renewable Energy Laboratory's (NREL) Building America Research Benchmark Definition (BARBD) model, and the Micropas model. The features of each of these models are described below.

  - **OFFROAD/OFFROAD2007**. OFFROAD2007 is the most recent version of a model developed by the CARB to estimate the activity and emissions of off-road mobile emissions sources, such as construction equipment. OFFROAD contains a database of default values for horsepower, load factor, and hours per day of operation and can calculate emission factors based on the type of equipment and year of use.

  - **EMFAC/EMFAC2007**. EMFAC, as developed by CARB, compiles real fleet data on the county-level for the State of California, including vehicle model year distributions, vehicle class (e.g., light-duty automobiles, medium-duty truck, heavy-heavy-duty truck) distributions, and emission rate information to generate fleet-average emission factors for most criteria pollutants and CO_2. EMFAC2007 is the newest version of the program. Emission factors from EMFAC depend on the vehicle class, vehicle technology, speed, year of operation, average ambient air temperature, and relative humidity.

  - **URBEMIS**. The URBEMIS software was created by SCAQMD, although it is used by other air districts as well. It estimates emissions associated with different aspects of urban development. The Operational Data module in URBEMIS calculates emissions from mobile sources operating during the use of a development based on emission factors from EMFAC and traffic use

information specific to a development. Mobile source emissions during the construction phase are calculated separately in the construction module of URBEMIS. URBEMIS provides county, air district/air basin, or Statewide averages for number of daily trips per housing unit and per student at an elementary school in the absence of more specific information from traffic engineers. URBEMIS also provides air district-specific default values for vehicle fleet characteristics (vehicle class distribution and technology categories) and travel conditions (average trip length, trip speed, and relative frequency of each type of trip). URBEMIS (Version 9.2.2), uses EMFAC2007 emission factors and calculates CO_2 emissions using district-specific default parameters for various inputs, including vehicle fleet characteristics and travel conditions.

In addition to mobile source emissions, URBEMIS can also calculate emissions associated with the construction phase of a development and emissions from area sources (such as fireplaces) once the development is operational. The URBEMIS construction module enables separate emissions calculations from each of the four typical stages of any construction project: fine site grading, asphalt (paving), building construction, and architectural coatings.[230] Based on the timing of construction and size of the development, URBEMIS defaults can be used to estimate emissions. Alternatively, the user can override these defaults by entering specific information about the construction project (such as what types and numbers of equipment which are going to be used). In terms of area sources, URBEMIS is equipped to estimate GHG emissions from three types of GHG-emitting area sources based either on program defaults or more specific project information inputted by the user. These uses are natural gas fuel combustion, hearth fuel combustion, and landscaping equipment.

✧ **BARBD model**. The BARBD model was developed by the NREL in consultation with home developers and homebuilders within the Building America Program. This benchmark tool was developed to provide a means for tracking progress toward residential energy savings. The model includes a series of user profiles, intended to represent the behavior of a typical set of occupants. This benchmark is frequently updated, with the most recent benchmark model released on December 18, 2008. This information was used to determine the energy use for appliances and plug-in energy use in homes.

◊ **Indirect GHG emissions from electricity use**. As noted above, indirect GHG emissions are created as a result of electricity use (i.e., electricity use in a building generally causes emissions in an indirect manner). When electricity is used in a building, the electricity generation typically takes place off the site at

[230]/ URBEMIS 9.2.4 uses the four phases noted above as default phases. The user can add any of three additional phases: demolition, ass site grading, and trenching.

the power plant. The proposed project is supplied with power by Southern California Edison (SCE). Accordingly, indirect GHG emissions from electricity usage are calculated using the SCE carbon-intensity factor of 631 pounds CO_2e per megawatt hour (MW-hr).[231] This emission factor takes into account the current mix of energy sources used to generate electricity for SCE and the relative carbon intensities of these sources.[232]

◊ **Vegetation change**. The GHG analysis presents the calculation of the positive and negative GHG emissions associated with vegetation removal and re-vegetation at the project site. The permanent removal of existing vegetation can contribute to net GHG increases by reducing existing carbon sequestration capacity.[233] Areas that are temporarily disturbed but re-vegetated with the same vegetation type are assumed to have no net impact.

Following completion of the proposed project, some areas will become re-vegetated with trees, shrubs, and other vegetation. These areas could potentially sequester more CO_2 from the atmosphere than was sequestered prior to development. The difference between the total before-development sequestered CO_2 and the after-development sequestered CO_2 is the one-time CO_2 released from clearing the vegetation less the CO_2 sequestered by new plantings.[234] The overall CO_2 emissions due to vegetation change will result from two processes: (1) the change in the amount of CO_2 sequestered by vegetation, which would lead to a one-time GHG release; and (2) the amount that can be expected to be sequestered by new plantings. Both issues are discussed below.

As used in this analysis, the units CO_2 and CO_2e are used interchangeably. CH_4 and N_2O are assumed to contribute a negligible amount of GWP when compared to the CO_2 emissions from vegetation change.

♦ **One-time release by changes in carbon sequestration capacity**.[235] The one-time release of GHG emissions due to permanent changes in carbon sequestration capacity was calculated using the following four steps:

✧ **Change in area of various land types due to the development**. These changes include not only the area of land that will be converted to houses but also areas disrupted by the construction of utility corridors, water tank sites, and associated grading areas.

[231]/ The Climate Registry, California Climate Action Registry Database, Southern California Edison Company PUP Report, 2007.

[232]/ When calculating indirect emissions due to electricity usage, it is important to consider that indirect emissions from using a given amount of electricity will vary with the fuel-mix used to produce electricity. For example, CO_2 emissions per kWh from a coal-fired power plant are significantly higher than CO_2 emissions per kWh from a natural gas-fired power plant. Therefore, to most accurately estimate GHG emissions from the proposed project, the carbon intensity of the specific mix of energy sources that SCE uses to generate electricity was used to calculate emissions since SCE is the most likely source of electricity for on-site consumption.

[233]/ It is assumed that all mature land-types (at least 20 years old) are at steady-state (Source: The World Resource Institute, Land Use, Land-Use Change, and Forestry Guidance for GHG Project Accounting [http://www.ghgprotocol.org/DocRoot/97hb6BCSAAG2bImO7c9d/LULUCF%20Final.pdf]).

[234]/ It is assumed that mature ecosystems do not have a net influx or outflux of carbon.

[235]/ This section follows the IPCC guidelines, but has been adapted for ease of use for the proposed project.

Areas temporarily disturbed that will eventually recover to become vegetated will not be counted as vegetation removed as there is no net change in vegetation or land use.[236]

✧ **Biomass associated with each land type**. For the purposes of this analysis, the land types that are present at the project site were listed and characterized using the available general vegetation types found in the IPCC's "2006 IPCC Guidelines for National Greenhouse Gas Inventories" (IPCC Guidelines).[237] This characterization is shown in Table 4.7-18 (CO_2 Sequestration Change due to Land-Use Change). The general IPCC vegetation types are as follows: (1) forestland; (2) grassland; (3) wetland; (4) cropland; and (5) settlements.

California vegetation is heavily dominated by scrub and chaparral vegetation which may not be accurately characterized by default forest or grassland properties. Consequently, ecological zones and biomass based subdivisions identified in the IPCC Guidelines were used to sub-categorize the vegetation as tree or scrub dominated. The biomass values for each vegetation type are based on these categories which relate the site's vegetation to the IPCC vegetation types. Forestland, grassland and cropland categories and subcategories were used to determine the CO_2 emissions resulting from land-use impacts associated with the proposed project.

✧ **CO_2 emissions from the net change of vegetation**. When vegetation is removed, it may undergo biodegradation[238] or it may be combusted. Either pathway results in the carbon (C) present in the plants being combined with oxygen (O_2) to form CO_2. To estimate the mass of carbon present in the biomass, biomass weight is multiplied by the mass carbon fraction, 0.47.[239] The mass of carbon is multiplied by 3.67[240] to calculate the final mass of CO_2, assuming all of this carbon is converted into CO_2. The results of this calculation are shown in Table 4.7-19 (Carbon per Acre for IPCC Land Types) for each type of vegetation.

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[236]/ This assumption facilitates the calculation as a yearly growth rate and CO_2 removal rate does not have to be calculated. As long as the disturbed land will indeed return to its original state, this assumption is valid for time periods over 20 years per IPCC Guidelines (Source: International Panel on Climate Change, 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Agriculture, Forestry and Other Land Uses, 2006, Chapter 2, p. 2.13 [http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_02_Ch2_Generic.pdf]).

[237]/ Intergovernmental Panel on Climate Change, 2006 IPCC Guidelines for National Greenhouse Gas Inventories, 2006 (http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm).

[238]/ Cleared vegetation may also be deposited in a landfill or compost area, where some anaerobic degradation generating CH_4 may take place. For the purposes of this section, however, it is assumed that only aerobic biodegradation will take place which will only result in CO_2 emissions.

[239]/ The fraction of the biomass weight that is carbon. Here, a carbon fraction of 0.47 has been used for all vegetation types from the IPCC Guidelines, default forestland and agricultural land ratio. CCAR assumes a similar value of 0.5 in its Forest Selector Protocol.

[240]/ The ratio of the molecular mass of CO_2 to the molecular mass of carbon is 44/12 or 3.67.

✧ **Overall change in sequestered CO_2**. For all types of land that change from one type of land to another,[241] initial and final values of sequestered CO_2 are calculated using the following equation:

Overall Change in Sequestered CO2 (tonne CO_2)

$$= \sum_i (SeqCO_2)_i \times (area)_i - \sum_j (SeqCO_2)_j \times (area)_j$$

Where:
$SeqCO_2$ = mass of sequestered CO_2 per unit area (tonne CO_2/acre)
Area = area of land for specific land use type [acre]
I = index for final land use type
J = index for initial land use type

Table 4.7-18 (CO_2 Sequestration Change due to Land-Use Change) shows the effective change in the amount of sequestered CO_2 due to the change in land use of the developed area for each land type. The total equivalent CO_2 emissions attributable to the net change of vegetation are approximately 19,400 tonnes.

♦ **CO_2 sequestration by trees**. Planting individual trees on the project site will sequester CO_2. Changing vegetation as described above results in a one-time carbon-stock change. Planting trees is also considered to result in a one-time carbon-stock change. Table 4.7-20 (CO_2 Sequestration Capacity of New Vegetation Plantings) presents default annual CO_2 sequestration rates on a per tree basis, based on values provided by the IPCC. If the tree type is not known, an average of 0.035 tonne CO_2 per year per tree can be assumed for each tree planted.

Urban trees are only net carbon sinks when they are actively growing. The IPCC assumes an active growing period of 20 years. Thereafter, the accumulation of carbon in biomass slows with age and will be completely offset by losses from clipping, pruning, and occasional death. Actual active growing periods are subject to, among other things, species, climate regime, and planting density. The IPCC default value of 20 years has been assumed. Note that trees may also be replaced at the end of the 20-year cycle, which would result in additional years of carbon sequestration, as offset by the potential net release of carbon from the removal of the replaced tree.

Approximately 30,000 new net trees will be planted in LCRSP community. Planting these trees in the community will sequester approximately 20,520 tonnes CO_2. This was calculated by using the sequestration rate of 0.032 tonne CO_2 per year per pine tree for 8,000 new pine trees, the average tree sequestration rate of 0.035 tonne CO_2 per year per tree for 22,000 new trees of undefined type, and assuming 20 years of growth. This sequestration brings the net CO_2 emissions from vegetation to

[241]/ For example from forestland to grassland, or from cropland to permanently developed.

19,400 tonnes (land-use changes) minus 20,520 tonnes (30,000 net new trees), producing a negative 1,120 tonnes (net decrease in the amount of CO_2 released). The net CO_2 emissions from vegetation changes are presented in Table 4.7-21 (Change in CO_2 Sequestration due to Land-Use Changes and New Vegetation Planting).

◊ **GHG emissions associated with construction activities**. The analysis of construction activities describes the estimation of GHG emissions from construction activities associated with the proposed project. There are three major construction phases for an urban development: demolition, site grading, and building construction. The building construction phase can be broken down into three subphases: building construction, architectural painting, and asphalt paving. GHG emissions from these construction phases are largely attributable to fuel use from construction equipment and worker commuting.

CO_2 emissions associated with different aspects of urban development can be estimated using a combination of software programs. The OFFROAD2007 and the EMFAC2007 models are used to generate emission factor data for construction equipment and motor vehicles, respectively. These values serve as inputs for the URBEMIS model, which estimates emissions from several different aspects of urban development, including from construction sources based on emission factors and information specific to the development.

The units CO_2 and CO_2e are used interchangeably for diesel-powered construction equipment because CH_4 and N_2O are assumed to contribute a negligible amount of GWP when compared to the CO_2 emissions. For worker commuting, CH_4 and N_2O are explicitly calculated and, therefore, CO_2 and CO_2e for worker commuting are not equal.

♦ **GHG emissions from construction equipment**. It was assumed that negligible GHG emissions are produced by architectural painting equipment.[242] Emissions were calculated from demolition, grading, building construction, and paving using the URBEMIS methodology based upon the number and type of equipment that will be used in the proposed project's construction, as well as the duration of the different construction phases. The analysis assumed that each piece of equipment will operate for eight hours a day and five days a week during a given phase duration. An "equipment hour" is defined as one hour of a piece of equipment being used. Table 4.7-22 (GHG Emissions from Construction Equipment) contains specifications for each type of equipment (horsepower, load factor,[243] and GHG emission factor) provided by OFFROAD2007 and describes the detailed GHG calculations. CO_2 emissions for each type of construction equipment were calculated as follows:

[242]/ GHG calculations are intended to estimate long-term emissions, while air quality emission calculations are intended to estimate worst-case daily scenarios. As such, the methodology presented herein is different than associated with the quantification of criteria pollutants.

[243]/ Load factor is the percentage of the maximum horsepower rating at which the equipment normally operates.

Equipment Emissions [grams] = Total equipment-hours x emission factor [grams per brake horsepower-hour] x equipment horsepower x load factor

As indicated in the CCAR's "General Reporting Protocol" (GRP), the contributions of CH_4 and N_2O to overall GHG emissions from diesel construction equipment[244] are likely small (<1 percent of total CO_2e) and were, therefore, not included in this calculation. The estimated total GHG emissions from all construction equipment is about 139,370 tonnes CO_2.

- **GHG emissions from worker commuting**. Emissions from worker commuting are associated with workers involved in the demolition and site grading phases and all construction subphases (building construction, paving, architectural coating). Emissions related to trips made by vendors have been separately calculated. GHG emissions are emitted from worker vehicles in two ways: running emissions (produced by driving the vehicle) and startup emissions (produced by turning the vehicle on). The majority of worker commute emissions are running emissions. Table 4.7-23 (Estimated GHG Emissions from Worker Commutes) details emission calculations for worker commutes.

  Running emissions were calculated using the same general method for the demolition, grading, building, and paving phases. For the architectural coating phase, both running and starting emissions were assumed to equal 20 percent of construction phase emissions (representing the URBEMIS default value). Total running emissions from worker commuting during each phase were calculated by estimating the total vehicle miles traveled (VMT) by construction workers and then multiplying this value by the representative GHG emission factors for the vehicles they are expected to drive. The total VMT by construction workers for a given phase is calculated as follows:

  VMT = Number of worker 1-way trips x average 1-way commute length

  For the grading and paving phases, the number of worker round-trips is equal to the number of worker-days. URBEMIS estimates that the worker-days needed for the demolition, grading, and paving phases is equal to the number of equipment-days multiplied by 1.25. The length of the average one-way commute was assumed to be the URBEMIS default of 12.7 miles. For the building construction phase, the number of worker trips was determined based on the number of dwelling units and square footage of non-residential uses. URBEMIS provides trip generation rates based on four general land-use categories: multi-family, single-family, commercial/retail/school/recreation, and office/industrial. Total daily round-trips are the sum of the following:

[244]/ California Climate Action Registry, General Reporting Protocol, Version 3.0, April 2008 (http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf). These emissions are estimated to be less than 1 percent of total GHG contributions for diesel fueled equipment.

Total daily round-trips = (0.36 x number of multi-family units) + (0.72 x number of single-family units) + (0.32 x commercial/retail/school/ recreation square feet)/1000) + (0.42 x office/industrial square feet/1000)

After total VMT for the proposed project is calculated, GHG emissions for this development can be calculated from the following equation:

CO_2 emissions = VMT x [0.5 x EFLDA + 0.25 x (EFLDT1 + EFLDT2)]

Where:
VMT = vehicle miles traveled
EFLDA = emission factor of LDTs
EFLDT1 = emission factor of LDTs up to 6,000 gross vehicle weight (GVW)
EFLDT2 = emission factor of LDTs up to 8,500 GVW

The CO_2 calculation involves the following assumptions: (1) URBEMIS defaults assume that half of the workers commute with light-duty trucks (LDTs) and half commute in light-duty automobiles (LDAs); (2) half of the LDTs were assumed to be Type 1 and the other half Type 2; (3) the emission factor depends upon the speed of the vehicle. The URBEMIS default value of 30 miles per hour was used; (3) EMFAC emission factors from the year 2009 were used for EFLDA, EFLDT1, and EFLDT2. The running emission factors for 2016 and later years were adjusted to account for the impact of AB 1493's (Pavley) standards. According to CARB, relative to 2002, CO_2e emissions from light-duty vehicles would be reduced by 11 percent in 2016 and by 20 percent in 2020.[245]

Startup emissions are CO_2 emitted from starting a vehicle. For construction workers during all phases, the startup emissions were calculated using the following assumptions: (1) the number of round trips were equal to the number of worker days; (2) the breakdown in vehicles was 50 percent LDAs and 50 percent LDTs; and (3) two engine startups per day with a 12 hour wait before each startup.[246]

The USEPA recommends assuming that CH_4, N_2O, and HFCs account for 5 percent of GHG emissions from on-road vehicles, taking into account their GWPs.[247] To incorporate these additional GHG emissions into the calculations, the total GHG footprint was calculated by dividing the CO_2 emissions by 0.95.

Table 4.7-23 (Estimated GHG Emissions from Worker Commutes) summarizes the emission calculations for worker commutes. The total amount of GHG emissions from worker commuting during all phases is a one-time emission of approximately 69,928 tonnes.

[245]/ California Air Resources Board, Comparison of Greenhouse Gas Reductions for the United States and Canada under U.S. CAFE Standards and California Air Resources Board Greenhouse Gas Regulations an Enhanced Technical Assessment, February 25, 2008.
[246]/ The emission factor grows with the length of time the engine is off before each ignition.
[247]/ United States Environmental Protection Agency, Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle, February 2005.

- **GHG emissions from vendor trips**. Similar to worker commuting trips, GHG emissions emitted from vendor vehicles trips are based on running and startup emissions. The number of daily vendor trips was based on the size and type of buildings specified and URBEMIS defaults, which are based on four general land use categories: multi-family, single-family, commercial/retail/school/recreation, and office/industrial. The total round-trips are the sum of the following:

  Total daily round-trips + (0.11 x number of multi-family units) + (0.11 x number of single-family units) + 0.05 x commercial/retail/school/recreation square feet/1000) + (0.38 x office/industrial square feet)/1000)

  The total number of daily round-trips is multiplied by the number of work days, one-way trip length (13.3 miles) and a factor of 2 to account for round-trip to give the VMT. After total VMT for the proposed project is calculated, CO_2 emissions from mobile running can be calculated from the following equation:

  CO_2 emissions from mobile running = VMT x EFHHD

  Where:
  VMT = vehicle miles traveled (based on 13.3 miles one-way trip distance)
  EFHHD = emission factor of HDTs

  The CO_2 calculation involves the following assumptions: (1) URBEMIS defaults assume that vendor trips use heavy-duty trucks (HDTs); (2) the emission factor depends upon the speed of the vehicle (the URBEMIS default value of 30 miles per hour was used); and (3) EMFAC emission factors from the year 2009 were used for EFHHD.

  Startup emissions are CO_2 emitted from starting a vehicle. Startup emissions for vendor trips were calculated using the following assumptions: (1) the breakdown in vehicles was all HDTs; and (2) two engine startups per day with a 12-hour wait before each startup.[248]

  The USEPA recommends assuming that CH_4, N_2O, and HFCs account for 5 percent of GHG emissions from on-road vehicles, taking into account their GWPs.[249] To incorporate these emissions into the calculations, the total GHG footprint was calculated by dividing the CO_2 emissions by 0.95. As shown in Table 4.7-24 (Estimated GHG Emissions from Vendor Trips), the total amount of GHG emissions from vendor trips during construction is a one-time emission of about 48,232 tonnes of CO_2e.

- **Demolition hauling**. Demolition hauling involves removing material from the site during demolition phases. URBEMIS assumes that each demolition hauling truck carries 20 cubic yards of material and travels 16 miles round-trip. Based on URBEMIS defaults, it is estimated that there

[248]/ The emission factor grows with the length of time the engine is off before each ignition.
[249]/ *Op. Cit*., Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle.

will be 372.0 demolition hauling trips for construction activities. The number of round-trips is multiplied by the round-trip length to determine total VMT. After total VMT for the demolition hauling for construction is calculated, CO_2 emissions from mobile running for this development can be calculated from the following equation:

CO_2 emissions from mobile running = VMT x EFHHD

Where:
VMT = vehicle miles traveled (based on 15 miles round trip distance)
EFHHD = emission factor of HDTs

The CO_2 calculation involves the following assumptions: (1) URBEMIS defaults assume that demolition hauling trips use HHTs (2) the emission factor depends upon the speed of the vehicle (the URBEMIS default value of 30 mph was used); and (3) EMFAC emission factors from the year 2009 were used for EFHHD.

Startup emissions are CO_2 emitted from starting a vehicle. Startup emissions for demolition hauling trips were calculated using the following assumptions: (1) the breakdown in vehicles was all HDTs; and (2) two engine startups per day with a 12-hour wait before each startup.[250]

Taking into account their GWPs, the USEPA recommends assuming that CH_4, N_2O, and HFCs account for 5 percent of GHG emissions from on-road vehicles.[251] To incorporate these additional GHG emissions into the calculations, the total GHG footprint was calculated by dividing the CO_2 emissions by 0.95. As shown in Table 4.7-25 (Estimated GHG Emissions from Demolition Hauling Trips), the total amount of GHG emissions from demolition hauling is a one-time emission of about 22.4 tonnes of CO_2e.

Table 4.7-26 (Estimated Overall Construction GHG Emissions) shows total one-time GHG emissions for construction, including off-road equipment, worker commuting, vendor trips, and demolition hauling to be approximately 257,552 tonnes CO_2e for the LCRSP development.

- **Uncertainties in construction GHG emissions calculations**. This analysis utilized the phase length and number of pieces of each type of construction equipment as used in the derivation of criteria pollutants. The number of worker and vendor trips represent URBEMIS default values and settings. As such, these values are somewhat uncertain.

  In addition, emissions were estimated assuming reasonable worst-day conditions (i.e., maximum equipment usage) for the entire phase duration. As a result, the emission estimates presented are conservative.

[250]/ The emission factor grows with the length of time the engine is off before each ignition.
[251]/ *Op. Cit*., Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle.

Table 4.7-18
CO_2 SEQUESTRATION CHANGE DUE TO LAND-USE CHANGE

Vegetation Type[1]	IPCC Designation[2]	IPCC Sub qualification	Tons Dry Matter Carbon/Acre[3]	Sequestered CO_2 / Acre[4]	Total Impacted Area[5]	CO_2 Sequestration Capacity of Removed Vegetation
			[tonne/acre]	[tonne/acre]	[acres]	[tonne]
Scrubland	Forest Land	Scrub	3.9	14.3	1,356.3	19,400
GRAND TOTAL			3.9	14.3	1,356.3	19,400

Notes:
1. Land types shown here represent vegetation that will be potentially removed upon development.
2. Land types are mapped to generalized IPCC Land Designations (IPCC 2006).
3. Dry matter carbon per acre was determined from information contained in Table 4-2.
4. It is conservatively assumed that all carbon is eventually converted into CO_2. Multiply the mass of carbon by 3.67 to calculate the final mass of CO_2 (the molecular mass of CO_2 / the molecular mass of carbon is 44/12 or 3.67).
5. Data provided by Lytle Development Company. A positive number indicates the amount of land removed and a negative number indicates that this land type is added.

Sources:
Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm
Lytle Creek Ranch Specific Plan, December 2008.

Source: Environ International Corporation

Table 4.7-19
CARBON PER ACRE FOR IPCC LAND TYPES

IPCC Designation	Sub qualification	Above Ground Biomass[1] [tonne d.m./acre]	Ratio of Above Ground / Below Ground Biomass[2]	Total Biomass [tonne d.m./Hectare]	Total Biomass[3] [tonne d.m./acre]	Tonnes Dry Matter Carbon/Acre[4] [tonne/acre]
Forest Land	Scrub	5.7	2.17	20.5	8.3	3.9
Forest Land	Trees	52.6	4.35	159.9	64.7	30.4

Notes:
1. Numbers listed are used in conjunction with above ground/below ground ratios to calculate total biomass per acre. Values from source converted to tonne/acre.
2. This value is used to calculate total biomass when data for the total biomass is not available for a particular land type.
3. Total biomass is either 1.) Listed directly in the IPCC protocol, or 2.) Calculated from above ground biomass and the Above Ground / Below Ground biomass ratios as follows: Total = Above + (Above / [Above:Below Ratio]). Values from source converted to tonne/acre as necessary.
4. Total biomass multiplied by carbon fraction in plant material (0.47) to calculate carbon content. From IPCC (2006), default value for Forest Land (Table 4.3 of IPCC).

Abbreviations:
d.m. - dry mass

Sources:
Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm

Source: Environ International Corporation

Table 4.7-20
CO^2 SEQUESTRATION CAPACITY OF NEW VEGETATION PLANTINGS

Vegetation Species[1]	IPCC Species Class Designation	Sequestered CO_2 / Unit[2] [tonne/unit/year]	Unit	Total Quantity of New Vegetation[1]	Unit	CO_2 Sequestration Capacity of New Vegetation[3] [tonne]
Pine	Pine	0.032	trees	8,000	trees	5,120
Miscellaneous	Miscellaneous Trees	0.035	trees	22,000	trees	15,400
Total	-	-		**30,000**	**trees**	**20,520**

Notes:

1. Site-specific planting data provided by Lytle Development Company.
2. Species class-specific sequestration values are provided in Table 8.2 of "2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4". For species that do not appear in Table 8.2, the species was classifed as "miscellaneous" and the average value of all listed data was used.
3. An active growing period of 20 years was assumed for the new trees planted.

Sources:

Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm

Source: Environ International Corporation

Table 4.7-21
CHANGE IN CO_2 SEQUESTRATION DUE TO LAND-USE CHANGES AND NEW VEGETATION PLANTING

CO_2 Sequestration Capacity of Vegetation	CO_2 Sequestration Capacity of New Vegetation	Net Change in CO_2 Sequestration Capacity[1]
[tonne]	[tonne]	[tonne]
-19,400	20,520	1,120

Notes:
1. A positive value represents an increase in sequestration capacity and thus a net reduction in CO_2.

Source: Environ International Corporation

Table 4.7-22
ESTIMATED GHG EMISSIONS FROM CONSTRUCTION EQUIPMENT

Equipment	Total Number of Equipment[1]	Total equipment hours[1]	Horsepower[3]	Load factor[3]	Emission factor[3] (g/bhp-hr)	CO_2 emissions[4,5] (tonnes)
Scrapers	48	383,829	313	0.72	568.3	49,158
Aerial Lifts	8	91,474	60	0.46	568.3	1,435
Rubber Tired Loaders	11	95,537	164	0.54	568.3	4,808
Air Compressors	7	68,874	106	0.48	568.3	1,992
Water Trucks	17	141,977	189	0.5	568.3	7,625
Forklifts	16	188,000	145	0.3	568.3	4,648
Mixers	9	111,674	10	0.56	568.3	355
Pavers	2	23,486	100	0.62	568.3	828
Rollers	10	108,526	95	0.56	568.3	3,281
Rubber Tired Dozers	19	148,943	357	0.59	568.3	17,829
Graders	40	308,377	174	0.61	568.3	18,601
Paving equipment	10	108,526	104	0.53	568.3	3,400
Tractors/Loaders/Backhoes	35	330,331	108	0.55	568.3	11,151
Cranes	5	55,651	399	0.43	568.3	5,426
Generator sets	10	115,303	49	0.74	568.3	2,376
Welders	10	115,303	45	0.45	568.3	1,327
Other General Industrial Equipment	6	63,846	238	0.51	568.3	4,404
Concrete Industrial Saws	5	64,703	10	0.73	568.3	268
Skid Steer Loaders	2	33,383	44	0.55	568.3	459
Total						**139,370**

Notes:

1. The lists of equipment during construction were provided by PCR Services as URBEMIS input files.
2. The equipment-hour of individual equipment is calculated based on the phase duration. ENVIRON assumes that all equipment operate 8 hours a day and five days a week during the corresponding phases duration indicated in the URBEMIS input files.
3. The values of Horsepower, Load Factor, and Emission Factor of each type of equipment are from URBEMIS and OFFROADS2007 defaults.
4. The CO_2 Emission calculation formula for each piece of equipment is:
   CO_2 Emission = Equipment Hours x HP x Load Factor x Emission Factor x Unit Conversion Factor
5. Assume $CO_2 = CO_2e$ because the contribution of CH_4 and N_2O to overall GHG emissions is likely small (< 1% of total CO_2e) from diesel construction equipment.

Abbreviations:

bhp - break horsepower
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
g - gram
GHG - Greenhouse Gas
hr - hour

Source: Environ International Corporation

Table 4.7-23
ESTIMATED GHG EMISSIONS FROM WORKER COMMUTES

Year	Number of Worker One-Way Trips[1]	Total Worker VMT[2]	$EF^{3,7}_{LDA}$		$EF_{LDT1}^{4,7}$		$EF_{LDT2}^{4,7}$		Emission factor		CO_2 emissions[5]		Total CO_2 Emissions[6]	Total CO_2e Emissions[6]
			Running	Startup	Running	Startup	Running	Startup	Running	Startup	Running	Startup		
		miles/year	(g/mile)	(g/trip)	(g/mile)	(g/trip)	(g/mile)	(g/trip)	(g/mile)	(g/start)	tonnes			
2009	152,598	1,937,995	342	210	421	247	424	259	382	232	741	35	776	817
2010	662,908	8,418,929	342	210	421	247	424	259	382	232	3,217	154	3,370	3,548
2011	805,063	10,224,306	342	210	421	247	424	259	382	232	3,907	186	4,093	4,309
2012	1,507,134	19,140,599	342	210	421	247	424	259	382	232	7,314	349	7,663	8,066
2013	1,627,697	20,671,755	342	210	421	247	424	259	382	232	7,899	377	8,276	8,711
2014	1,627,697	20,671,755	342	210	421	247	424	259	382	232	7,899	377	8,276	8,711
2015	1,548,952	19,671,693	342	210	421	247	424	259	382	232	7,517	359	7,875	8,290
2016	1,395,921	17,728,203	304	210	375	247	378	259	340	232	6,029	323	6,352	6,687
2017	1,387,856	17,625,772	304	210	375	247	378	259	340	232	5,994	321	6,315	6,648
2018	1,267,030	16,091,277	304	210	375	247	378	259	340	232	5,472	293	5,766	6,069
2019	1,104,807	14,031,049	304	210	375	247	378	259	340	232	4,772	256	5,027	5,292
2020	419,303	5,325,150	273	210	337	247	339	259	306	232	1,628	97	1,725	1,816
2021	135,584	1,721,913	273	210	337	247	339	259	306	232	526	31	558	587
2022	0	0	273	210	337	247	339	259	306	232	0	0	0	0
2023	0	0	273	210	337	247	339	259	306	232	0	0	0	0
2024	38,884	493,821	273	210	337	247	339	259	306	232	151	9	160	168
2025	48,347	614,006	273	210	337	247	339	259	306	232	188	11	199	209
Total	**13,729,781**	**174,368,222**									**63,252**	**3,180**	**66,432**	**69,928**

Notes:

1. Worker trips were calculated for all Demolition, Grading and Paving phases as follows:
   a. Operation hours for each piece of machine = 8 hr per day
   b. Number of working days for each type of equipment = total hours of operation / 8hr per day
   c. One-way trips per worker per working day = 2
   d. Worker One-way Trips = Number of working days x 1.25

   Worker one-way trips during the building construction phase are calculated based on four general land use categories: multifamily, single-family, commercial/retail/school/recreation and office/industrial. The total daily trips are the sum of the following:
   i. 0.36* # multifamily units
   ii. 0.72 * # single-family units
   iii. 0.32 *(commercial/retail/school/recreation square ft)/1000
   iv. 0.42 * (office/industrial square ft)/1000

   Worker one-way trips for Coating phase are 20% of the worker one-way trips for Building Construction Phase.
2. Vehicle Miles Traveled = Worker One-way Trips x 12.7 miles per one-way trip, based on URBEMIS default.
3. The running emission factor depends on the speed of the vehicle. The emission factor used in this calculation refers to the URBEMIS 9.2.4 default vehicle speed: 30 MPH.
   The startup emission factor depends on the settling period before driving. The startup emissions were conservatively calculated based on a 12 hour wait before each engine startup.
4. LDT1: up to 6000 GVW; LDT2: up to 8500 GVW
5. GHG Running Emission calculation formula: GHG Emission = VMT x ($0.5 \times EF_{LDA} + 0.25 \times EF_{LDT1} + 0.25 \times EF_{LDT2})_{Running}$
   GHG Startup Emission calculation formula: GHG Emission = Worker Trips x ($0.5 \times EF_{LDA} + 0.25 \times EF_{LDT1} + 0.25 \times EF_{LDT2})_{Startup}$
   URBEMIS 9.2.4 assumes that LDA and LDT have a 50:50 mixing ratio.
6. $CO_2e = CO_2 / 0.95$: The United States Environmental Protection Agency (USEPA) recommends assuming that CH_4, N_2O, and HFCs account for 5% of GHG emissions from on-road vehicles, taking into account their global warming potentials.
7. The running emission factor values have been adjusted to account for reductions resulting from the Pavley standards. No changes to the starting emission factors were made. According to ARB, CO_2e emissions from light-duty vehicles would be reduced by 11% relative to 2002 in 2016, and by 20% relative to 2002 in 2020. For this analysis, reductions were taken relative to estimated emissions for 2009 instead of 2002, which provides a conservative estimate. ENVIRON also conservatively assumed that no reductions would take place from 2009 through 2015, and that no changes in emission factors would occur between 2016 and 2019

Abbreviations:
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
g - gram
GHG - Greenhouse Gas
EF - Emission Factor
GVW - Gross Vehicle Weight
HFC - hydro fluorocarbons
hr - hour
LDA - Light Duty Auto
LDT - Light Duty Truck
MPH: miles per hour
N_2O: nitrous oxide
MPH - Miles per hour
URBEMIS - Urban Emissions Model
VMT - Vehicle Miles Traveled

Source: Environ International Corporation

Table 4.7-24
ESTIMATED GHG EMISSIONS FROM VENDOR TRIPS

Construction sub-phase	# Vendor trips	Total vendor VMT	EF^{3}_{HHD}		CO_2 Emissions[4]		Total CO_2	Total CO_2e
		miles/year	Running	Startup	Running	Startup	Emissions	Emissions[5,6]
			(g/mile)	(g/trip)	tonnes			
Building construction	1,803,168	23,982,140	1,905	75	45,686	135	45,821	48,232

Notes:

1. Vendor trips only occur during the building construction phase, and they are calculated based on four general land use categories: multifamily, single-family, commercial/retail/school/recreation and office/industrial. The total daily trips are the sum of the following:
   i. 0.11* # multifamily units
   ii. 0.11 * # single-family units
   iii. 0.05 *(commercial/retail/school/recreation square ft)/1000
   iv. 0.38 * (office/industrial square ft)/1000
2. Vehicle Miles Traveled = Vendor One-way Trips x 13.3 miles per one-way trip , based on URBEMIS default.
3. The running emission factor depends on the speed of the vehicle. The emission factor used in this calculation refers to the URBEMIS 9.2.4 default vehicle speed: 30 MPH.
   The startup emission factor depends on the settling period before driving. The startup emissions are conservatively calculated based on a 12 hour wait before each engine startup.
4. URBEMIS 9.2.4 assumes that all vendors drive heavy-heavy-duty trucks.
   CO_2 Running Emission calculation formula: CO_2 Emission = VMT x $EF_{HHD\text{-}Running}$
   CO_2 Startup Emission calculation formula: CO_2 Emission = Vendor Trips x $EF_{HHD\text{-}Startup}$
5. $CO_2e = CO_2 / 0.95$: The United States Environmental Protection Agency (USEPA) recommends assuming that CH_4, N_2O, and HFCs account for 5% of GHG emissions from on-road vehicles, taking into account their global warming potentials.
6. The emission factor values of 2009, the anticipated start date of the project, are used for all calculations.

Abbreviations:
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
g - gram
GHG - Greenhouse Gas
EF - Emission Factor
GVW - Gross Vehicle Weight
HFC - hydro fluorocarbons
hr - hour
LDA - Light Duty Auto
LDT - Light Duty Truck
MPH: miles per hour
N_2O: nitrous oxide
MPH - Miles per hour
URBEMIS - Urban Emissions Model
VMT - Vehicle Miles Traveled

Source: Environ International Corporation

Table 4.7-25
ESTIMATED GHG EMISSIONS FROM DEMOLITION HAULING TRIPS

Construction sub-phase	Demolition Hauling Round Trips[1]	VMT[2]	EF^{3}_{HHD}		CO_2 Emissions[4]		Total CO_2 Emissions	Total CO_2e Emissions[5,6]
			Running	Startup	Running	Startup		
		(miles)	(g/mile)	(g/trip)	tonnes			
Demolition	372	11,160	1,905	75	21	0	21	22

Notes:

1. Demolition hauling trips only occur during the demolition phase, and they are calculated based on URBEMIS defaults which assume a 20 cubic yard truck driving 30 miles round trip per day. URBEMIS estimates 12 round trips per day for this phase.
2. Vehicle Miles Traveled = Demolition Hauling Trips x 30 miles per roundtrip.
3. The running emission factor depends on the speed of the vehicle. The emission factor used in this calculation refers to the URBEMIS 9.2.4 default vehicle speed: 30 MPH.
   The startup emission factor depends on the settling period before driving. The startup emissions are conservatively calculated based on a 12 hour wait before each engine startup.
4. URBEMIS 9.2.4 assumes that all demolition haulers drive heavy-heavy-duty trucks.
   CO_2 Running Emission calculation formula: CO_2 Emission = VMT x $EF_{HHD\text{-}Running}$
   CO_2 Startup Emission calculation formula: CO_2 Emission = Demolition Hauler Trips x $EF_{HHD\text{-}Startup}$
5. $CO_2e = CO_2 / 0.95$: The United States Environmental Protection Agency (USEPA) recommends assuming that CH_4, N_2O, and HFCs account for 5% of GHG emissions from on-road vehicles, taking into account their global warming potentials.
6. The emission factor values of 2009, the anticipated start date of the project, are used for all calculations.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
g - gram
GHG - Greenhouse Gas
EF - Emission Factor
GVW - Gross Vehicle Weight
HFC - Hydro Fluorocarbons
HHD - Heavy-Heavy Duty
hr - hour
MPH - Miles per hour
N_2O - nitrogen dioxide
URBEMIS - Urban Emissions model
VMT - Vehicle Miles Traveled

Source: Environ International Corporation

Table 4.7-26
ESTIMATED OVERALL CONSTRUCTION GHG EMISSIONS

Location	Construction Equipment	Worker Commuting	Vendor Commuting	Demolition Hauling	Total GHG Emissions
	(tonnes CO_2e)				
Lytle Creek	139,370	69,928	48,232	22	257,552

Notes:
1. See previous tables for calculation detail. The table includes emissions from construction equipment, worker commuting, vendor commuting, and demolition hauling.

Abbreviations:
CO_2e - carbon dioxide equivalent
GHG - Greenhouse Gas

Source: Environ International Corporation

Table 4.7-27
EMISSION FACTORS FOR DIFFERENT ENERGY SOURCES FOR BUILDINGS

Energy Source	Scenario	lb CO_2/source unit	Source Units
Natural Gas[1]	-	117.0	(MBTU)
Electricity[2]	without RPS	0.631	(kW-hr)
	2010 RPS (20%)	0.583	
	2020 RPS (33%)	0.488	

Derivation of GHG Emissions from Renewable Power Standards

Renewable Energy Source[3]	Energy Delivered[3] [million kWh]	Percentage of Renewable Energy Delivered [%]
Wind	2,359	21%
Small hydro	449	4%
Biogas	0	0%
Solar	0	6%
Biomass	786	7%
Geothermal	6,965	62%
Total[4]	11,234	100%
% of Total Energy From Renewables[3]	13%	
% of Total Energy From Non-Renewables	87%	
Total Energy Delivery[4]	83,958,770	MWh
from renewables	11,234,288	MWh
from non-renewables	72,724,482	MWh
CO2 Emissions per Total Energy Delivered[5]	630.9	lbs CO2/MWh delivered
Total CO2 Emissions[5]	24,026,108	metric tonnes CO2
CO2 Emissions per Total Non-Renewable Energy[6]	728.34	lbs CO2/MWh delivered
Estimated Emission Factors for Total Energy Delivered[7]		
2010 RPS (20%)	582.7	lbs CO2/MWh delivered
2020 RPS (33%)	488.0	lbs CO2/MWh delivered

Notes:

1. Emission factor for natural gas was obtained from California Climate Action Registry Reporting Protocol, Table C6.

2. Emission factors as derived below.

3. The renewable energy portfolio for Southern California Edison. The renewable energy distribution is based on 2008 data available at: http://www.sce.com/PowerandEnvironment/renewables/

4. Total energy value and emission factor reported for 2007 by Southern California Edison in California Climate Action Registry. Available at: http://www.climateregistry.org/CarrotDocs/26/2007/SCEPUP07r3.xls

5. The amount of CO2 emissions is provided in Southern California Edison's Power/Utility Protocol (PUP) Report for 2007 available at: http://www.climateregistry.org/CarrotDocs/26/2007/SCEPUP07r3.xls

6. The emissions metric presented here is calculated based on the total CO2 emissions divided by the energy delivered from non-renewable sources.

7. The emission factors for total energy delivered are estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO2 emissions per total non-renewable energy metric calculated above. Two emission factors are presented here for the current 20% RPS goal for 2010 and th presumed 33% RPS for 2020. The estimate provided here and the 2007 PUP report issued by Southern California Edison assume that renewable energy sources do not result in any CO2 emissions. This is not necessarily true for biogas- and biomass-sourced energy but some consider these sources to be "carbon neutral."

Abbreviations:
CO_2 = carbon dioxide
kW-hr - kilowatt-hour
lb - pound
MBTU - million British thermal units
RPS - Renewables Portfolio Standard
MWh = Megawatt-hour
PUP = Power/Utility Protocol

Sources:
California Climate Action Registry General Reporting Protocol, Version 3.1 (January 2009). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

California Climate Action Registry Database: Southern California Edison Company 2007 PUP Report. 2008. Available a https://www.climateregistry.org/CARROT/public/Reports.aspx

Source: Environ International Corporation

◊ **GHG emissions associated with residential buildings**. Residential buildings include single-family homes, attached homes, apartments, and condominiums. This section describes the methods used to estimate the GHG emissions associated with activities in those buildings.

The amount of energy and, therefore, the amount of associated GHG emissions emitted per dwelling unit will vary with the type of residential building. The major types of residential buildings are single-family detached (3,409 dwelling units), single-family attached (3,673 dwelling units), and multi-family attached (1,325 dwelling units) units.

GHG emissions are emitted as a result of activities in residential buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere (when this occurs in a residential building, it is a direct emission source[252] associated with that building). GHG emissions are also emitted during the generation of electricity from fossil fuels. When electricity is used in a residential building, the electricity generation typically takes place off the site at the power plant (electricity use in a residential building generally causes emissions in an indirect manner).

While fuel combustion generates CH_4 and N_2O, the emissions of these GHG emissions typically comprise less than 1 percent of CO_2e emissions from electricity generation and natural gas consumption.[253] Fuel oil, kerosene, liquefied petroleum gas, and wood can also be used as fuels but will likely contribute only in small amounts as combustion sources within residential buildings. Wood burning hearths are addressed under “area sources” below.

Energy use in residential buildings is divided into: (1) energy consumed by the built environment; and (2) energy consumed by uses that are independent of the construction of the building (such as plug-in appliances). In California, Title 24, Parts 1-6 of the CCR (Title 24) governs energy consumed by the built environment, including the heating, ventilation and air conditioning (HVAC) system, water heating, and some fixed lighting. Non-building or “plug-in” energy use can be further subdivided by specific end-uses (such as refrigeration, cooking, and lighting). For the purpose of this analysis, energy use associated with each end use was separately calculated. The resulting energy use quantities were then converted to GHG emissions by multiplying by the appropriate emission factors, incorporating information on local electricity production.[254]

California's renewable portfolio standard (RPS) requires retail suppliers of electric services to increase procurement from eligible renewable energy resources until they reach 20 percent by 2010. California Executive Order S-14-08 mandates a further increase in procurement from eligible renewable energy resources to 33

[252]/ *Op. Cit*., General Reporting Protocol, Version 3.0, Chapter 8.

[253]/ *Ibid*., Tables C1 and C2. The methane and nitrous oxide emission factors are negligible compared to the total CO_2 emission factor for electricity generation in California.

[254]/ The SCE-specific emission factor for electricity deliveries is 641 pounds CO_2/MWh. Although this emission factor accounts for only CO_2, the emissions associated with N_2O and CH_4 contribute to less than 1 percent of the electricity generation CO_2e emissions.

percent by 2020. The analysis conservatively assumed that 20 percent of the electricity would be from renewable resources, consistent with the currently enacted law. The resulting reduction in the emission factor for SCE was calculated as outlined in Table 4.7-27 (Emission Factors for Different Energy Sources for Buildings) and applied to these calculations. The emission reductions that would result from a RPS of 33 percent were California Executive Order S-14-08 to become law was also calculated for illustrative purposes.

In this analysis, the units CO_2 and CO_2e are used interchangeably for residential buildings because CH_4 and N_2O are assumed to contribute a negligible amount of GWP when compared to the CO_2 emissions from residential buildings.

- **Residential energy use intensity**. CO_2 intensity values (i.e., CO_2 emissions per dwelling unit per year) were developed for the residential building types proposed to be developed using the United States Department of Energy - Energy Information Administration's (EIA) 2005 "Residential Energy Consumption Survey" (RECS) database[255] and estimation methods presented in the NREL's BARBD.[256] Three building types representative of the proposed project's planned residences were evaluated (i.e., single-family detached, single-family attached, and multi-family units in buildings with five or more units). The methods that were used and the assumptions that were made in estimating energy use are described below.

  - **Energy use in the built environment**. New Californian homes must be designed to meet building energy-efficiency standards (Title 24). Compliance with Title 24 is determined from the total daily valuation (TDV) of energy use in the built-environment (on a per square foot per year basis). The regulated energy uses include space heating and cooling, domestic hot water heating, and hard-wired lighting. TDV energy use is a parameter that reflects the burden that a building imposes on an electricity supply system. In general, there is a larger electricity demand and, hence, higher stress on the supply system during the day (peak times) than at night (off peak times). To account for this variation, the calculation of TDV assigns different weights for energy used at different times. For example, a building that uses a given amount of electricity during the peak mid-day period will have a higher TDV value than a building using an equivalent amount of electricity during off-peak hours. Title 24 determines compliance by comparing the energy use of a modeled (proposed) home to a minimally Title 24-compliant "standard home" of equal dimensions. Title 24 focuses on building energy efficiency per square foot and places no limits upon the size of the house or the actual energy used per dwelling unit.

[255]/ United States Department of Energy, Energy Information Administration, Public Use Microdata, accessed June 16, 2009 (http://www.eia.doe.gov/emeu/recs/contents.html).

[256]/ Hendron, Robert, Building America Research Benchmark Definition, Updated December 20, 2007, National Renewable Energy Laboratory Technical Report, NREL/TP-550-42662, January 2008 (http://apps1.eere.energy.gov/buildings/publications/pdfs/building_america/42662.pdf).

The EIA's 2005 RECS database was used to determine annual energy use for Title 24-regulated uses (space heating, space cooling, and domestic hot water systems). Estimates for hard-wired lighting are separately discussed below. Energy use estimates for this analysis are based on 2005 RECS data that was filtered by state, square footage, and dwelling type. It is important to note, however, that the RECS dataset is comprised of mostly older buildings, which are typically less energy efficient (on a per square foot basis) than newer buildings constructed to meet increasingly stricter energy-efficiency standards. Although many of the homes in the RECS database are likely less energy efficient than Title 24-compliant buildings, the energy use estimates were used to represent 2001 Title 24-compliant homes. The Title 24 standards have been updated twice (in 2005 and again in 2008) since the RECS study and the CEC has published reports estimating the percentage deductions in energy use resulting from these new standards.[257,258] Because new buildings associated with the proposed project would conform to the most updated (and most stringent) standards, the analysis accounted for the impact of the Title 24 updates by deducting the estimated percentage savings from the RECS energy use estimates.

The 2005 RECs database analysis provides annual electricity use for the heating and cooling system and annual natural gas usage for both the heating and domestic hot water (DHW) systems per building. HVAC electricity use and natural gas use values are presented in Table 4.7-28 (Energy Use per Residential Dwelling Unit: Title 24-Regulated Heating and Cooling). Built-in lighting covered by Title 24 was calculated using values from BARBD for hard-wired lighting.

Title 24-compliant electricity use on a per dwelling unit basis is 3,418 kilowatt hours (kWh) per year for single-family detached homes, 2,662 kWh per year for single-family attached homes, and 2,825 kWh per year for multi-family units. Natural gas use for Title 24 uses in Title 24-compliant residences on a per dwelling unit basis is 41 million British thermal units (MBtu) per year for single-family detached homes, 18 MBtu per year for single-family attached homes, and 17 MBtu per year for multi-family units.

The Applicant has committed to making all new homes 15 percent more energy efficient than 2008 Energy-Efficiency Standards requirements (on a TDV basis). Although annual energy and TDV energy do not necessarily scale linearly with each other, this

[257]/ California Energy Commission, Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings, 2003 (http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF).

[258]/ California Energy Commission, Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings, 2007 (http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF).

analysis assumes that all sources covered by Title 24 would uniformly use 15 percent less annual energy. These calculations are shown in Table 4.7-28 (Energy Use per Residential Dwelling Unit: Title 24-Regulated Heating and Cooling).

For each dwelling type, the Title 24-compliant energy use was calculated with RECS database and BARBD, as described above. These energy use numbers were then each multiplied by 0.85 to account for the Applicant's commitment to a 15 percent energy-efficiency improvement over 2008 Energy-Efficiency Standards. This improvement over 2008 Energy-Efficiency Standards energy standards reduces the electricity use to 3,146 kWh per year for single-family detached homes, 2,421 kWh per year for single-family attached homes, and 2,566 kWh per year for multi-family units. For natural gas, this improvement over 2008 Energy-Efficiency Standards reduces usage on a per dwelling unit basis to 37 MBtu per year for single-family detached homes, 16 MBtu per year for single-family attached homes, and 16 MBtu per year for multi-family units. Because Title 24 does not address the plug-in energy use, this improvement over 2008 Energy-Efficiency Standards was not applied to appliances and plug-in lighting. The calculations for major appliances and plug-in energy use are separately discussed below.

- **BARBD (major appliances)**. Major household appliances such as refrigerators, clothes washers and dryers, dishwashers, and cooking ranges are typically provided with a new residential unit. As a result, the developer/builder has influence on the energy performance of these items. The energy use for these major appliances was estimated using guidance from the NREL's BARBD model. This technical manual presents empirical equations for electricity usage derived using data from the 2001 RECS. The electricity usage of the major appliances was estimated using equations based on the number of bedrooms per dwelling unit. The exception is refrigerator energy use, which was set to one value for all residence types, because it was assumed not to be influenced by the floor area or number of bedrooms of the dwelling unit. For dryers and cooking ranges, which can be either gas or electric, it is assumed that 50 percent of the houses will use electric and 50 percent will use natural gas appliances; therefore, values provided represent 50 percent of natural gas usage for natural gas models and 50 percent electricity usage for both electric and natural gas (if applicable) models.

  Table 4.7-29 (Energy Use per Residential Dwelling Unit: Appliances and Plug-Ins) summarizes the estimated major appliance energy use for the three residential dwelling types. The annual electricity use of major appliances is 1,828 kWh per year for single-family detached homes, 1,738 kWh for single-family attached homes, and 1,560 kWh per year for multi-family units. In

addition the annual natural gas use of major appliances is 5.3 MBtu per year for single-family detached homes, 4.9 MBtu per year for single-family attached homes, and 4.1 MBtu per year for multi-family units.

The Applicant has committed to requiring Energy Star appliances for all major appliances rated by Energy Star in newly built residences when the developer/builder supplies appliances with the new home. This includes refrigerators, dishwashers, and clothes washers. There is no Energy Star rating for dryers at this time since there is no considerable difference in energy use between different dryer models. Energy Star ratings also are not available for cooking ranges. The average energy improvement for Energy Star rated appliances over standard appliances as reported in Energy Star Annual Report was used to determine the percent reduction in energy use from major appliances.

Table 4.7-30 (Estimated Energy Use per Residential Dwelling Unit) shows the calculations for the improvement in energy use from the Applicant's commitment to a 15 percent improvement over 2008 Energy-Efficiency Standards and commitment to requiring Energy Star major appliances where available. This results in a 12-percent reduction in electricity use from Energy Star and an average combined electricity savings of 16.6 percent.

✧ **BARBD (plug-in energy use)**. Additional energy use from loads such as plug-in lighting, office equipment, plug-in cooking equipment, and electronics are also part of the anticipated energy use for a residential development. Similar to major appliances, energy use values for plug-in appliances, lighting, and miscellaneous energy loads (MELs) were estimated using guidance from NREL's BARBD. Plug-in lighting energy use was estimated based on the finished floor area, whereas the electricity usage for miscellaneous energy loads (e.g., home entertainment devices, computers, small kitchen appliances) were determined by equations involving the number of bedrooms, finished floor area, and a California-specific load multiplication factor.

Table 4.7-29 (Energy Use per Residential Dwelling Unit: Appliances and Plug-Ins) summarizes the estimated plug-in energy use for each residence dwelling type. The annual electricity use for plug-in appliances, lighting, and MELs (on a per dwelling unit per year basis) is 1,058 kWh for single-family detached homes, 812 kWh for single-family attached homes, and 737 kWh for multi-family units. Table 4.7-28 (Energy Use per Residential Dwelling Unit: Title 24-Regulated Heating and Cooling) summarizes the combined energy use including the Title 24-compliant systems, major appliances, and plug-ins. It should be noted that the residential plug-in energy-use values are likely overestimates. The estimates are based upon currently available

technologies, which are likely less energy-efficient than future equipment models. If future project residents install Energy Star appliances, use more energy-efficient equipment, and replace incandescent lights with fluorescent lights, the actual electricity use for plug-ins will be lower than the estimates presented herein. Conversely, future residents may have more small plug-ins (e.g., MP3 players, cell phones, miscellaneous equipment) that could offset the savings from more energy-efficient equipment; however, because refrigerators, lighting, and large appliances contribute to the bulk of the electricity load, and these types of equipment will likely improve in energy efficiency in the future, the estimates presented here are still likely overly conservative.

- **Estimate of annual GHG emissions from residential buildings**. Energy use data from Table 4.7-30 (Estimated Energy Use per Residential Dwelling Unit) were multiplied by the emission factors in Table 4.7-27 (Emission Factors for Different Energy Sources for Buildings) to generate CO_2 intensity values (i.e., CO_2 emissions per dwelling unit) for each building type. Emission factors taking into account reductions from a 20 percent RPS were used. In comparison, Table 4.7-31 (CO_2e Emissions per Dwelling Unit with 2020 Renewable Portfolio Standards) shows the reductions in CO_2 intensity that would be achieved if the 33 percent RPS for 2020 (per Executive Order S-14-08) were implemented.

  The developer/builder has control over energy use for the built environment and the initial major appliances. As shown in Table 4.7-32 (Estimated CO_2e Emissions per Dwelling Unit), the homes that are 15 percent more energy efficient than 2008 Energy-Efficiency Standards have lower CO_2 emissions. When combined with Energy Star appliances, the single-family detached homes, single-family attached homes, and multi-family units emit 22 percent less CO_2 per year than standard homes for the built environment and major appliances. When plug-in loads are considered, the single-family detached homes, single-family attached homes and multi-family units emit 18 percent less CO_2 per year than the Title 24- compliant homes without Energy Star appliances.

  Table 4.7-33 (CO_2e Emissions from Electricity and Natural Gas Usage in Residential Dwelling Units) shows the yearly CO_2 emissions from the proposed project by incorporating the emission factors from Table 4.7-32 (Estimated CO_2e Emissions per Dwelling Unit), and the number of dwelling units for each residential dwelling type for Title 24-compliant systems. In contrast, Table 4.7-34 (CO_2e Emissions from Electricity and Natural Gas Usage in Residential Dwelling Units with 2020 Renewable Portfolio Standards) shows the CO_2 emissions from residential energy taking into account the 33 percent RPS for 2020 described in Executive Order S-14-08.

  Total CO_2 emissions from Title 24-complaint systems would be 19,789 tonnes per year without improvements over Title 24 energy efficiency and without renewable energy. Specifically, the single-family detached homes

would emit 11,816 tonnes per year, single-family attached homes would emit 5,695 tonnes per year, and the multi-family units (1,325 dwelling units) would emit 2,279 tonnes per year. With 15 percent improvements over 2008 Energy-Efficiency Standards, the annual CO_2 emissions would be reduced to 10,709 tonnes (2.4 tonnes/dwelling unit) for single-family detached homes, 5,149 tonnes (1.3 tonnes/dwelling unit) for single-family attached homes, and 2,097 tonnes (1.3 tonnes/dwelling unit) for multi-family units. The total emissions in this scenario would be 17,955 tonnes per year, which represents a 17 percent reduction in GHG emissions.

Table 4.7-33 (CO_2e Emissions from Electricity and Natural Gas Usage in Residential Dwelling Units) shows the combined yearly CO_2 emissions from Title 24-compliant systems and major appliances for each building type. Total CO_2 emissions would be 26,208 tonnes per year without improvements over 2008 Energy-Efficiency Standards and with standard major appliances. Specifically, the single family detached homes would emit 14,826 tonnes per year, the single-family attached homes would emit 8,225 tonnes per year, and the multi-family units (1,325 dwelling units) would emit 3,158 tonnes. With 15 percent improvements over 2008 Energy-Efficiency Standards and Energy Star appliances, annual CO_2 emissions would be reduced to 13,720 tonnes (3.1 tonnes/dwelling unit) for single-family detached homes, 7,679 tonnes (1.9 tonnes/dwelling unit) for single-family attached homes, and 2,975 tonnes per year (1.9 tonnes/dwelling unit) for multi-family units. The total emissions in this scenario would be 24,374 tonnes per year, which represents a 16 percent reduction in GHG emissions.

Table 4.7-33 (CO_2e Emissions from Electricity and Natural Gas Usage in Residential Dwelling Units) shows the yearly CO_2 emissions from the proposed project by incorporating the aforementioned emission factors and the number of dwelling units for each building type for Title 24-compliant systems and all plug-in energy. Total CO_2 emissions would be approximately 28,397 tonnes per year without improvements over Title 24 and without renewable energy. Specifically, the single-family detached homes would emit about 15,959 tonnes per year, the single-family attached homes about 9,002 tonnes per year, and the multi-family units about 3,437 tonnes. With 15 percent improvements over 2008 Energy-Efficiency Standards, Energy Star appliances, and without renewable energy, annual CO_2 emissions would be reduced by approximately 14,853 tonnes (4.0 tonnes/dwelling unit) for single-family detached homes, 8,456 tonnes (2.5 tonnes/dwelling unit) for single-family attached homes, and 3,254 tonnes per year (2.5 tonnes/dwelling unit) for multi-family units. The total emissions in this scenario would be 21,851 tonnes per year, representing an 18 percent reduction in GHG emissions.

These CO_2 emission estimates do not take into account the State's requirement for developers/builders to offer solar panels as an option to homeowners. It is unknown how many future homeowners will chose this option, therefore, while the exact reduction in CO_2 emissions due to this

feature cannot be quantified it will decrease the CO_2 emissions for those residential buildings that choose to install renewable energy.

- **Uncertainties in residential building GHG calculations**. Several factors lead to uncertainties with regards to GHG emission from residential building. It is, however, believed that these uncertainties result in conservative estimates of the GHG emissions for the residential buildings associated with the proposed project. These uncertainties include, but may not be limited to the following:

  - Energy use will vary considerably depending upon home design. Residential units will vary considerably in size, layout, and overall design. Energy use estimates for a given dwelling type were calculated using RECS data for a range of dwelling sizes centered around the average square footage of each dwelling type.

  - Built environment energy use will vary considerably depending upon the homeowners' habits regarding energy use. For instance, homeowners determine the set point of thermostats, the duration of showers, and the usage of air conditioning, among other things. The Applicant will have little, if any, influence over these choices. Current median behavior attributes were assumed herein. To the extent that individuals are becoming more energy conscious, this will tend to overestimate energy use in the future.

  - Plug-in energy use will also vary considerably depending upon the appliances, lights, and other plug-ins installed by the homeowner. The Applicant will have little, if any, influence over these choices. Current median behavior attributes were represented herein. To the extent that individuals are becoming more energy conscious or appliances are becoming more energy efficient, the estimates provided here will tend to overestimate energy use in the future.

- **GHG emissions associated with non-residential buildings**. Non-residential buildings include all structures except residences that may exist in a development, such as government, municipal, commercial, retail, and office space. Presented below is a description of the methodology used to estimate the GHGs associated with activities in non-residential buildings.

  The amount of energy used and the associated GHG emissions emitted per square foot of available space vary with the type of non-residential building. For example, food stores are far more energy intensive than warehouses, which have little climate-conditioned space. For new developments, the exact types of buildings are typically unknown. As such, not all building categories that may actually exist within the LCRSP boundaries are represented below; however, all of the non-residential building area is accounted for and the accompanying tables present the differences in energy intensities from building types. The types of non-residential buildings include office, commercial, and school.

Table 4.7-28

ENERGY USE PER RESIDENTIAL DWELLING UNIT: TITLE 24-REGULATED HEATING AND COOLING

			Electricity Delivered (kW-hr/DU/year)							Natural Gas Delivered (MBTU/DU/yr)						
Type	Average Square Footage per DU[1]	RECs range[2]	Heating[3]	Cooling	RECs Total	% reduction due to 2005 standards relative to 2001[4,5]	2005 Estimated Total	% reduction due to 2008 vs. 2005 standards[6]	2008 Estimated Total	Heating[3]	Domestic Hot Water[7]	RECs total	% reduction due to 2005 standards relative to 2001[4]	2005 Estimated Total	% reduction due to 2008 vs. 2005 standards[6]	2008 Estimated Total
Single-family detached	2,585	1,350 - 3,450	188	1,303	1,491	19.8%	1,196	22.7%	924	13.3	30.7	44.1	6.7%	41.1	10%	37.0
Single-family attached	1,260	700 - 2,000	393	931	1,324	19.8%	1,062	22.7%	821	4.5	14.5	19.0	6.7%	17.8	10%	16.0
Apartment in building with 5 or more units	1,250	1,000 - 1,500	555	1,177	1,731	24.3%	1,311	19.7%	1,052	3.8	16.6	20.4	15.7%	17.2	7%	16.0

Notes:

1. Based on information provided by Lytle Development Company.

2. The 2005 survey collected data from 4,382 households nationwide in housing units statistically selected to represent the 111.1 million housing units in the United States. Only RECS data tabulated for California were considered in this analysis.
3. Homes can be heated using electricity and/or natural gas. The values shown here are averages for the dataset.
4. Reductions are taken with the assumption that the RECs estimate reflects heating/cooling/hot water electricity use for homes that are minimally compliant with 2001 Title 24 Standards.
According to the RECS database, less than 4% of California homes surveyed were built in 2000 or later. Because older homes tend to use more energy, the numbers shown here may overestimate actual energy use. At the same time, the homes included in the data sets have a range of cooling degree days and heating degree days, which affects the heating and cooling-related energy use.
5. Based on report by California Energy Commission on estimated first-year electricity savings due to 2005 standards for single-family and multi-family homes, relative to 2001 standards.
6. Based on California Energy Commission report on estimated first-year electricity savings due to 2008 standards for single-family and multi-family homes, relative to 2005 standards.
7. All domestic hot water systems are assumed to use natural gas.

Abbreviations:

DU - Dwelling Unit
kW-hr - kilowatt-hour
MBTU - million british thermal units

Source:

California Energy Commission. 2003. Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF
California Energy Commission. 2007. Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF
Energy Information Administration 2005 Residential Energy Consumption Survey (RECS). Available at: http://www.eia.doe.gov/emeu/recs/

Source: Environ International Corporation

Table 4.7-29
ENERGY USE PER RESIDENTIAL DWELLING UNIT: APPLIANCES AND PLUG-INS

		Dwelling Size		Electricity Delivered (kW-hr/DU/year)[2]									Natural Gas Delivered (MBTU/DU/yr)[2]		
Type	Type	Average Square Footage per DU	Bedrooms per DU[1]	Refrigerator	Clothes Washer	Clothes Dryer (Electric)[3]	Dishwasher	Cooking Range (Electric)[4]	Total Major Appliances	Plug-in Lighting	MELs	Total	Clothes Dryer (Gas)[6]	Gas Cooking Range[5]	Total
Standard Appliances	Single-family detached	2,585	3.8	669	120	520	235	345	1,889	505	622	3,015	3.0	2.6	5.6
	Single-family attached	1,260	2.7	669	100	435	197	289	1,690	293	479	2,461	2.5	2.1	4.7
	Apartment in building with 5 or more units	1,250	2.0	669	88	380	172	252	1,560	291	446	2,296	2.2	1.9	4.1
Energy Star Appliances[7]	Single-family detached	2,585	3.8	569	90	520	141	345	1,665	126	622	2,413	3.0	2.6	5.6
	Single-family attached	1,260	2.7	569	75	435	118	289	1,486	73	479	2,038	2.5	2.1	4.7
	Apartment in building with 5 or more units	1,250	2.0	569	66	380	103	252	1,369	73	446	1,887	2.2	1.9	4.1

Notes:
1. Based on information provided by Lytle Development Company.
2. Energy use per residential dwelling unit is based on information in BARBD Table 12.
3. Dryers may be either electric or natural-gas fueled. This value represents the average of the electricity requirements for the two dryer types.
4. Cooking ranges can be either gas or electric. This value represents 1/2 the energy required for electric stoves.
5. This value represents 1/2 the natural gas required for natural gas stoves.
6. This value represents 1/2 the natural gas required for natural gas dryers.
7. Average energy savings above standard products are applied to refrigeration (15%), clothes washer (25%), dishwasher (40%), and lighting (75%) as reported in Energy Star and Other Climate Protection Partnerships 2006 Annual Report Table 10.

Abbreviations:
BARBD - Building America Research Benchmark Definition
DU - Dwelling Unit
kW-hr - kilowatt-hour
MBTU - million british thermal units
MEL - Miscellaneous electric load

Source:
R. Hendron. Building America Research Benchmark Definition. Technical Report NREL/TP-550-4816. December 2008.
Environmental Protection Agency (USEPA). 2006 Annual Report. Energy Star and Other Climate Protection Partnerships. Available at: http://www.epa.gov/appdstar/pdf/AR%202006%20Final.pdf

Source: Environ International Corporation

Table 4.7-30
ESTIMATED ENERGY USE PER RESIDENTIAL DWELLING UNIT

	Dwelling Sizes		Electricity Delivered					Natural Gas Delivered		
			RECs	BARBD[3]	BARBD[3]	BARBD[3]		RECs	BARBD[3]	
Title 24 Compliance	Type	Average Square Footage/DU[1]	Heating and Cooling	Hard Wired Lighting	Major Appliances[4,6]	Plug-ins[5]	Total	Heating and Domestic Hot Water	Gas Dryers and Oven Ranges[4,6]	Total
			[kW-hr / DU / year]					(MBTU natural gas / DU / year)		
Minimally Title 24 Compliant (2005)	Single-family detached	2,585	1,196	2,368	1,889	1,126	6,579	41	6	47
	Single-family attached	1,260	1,062	1,521	1,690	772	5,044	18	5	22
	Apartment in building with 5 or more units	1,250	1,311	1,514	1,560	737	5,121	17	4	21
Minimally Title 24 Compliant (2008)	Single-family detached	2,585	924	2,368	1,889	1,126	6,308	37	6	43
	Single-family attached	1,260	821	1,521	1,690	772	4,803	16	5	21
	Apartment in building with 5 or more units	1,250	1,052	1,514	1,560	737	4,863	16	4	20
15% Better Than Title 24 and Energy Star Appliances[7]	Single-family detached	2,585	786	2,013	1,665	748	5,211	31	6	37
	Single-family attached	1,260	698	1,292	1,486	552	4,028	14	5	18
	Apartment in building with 5 or more units	1,250	894	1,287	1,369	518	4,069	14	4	18
Percentage Improvement over Title 24	Single-family detached	2,585	15%	15%	12%	34%	17.4%	15%	--	13%
	Single-family attached	1,260	15%	15%	12%	28%	16.1%	15%	--	12%
	Apartment in building with 5 or more units	1,250	15%	15%	12%	30%	16.3%	15%	--	12%

Notes:

1. Information provided by Lytle Development Company.
2. Energy use shown is from a Title 24 compliant house.
3. Estimated using guidance provided by the US Department of Energy (Table 12 of "Building America Research Benchmark Definition, Updated December 19, 2008").
4. Cooking may be performed on an electric range or a natural gas stove. The values shown in these columns are 50% of the energy/heat used for each stove type.
5. "Plug-ins" refers to electricity use associated with plug-in lighting, plug-in appliances, and miscellaneous electric loads. This energy use is calculated using guidance from BARBD. Energy use for each dwelling type is based on the number of bedrooms, total finished floor area, and a California-specific plug load multiplier. Refer to Table 4-8 for load-specific energy estimates.
6. Dryers and ovens may be electric or gas. The values presented in this table represent 50% of the electricity and/or natural gas use for each equipment type.
7. Lytle Development Company has committed to a 15% improvement in energy use in the building envelope over Title 24 standards and inclusion of energy star appliances.

Abbreviations:
BARBD - Building America Research Benchmark Definition
DU - Dwelling Unit
kW-hr - kilowatt-hour

Source:
R. Hendron. Building America Research Benchmark Definition. Technical Report NREL/TP-550-4816. December 2008.

Source: Environ International Corporation

Table 4.7-31
CO_2E EMISSIONS PER DWELLING UNIT WITH 2020 RENEWABLE PORTFOLIO STANDARDS

Title 24[1] Compliance	Type	DU per Building	Average SF / DU[2]	Title-24 Systems[1]		Title-24 Systems and Major Appliances		Title-24 Systems and All MELs		Title-24 Systems	Title-24 Systems and Major Appliances	Title-24 Systems and All MELs
				CO_2 Electricity[3]	CO_2 Natural Gas[4]	CO_2 Electricity[3]	CO_2 Natural Gas[4]	CO_2 Electricity[3]	CO_2 Natural Gas[4]	CO_2 Total	CO_2 Total	CO_2 Total
				(lbs / DU / year)						(tonnes / DU / year)		
Minimally Title 24 Compliant (2005)	Single-family detached	1	2,585	2,249	4809	3440	5462	4151	5462	3.2	4.0	4.4
	Single-family attached	2 to 4	1,260	1,629	2077	2695	2624	3182	2624	1.7	2.4	2.6
	Apartment in building with 5 or more units	5 or more	1,250	1,782	2010	2766	2488	3231	2488	1.7	2.4	2.6
Minimally Title 24 Compliant (2008)	Single-family detached	1	2,585	2,077	4328	3269	4981	3980	4981	2.9	3.7	4.1
	Single-family attached	2 to 4	1,260	1,477	1869	2543	2416	3030	2416	1.5	2.2	2.5
	Apartment in building with 5 or more units	5 or more	1,250	1,619	1870	2603	2347	3068	2347	1.6	2.2	2.5
15% Better Than Title 24, Energy Star Appliances and Renewable Portfolio Standard[5,6]	Single-family detached	1	2,585	1,366	3679	2178	4332	2543	4332	2.3	3.0	3.1
	Single-family attached	2 to 4	1,260	971	1589	1696	2136	1966	2136	1.2	1.7	1.9
	Apartment in building with 5 or more units	5 or more	1,250	1,064	1589	1733	2067	1985	2067	1.2	1.7	1.8
Percentage Improvement over Title 24	Single-family detached	1	2,585	34%	15%	33%	13%	36%	13%	21%	21%	23%
	Single-family attached	2 to 4	1,260	34%	15%	33%	12%	35%	12%	23%	23%	25%
	Apartment in building with 5 or more units	5 or more	1,250	34%	15%	33%	12%	35%	12%	24%	23%	25%

Notes:
1. Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code.
2. Information provided by Lytle Development Company.
3. Converted from kW-hr to lb CO_2 using emission factor from the California Climate Action Registry Database: Southern California Edison Company 2006 PUP Report. 2008.
4. Converted from MBTU to lb CO_2 using emission factor from California Climate Action Registry General Reporting Protocol (CCAR GRP).
5. Lytle Development Company has committed to a 15% improvement in energy use in the building envelope over Title 24 standards and inclusion of energy star appliances.
6. The project emissions take into account implementation of the Renewables Portfolio Standard.

Abbreviations:
DU - Dwelling Unit
kW-hr - kilowatt-hour
lb - pound
SF - Square Feet
RPS - Renewables Portfolio Standard

Sources:
California Climate Action Registry General Reporting Protocol, Version 3.1 (June 2009). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

California Climate Action Registry Database: Southern California Edison Company 2006 PUP Report. 2008. Available at: Available at: https://www.climateregistry.org/CARROT/public/Reports.aspx

Source: Environ International Corporation

Table 4.7-32
ESTIMATED CO_2E EMISSIONS PER DWELLING UNIT

Title 24[1] Compliance	Type	DU per Building	Average SF / DU[2]	Title-24 Systems[1]		Title-24 Systems and Major Appliances		Title-24 Systems and All MELs		Title-24 Systems	Title-24 Systems and Major Appliances	Title-24 Systems and All MELs
				CO_2 Electricity[3]	CO_2 Natural Gas[4]	CO_2 Electricity[3]	CO_2 Natural Gas[4]	CO_2 Electricity[3]	CO_2 Natural Gas[4]	CO_2 Total	CO_2 Total	CO_2 Total
				(lbs / DU / year)						(tonnes / DU / year)		
Minimally Title 24 Compliant (2005)	Single-family detached	1	2,585	2,249	4809	3440	5462	4151	5462	3.2	4.0	4.4
	Single-family attached	2 to 4	1,260	1,629	2077	2695	2624	3182	2624	1.7	2.4	2.6
	Apartment in building with 5 or more units	5 or more	1,250	1,782	2010	2766	2488	3231	2488	1.7	2.4	2.6
Minimally Title 24 Compliant (2008)	Single-family detached	1	2,585	2,077	4328	3269	4981	3980	4981	2.9	3.7	4.1
	Single-family attached	2 to 4	1,260	1,477	1869	2543	2416	3030	2416	1.5	2.2	2.5
	Apartment in building with 5 or more units	5 or more	1,250	1,619	1870	2603	2347	3068	2347	1.6	2.2	2.5
15% Better Than Title 24, Energy Star Appliances and Renewable Portfolio Standard[5,6]	Single-family detached	1	2,585	1,631	3679	2601	4332	3036	4332	2.4	3.1	3.3
	Single-family attached	2 to 4	1,260	1,160	1589	2025	2136	2347	2136	1.2	1.9	2.0
	Apartment in building with 5 or more units	5 or more	1,250	1,271	1589	2069	2067	2371	2067	1.3	1.9	2.0
Percentage Improvement over Title 24	Single-family detached	1	2,585	21%	15%	20%	13%	24%	13%	17%	16%	18%
	Single-family attached	2 to 4	1,260	21%	15%	20%	12%	23%	12%	18%	16%	18%
	Apartment in building with 5 or more units	5 or more	1,250	21%	15%	21%	12%	23%	12%	18%	16%	18%

Notes:
1. Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code.
2. Information provided by Lytle Development Company.
3. Converted from kW-hr to lb CO_2 using emission factor from the California Climate Action Registry Database: Southern California Edison Company 2006 PUP Report. 2008.
4. Converted from MBTU to lb CO_2 using emission factor from California Climate Action Registry General Reporting Protocol (CCAR GRP).
5. Lytle Development Company has committed to a 15% improvement in energy use in the building envelope over Title 24 standards and inclusion of energy star appliances.
6. The project emissions take into account implementation of the Renewables Portfolio Standard.

Abbreviations:
DU - Dwelling Unit
kW-hr - kilowatt-hour
lb - pound
SF - Square Feet

Sources:
California Climate Action Registry General Reporting Protocol, Version 3.1 (June 2009). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

California Climate Action Registry Database: Southern California Edison Company 2006 PUP Report. 2008. Available at: Available at: https://www.climateregistry.org/CARROT/public/Reports.aspx

Source: Environ International Corporation

Table 4.7-33
CO_2E EMISSIONS FROM ELECTRICITY AND NATURAL GAS USAGE IN RESIDENTIAL DWELLING UNITS

Title 24[1] Compliance	Housing Type	# Dwelling Units[2]	Title-24 Systems			Title-24 Systems and Major Appliances			Title-24 Systems and All MELs		
			CO_2 Emission Factor (tonne CO_2 / DU / year)	Total CO_2 Emissions (tonne CO_2 / year)		CO_2 Emission Factor (tonne CO_2 / DU / year)	Total CO_2 Emissions (tonne CO_2 / year)		CO_2 Emission Factor (tonne CO_2 / DU / year)	Total CO_2 Emissions (tonne CO_2 / year)	
Minimally Title 24 Compliant (2005)	Single-family detached	3,409	3.2	10,913	**19,367**	4.0	13,766	**25,786**	4.4	14,865	**27,975**
	Single-family attached	3,673	1.7	6,175		2.4	8,862		2.6	9,673	
	Apartment in building with 5 or more units	1,325	1.7	2,279		2.4	3,158		2.6	3,437	
Minimally Title 24 Compliant (2008)	Single-family detached	3,409	2.9	9,904	**17,576**	3.7	12,758	**23,995**	4.1	13,856	**26,184**
	Single-family attached	3,673	1.5	5,575		2.2	8,262		2.5	9,073	
	Apartment in building with 5 or more units	1,325	1.6	2,097		2.2	2,975		2.5	3,254	
15% Better Than Title 24 and Energy Star Appliances	Single-family detached	3,409	2.4	8,210	**14,508**	3.1	10,721	**20,138**	3.3	11,394	**21,530**
	Single-family attached	3,673	1.2	4,579		1.9	6,933		2.0	7,468	
	Apartment in building with 5 or more units	1,325	1.3	1,719		1.9	2,485		2.0	2,667	
Percentage Improvement over Title 24 (2005)	Single-family detached	3,409	17%	17%	**17%**	16%	16%	**16%**	18%	18%	**23%**
	Single-family attached	3,673	18%	18%		16%	16%		18%	18%	
	Apartment in building with 5 or more units	1,325	18%	18%		16%	16%		18%	18%	

Notes:
1. Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code.
2. Information provided by Lytle Development Company.

Abbreviations:
CO_2 - carbon dioxide
DU - Dwelling Units
MEL - Miscellaneous electric loads

Sources:
California Climate Action Registry General Reporting Protocol, Version 3.0 (April 2008). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf
California Climate Action Registry General Reporting Protocol, Version 3.1 (January 2009). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

Source: Environ International Corporation

Table 4.7-34

CO_2E EMISSIONS FROM ELECTRICITY AND NATURAL GAS USAGE IN RESIDENTIAL DWELLING UNITS WITH 2020 RENEWABLE PORTFOLIO STANDARDS

Title 24[1] Compliance	Housing Type	# Dwelling Units[2]	Title-24 Systems			Title-24 Systems and Major Appliances			Title-24 Systems and All MELs		
			CO_2 Emission Factor (tonne CO_2 / DU / year)	Total CO_2 Emissions (tonne CO_2 / year)		CO_2 Emission Factor (tonne CO_2 / DU / year)	Total CO_2 Emissions (tonne CO_2 / year)		CO_2 Emission Factor (tonne CO_2 / DU / year)	Total CO_2 Emissions (tonne CO_2 / year)	
Minimally Title 24 Compliant (2005)	Single-family detached	3,409	3.2	10,913	**19,367**	4.0	13,766	**25,786**	4.4	14,865	**27,975**
	Single-family attached	3,673	1.7	6,175		2.4	8,862		2.6	9,673	
	Apartment in building with 5 or more units	1,325	1.7	2,279		2.4	3,158		2.6	3,437	
Minimally Title 24 Compliant (2008)	Single-family detached	3,409	2.9	9,904	**17,576**	3.7	12,758	**23,995**	4.1	13,856	**26,184**
	Single-family attached	3,673	1.5	5,575		2.2	8,262		2.5	9,073	
	Apartment in building with 5 or more units	1,325	1.6	2,097		2.2	2,975		2.5	3,254	
15% Better Than Title 24 and Energy Star Appliances	Single-family detached	3,409	2.3	7,800	**13,660**	3.0	10,067	**18,734**	3.1	10,631	**19,900**
	Single-family attached	3,673	1.2	4,265		1.7	6,384		1.9	6,833	
	Apartment in building with 5 or more units	1,325	1.2	1,595		1.7	2,283		1.8	2,435	
Percentage Improvement over Title 24 (2005)	Single-family detached	3,409	29%	29%	**29%**	27%	27%	**27%**	28%	28%	**29%**
	Single-family attached	3,673	31%	31%		28%	28%		29%	29%	
	Apartment in building with 5 or more units	1,325	30%	30%		28%	28%		29%	29%	

Notes:
1. Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code.
2. Information provided by Lytle Development Company.

Abbreviations:
CO_2 - carbon dioxide
DU - Dwelling Units
MEL - Miscellaneous electric loads

Sources:
California Climate Action Registry General Reporting Protocol, Version 3.0 (April 2008). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf
California Climate Action Registry General Reporting Protocol, Version 3.1 (January 2009). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

Source: Environ International Corporation

◊ **GHG emissions associated with non-residential buildings**. Non-residential buildings include all structures except residences that may exist in a development, such as government, municipal, commercial, retail, and office space. Presented below is a description of the methodology used to estimate the GHGs associated with activities in non-residential buildings.

The amount of energy used and the associated GHG emissions emitted per square foot of available space vary with the type of non-residential building. For example, food stores are far more energy intensive than warehouses, which have little climate-conditioned space. For new developments, the exact types of buildings are typically unknown. As such, not all building categories that may actually exist within the LCRSP boundaries are represented below; however, all of the non-residential building area is accounted for and the accompanying tables present the differences in energy intensities from building types. The types of non-residential buildings include office, commercial, and school.

Similar to the case for residential buildings, GHG emissions are emitted as a result of activities in non-residential buildings for which electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere (when this occurs in a non-residential building this is a direct emission source associated with that building). GHG emissions are also emitted during the generation of electricity from fossil fuels. When electricity is used in a non-residential building, the electricity generation typically takes place off the site at the power plant (electricity use in a non-residential building generally causes emissions in an indirect manner).

While fuel combustion generates CH_4 and N_2O, the emissions of these GHGs typically comprise less than one percent of CO_2e emissions from electricity generation and natural gas consumption.[259] Fuel oil, kerosene, liquefied petroleum gas, and wood can also be used as fuels but generally contribute only in small amounts as combustion sources within non-residential buildings. As such, these minor emissions are not accounted for here.

Similar to energy use in residential buildings, energy use in non-residential buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as plug-in appliances. In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some fixed lighting. Non-building energy use or plug-in energy use can be further subdivided by specific end-use. In order to quantify energy use due to non-residential buildings energy use was calculated from systems covered by Title 24 (HVAC system, water heating system, and the lighting system) and office equipment, plug-in lighting, and other sources not covered by Title 24.

The resulting energy use quantities were then converted to GHG emissions by multiplying by the appropriate emission factors obtained by incorporating information on local electricity production. The total GHG emissions for non-residential buildings is estimated to be approximately 4,133 tonnes CO_2 per year.

[259]/ *Op. Cit*., General Reporting Protocol, Version 3.0, Tables C1 and C2. The methane and nitrous oxide emission factors are negligible compared to the total CO_2 emission factor for electricity generation in California.

The methodologies employed to estimate GHG emissions is presented below. The units CO_2 and CO_2e are used interchangeably for non-residential buildings because CH_4 and N_2O are assumed to contribute a negligible[260] amount of GWP when compared to the CO_2 emissions from non-residential buildings.

- **Non-residential energy use intensity**. Using data from the California Commercial End-Use Survey (CEUS),[261] the GHG analysis formulated CO_2 intensity values (CO_2 emissions per square foot per year) for building types allowable under the proposed LCRSP. The methodology used to estimate these emissions are described below.

  The overall electricity use for the building types was calculated based on data provided by the CEC.[262] The building types and subcategories are shown in Table 4.7-35 (Electricity End-Use Distribution for Non-Residential Building Types) which also provides the mapping used to relate the proposed project's building types to CEUS building types. The CEUS data is based on a survey conducted in 2002 of existing buildings. Each building type has a characteristic electricity and natural gas use per square foot of building space. Electricity use per square foot (electricity intensity) for each building sample was extracted from the CEUS data. Similarly, the natural gas use per square foot (natural gas intensity) for each building sample was also extracted.

  For this analysis, energy use was based upon buildings in California's Climate Zone 10. Table 4.7-35 (Electricity End-Use Distribution for Non-Residential Building Types) lists the breakdown of electricity use among several end uses for electricity in various non-residential building types. Table 4.7-36 (Natural Gas End-Use Distribution for Non-Residential Building Types) lists the percentage breakdown of end uses for natural gas in various non-residential building types. The end-use data provide an estimate of the percent of the total energy use comprised by Title 24-regulated (built environment) and plug-in electricity in each building type. The Title 24-regulated electricity use (cooling, space heating, water heating, lighting, ventilation) and the non-built electricity use (e.g., office equipment, refrigeration, cooking) are presented in Table 4.7-35 (Electricity End-Use Distribution for Non-Residential Building Types). The Title 24-regulated natural gas use and the non-built natural gas use (primarily from cooking) are presented in Table 4.7-36 (Natural Gas End-Use Distribution for Non-Residential Building Types).

  The electricity and natural gas use per square foot for each building type are converted to GHG emissions as shown below.

[260]/ The SCE specific emission factor for electricity deliveries is 631 pounds CO_2/MWh. Although this emission factor accounts for only CO_2, the emissions associated with N_2O and CH_4 contribute to less than 1% of the electricity generation CO_2e emissions.

[261]/ California Energy Commission, California Commercial End-Use Survey Results, March 2006 (http://capabilities.itron.com/CeusWeb/Chart.aspx).

[262]/ California Energy Commission (Itron, Inc.), Workbooks for "SCE – FCZ10," accessed on June 12, 2009 (http://capabilities.itron.com/CeusWeb/Chart.aspx).

- **Annual GHG emissions from non-residential buildings**. The Applicant has committed to making all new non-residential buildings 15 percent more energy efficient than 2008 Energy-Efficiency Standards or 15 percent more energy efficient on a TDV basis. This analysis also assumed that all sources covered by Title 24 would uniformly use 15 percent less annual energy. These calculations are shown in Table 4.7-37 (Energy Usage and Resulting GHG Emissions for Non-Residential Building Types). Non-Title 24-regulated energy use is assumed to still use the same amount of energy as a minimally Title 24-compliant building. There is no credit taken for any Energy Star appliances in the non-residential building category since it is difficult to determine which appliances may be present in the various non-residential building categories. In addition these are generally not supplied with the building. Baseline Title 24-usage rates have been adjusted to reflect improvements in Title 24 building codes since their introduction in 2002. The CEC presents average savings for improvements from 2002 to 2005 as well as from 2005 to 2008. These CEC average savings percentages were used to account for reductions in energy use. The average savings percentages are: (1) 8.5 and 4.9 percent reduction for electricity in 2005 and 2008, respectively; and (2) 5.8 and 9.4 percent reduction for natural gas in 2005 and 2008, respectively. This methodology results in a reduction of energy use for all building types. Because plug-ins are not covered under Title 24, the decrease in energy use is typically less than 15 percent, yet still substantial. For instance, GHG emissions in office buildings decreased from 3.50 to 3.00 tonnes CO_2e per 1,000 square feet; representing a 14 percent decrease in GHG emissions.

  Energy use data from Table 4.7-35 (Electricity End-Use Distribution for Non-Residential Building Types) and Table 4.7-36 (Natural Gas End-Use Distribution for Non-Residential Building Types) were multiplied by the emission factors presented in Table 4.7-38 (Emission Factors by Energy Source) to generate CO_2 intensity values (CO_2 emissions per square foot of building area). The results are shown in Table 4.7-37 (Energy Usage and Resulting GHG Emissions for Non-Residential Building Types). The CO_2 intensity values presented therein represent the non-residential building types described earlier. The annual CO_2 emissions for different building types range from 2.44 tonnes per 1,000 square feet for schools to 3.75 tonnes per 1,000 square feet for commercial space.

  Table 4.7-37 (Energy Usage and Resulting GHG Emissions for Non-Residential Building Types) also shows the yearly CO_2 emissions from the proposed project's development by incorporating the emission factors developed (as discussed above) and the square footage of each of the main building categories. Due to the project design feature of reducing built energy use 15 percent below 2008 Energy-Efficiency Standards, a reduction of approximately 531 tonnes of CO_2 per year is realized from the non-residential buildings or about 13 percent of the CO_2 emissions associated with non-residential buildings. These measures bring the overall CO_2 emissions associated with non-residential energy use down to approximately 4,133 tonnes CO_2 per year.

- **Uncertainties in non-residential building GHG calculations**. Several factors lead to uncertainties in the above analysis. For new developments, the exact types of buildings are typically unknown. As such, not all building categories that may actually be built pursuant to the proposed LCRSP are represented in this analysis. All of the commercial building area is, however, accounted for and the best available assessment of the building type composition that might be developed pursuant to the LCRSP has been used. The tables provided herein present the differences in energy intensities from building types. Although it is unknown exactly how the buildings will be designed, each building will be Title 24 compliant.

◊ **GHG emissions associated with mobile sources**. GHG emissions from mobile sources were estimated as part of this analysis. The mobile source emissions considered for this project will be from the typical daily operation of motor vehicles by project residents.

GHG emissions were estimated based upon all miles traveled by project residents, regardless of internal or external destinations or purpose of trip. Traffic patterns, trip rates, and trip lengths are based upon URBEMIS methodology and defaults.

With regards to the assessment of GHG emissions, mobile source emissions from new residences are reasonably considered to be growth, as residences are rarely removed from the housing supply once constructed.[263]; however, it is less clear that commercial development should be considered new growth for vehicular travel purposes. To the extent that commercial development serves existing residential development its vehicular travel may not be new. For instance, if the new commercial area serves an area with a high residential/ commercial balance, then this new commercial growth will reduce shopping and work trip lengths and will reduce GHG emissions associated with mobile sources. If, however, the new commercial area results in longer trips for its workers and residents than they would have previously made, then it adds GHG emissions. Commercial development that could potentially increase VMT would be facilities that draw trips from far away that otherwise would not be made (e.g., a theme park, for example, may be viewed as such a development).

With regards to GHG emission, it is assumed that proposed new non-residential (i.e., office space, retail space, and industrial buildings) development will serve an area with a high residential/non-residential balance; therefore, this new non-residential growth will not, independent of the new residential areas, result in new shopping and work trips. Accordingly, new non-residential space will not contribute to mobile GHG emissions. The emissions from heating and cooling the non-residential areas would, however, be considered to be new, as that would reflect growth in non-residential areas that goes along with growth in residential areas. Accordingly, GHG emissions from VMT serving non-residential areas will only be counted if the non-residential areas contribute to greater VMT

[263]/ There are exceptions, such as when one housing development replaces another, and, in those cases, the replacement residential development need not be considered growth.

as a result of its location. It should be noted that because the proposed project combines both residential and non-residential development, this issue does not directly affect the LCRSP's VMT calculations; all VMT from project residents is calculated, regardless of internal or external destinations or purpose of trip.

Assuming knowledge of the fuel consumption rate for each vehicle as well as the miles traveled per vehicle, the CCAR GRP recommends estimating GHG emissions from mobile sources at an individual vehicle level. Since these parameters are not known for a future development, the CCAR guidance is too specific to use as recommended.

For mobile sources, CH_4 and N_2O are explicitly calculated, multiplied by their respective GWP, and added to the CO_2 emissions, to result in total CO_2e emissions from mobile sources.

- **Estimating VMT from mobile sources**. Traditional traffic models focus upon designing roads and planning a development such that traffic delays will be avoided during peak-travel hours. Traditional traffic analyses also provide the total number of daily vehicles on a road which can then be used to calculate toxic or criteria emissions that may have localized health effects. Several steps must be taken to go from a traditional traffic model to a set of calculations that describe VMT made by project residents. In an effort to evaluate the assumptions described in this section, it is noted that the VMT and GHG emissions will change based on further reductions that are likely due to the potential benefits of the community's design to encourage mode shifts. In addition changes in estimated fleet distribution and emission factors will likely improve based on current and anticipated regulations.

  The trip generation data was taken from the East Valley Transportation Model (EVTM) which was also used to generate the traffic analysis. The EVTM was run by SCAG based on inputs provided by the City's consulting traffic engineer (Crain and Associates).[264] Trip ends were adjusted based on the proportion of production ends only, based on the methodology of the federally-issued Urban Transportation Planning Software (UTPS) package. For the purpose of this GHG emissions assessment, added daily trips, based on weekday estimates, as well as added VMT are shown in Table 4.7-39 (Mitigated Trip Generation Rates and Vehicle Miles based on Traffic Modeling).

- **Calculate final VMT**. Trips for each neighborhood are associated with an average trip length as provided by Crain and Associates (C&A). Total vehicle miles traveled (VMT) were calculated by multiplying the number of trips by the average trip length for each type of trip, as indicated below:

  VMT = Number of Trips x Average Trip Length

  Where:
  VMT = vehicle miles traveled

[264]/ Crain & Associates, Lytle Creek Development Mobile Emissions Analysis Input, September 15, 2009.

The value calculated here includes all VMT generated by future project residents commuting within the project and all VMT generated by future project residents commuting to and from the project. Each of the proposed project's residential dwelling unit is estimated to generate approximately 21,638 VMT per year. The total VMT for LCRSP residents is 181,911,255 as shown in Table 4.7-40 (Mitigated GHG Emissions from Vehicles for the Year 2030). This VMT was multiplied by the appropriate emission factors, as discussed below, to calculate the project's estimated GHG emissions from mobile sources.

- **Estimating GHG emissions from mobile sources**. The CO_2 emissions from mobile sources were calculated with the trip rates, trip lengths, and emission factors for running and starting emissions from EMFAC2007 as follows:

  CO_2 emissions = VMT x EFrunning

  Where:
  VMT = vehicle miles traveled
  EFrunning = emission factor for running emissions

  The CO_2 calculation involves the following assumptions: (1) internal trips were 30 miles per hour (mph)[265]; and (2) EMFAC emission factors from the year 2030 were used for EFrunning based on the County's fleet mix.

  Startup emissions are CO_2 emitted from starting a vehicle. Startup emissions were calculated using the following assumptions: (1) the number of starts is equal to the number of trips made annually; (2) the breakdown in vehicles was EMFAC fleet mix for the County in 2030; and (3) the emission factor for startup was calculated based on a conservative assumption of long waits between starts. Fleet distribution types from EMFAC2007 were used for the year 2030.

  Table 4.7-40 (Mitigated GHG Emissions from Vehicles for the Year 2030) shows the CO_2 emissions from vehicles associated with project residents, as calculated according to the methodology described above. Since the EVTM modeled trip generation rates were based on weekday conditions, weekend traffic were calculated by applying differences between the weekend and the weekday traffic based upon the analysis conducted by C&A based on ITE weekend and weekday trip generation rates. The ITE projection for the weekend trip ends was less than five percent less than the weekday trip end generation value. Weekend traffic was assumed to be 95 percent of the weekday capacity.[266] Consequently, CO_2 emissions in Table 4.7-40 (Mitigated GHG Emissions from Vehicles for the Year 2030) were multiplied by 98.6 percent to account for the difference between weekday and weekend conditions.

[265]/ URBEMIS defaults to a vehicle speed of 30 mph for all trip types if no project specific data is entered.
[266]/ A conservative adjustment for weekend travel was assumed for all the trips since information was not available to distinguish between trips on major highways and trips on small streets.

Nitrous oxide, CH_4, and HFCs[267] are also emitted from mobile sources. The USEPA recommends assuming that CH_4, N_2O, and HFCs account for 5 percent of mobile source GHG emissions, taking into account their GWPs.[268] CO_2 emissions in Table 4.7-40 (Mitigated GHG Emissions from Vehicles for the Year 2030) were, therefore, divided by 0.95 to account for non-CO_2 GHG emissions. Vehicles associated with the proposed project will emit approximately 71,114 tonnes CO_2e per year without taking into account future regulatory activity.

The USEPA recently granted a waiver for California for its GHG standards for motor vehicles. AB 1493 is expected to reduce running emissions for passenger cars and light trucks by 20 percent relative to the year 2009 by the year 2020.[269] Starting emissions will not be affected. Table 4.7-41 (Mitigated GHG Emissions from Vehicles for the Year 2030 with Pavley Standards) shows the CO_2 emissions from vehicles associated with future project residents as calculated incorporating the emissions reductions resulting from AB 1493. CO_2 emissions in Table 4.7-41 (Mitigated GHG Emissions from Vehicles for the Year 2030 with Pavley Standards) were divided by 0.95 to account for non-CO_2 GHG emissions. Vehicles associated with the proposed project will emit approximately 57,265 tonnes CO_2e per year.

◊ **GHG emissions associated with municipal sources**. Based on the following assumptions, estimates for emissions stemming from municipal sources (e.g., drinking water and wastewater supply and treatment, public area lighting, and municipal vehicles) were factored into this analysis.

♦ **Water and wastewater supply and treatment systems**. In general, the majority of municipal-sector GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. These are generally indirect emissions from the production of electricity to power these systems. Additional emissions from wastewater treatment include CH_4 and N_2O, which are emitted directly from the wastewater.

The amount of electricity required to treat wastewater and supply water depends on the volume of the water involved. As shown in Table 4.10-7 (Estimated Water Demand for the Lytle Creek Ranch Specific Plan), the total water demand projected for the proposed project is estimated to be 10,174 AF/Y. The entire amount is assumed to be potable water supplied by West Valley Water District.[270] Three processes are necessary to supply potable water to residential and commercial users: (1) supply and conveyance of the water from the source; (2) treatment of the water to

[267]/ HFCs can be emitted from air conditioning systems.

[268]/ United States Environmental Protection Agency, Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle, February 2005 (http://www.epa.gov/otaq/climate/420f05004.pdf).

[269]/ *Op. Cit.*, Comparison of Greenhouse Gas Reductions for the United States and Canada Under U.S. CAFÉ Standards and California Air Resources Board Greenhouse Gas Regulations, Table 11.

[270]/ As indicated in the West Valley Water District's (WVWD) "Urban Water Management Plan" (WVWD, January 2006), the WVWD expects that the water for the proposed project will be sourced from groundwater basins, surface water, and purchased water.

potable standards; and (3) distribution of the water to individual users. After use, the wastewater is treated and reused as reclaimed water.

Indirect emissions resulting from electricity use were determined by multiplying electricity use by the CO_2 emission factor provided by the local electricity supplier, Southern California Edison, (SCE). Energy use for different aspects of water treatment (e.g. source water pumping and conveyance, water treatment, distribution to users) was determined using the stated volumes of water and energy intensities values (i.e., energy use per unit volume of water) provided by reports from the California Energy Commission (CEC) and a report by Robert Wilkinson on energy use for California's water systems.[271]

The emission factors and GHG emissions for all these processes are shown in Table 4.7-42 (GHG Emissions Factors for LCRSP Municipal Sources). The annual emissions from water treatment and distribution, wastewater treatment, and distribution of recycled water are approximately 8,891 tonnes CO_2e per year. Details on the emissions generated by specific aspects of water treatment and supply systems are provided in the following sections.

- **Potable water source supply and conveyance**. Water is typically supplied from several sources including the local underground aquifer, the State Water Supply (SWP), and recycled and reclaimed water.

  Supplying and conveying water for the proposed project is estimated to account for 3,212 tonnes of CO_2e emissions per year. To supply the annual demand for 10,174 AF/Y of potable water, the proposed project will draw upon water from the SWP, groundwater, and surface water.[272]

  The energy needed to supply and convey potable water will be used to pump this water from the sources and distribute it throughout the development. The CEC estimated that 950 kilowatt hours (kWh) would be required to extract one acre-foot of water from the Chino Basin groundwater, and 370 kWh would be required to extract one acre-foot of water from surface water. Robert Wilkinson estimated that 3,236 kWh would be required to extract one acre-foot of water from the SWP.

  As indicated in Table 4.7-42 (GHG Emissions Factors for LCRSP Municipal Sources), using the above referenced energy intensity factors, the expected potable water demand, and the SCE carbon-intensity factor, GHG emissions from potable water supply and conveyance were calculated. Supplying and conveying water in LCRSP from the SWP,

[271]/ California Energy Commission, California's Water-Energy Relationship, Final Staff Report, CEC-700-2005-011-SF 2005; California Energy Commission (Navigant Consulting, Inc.), Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report, December 2006; Wilkinson, Robert, Methodology for Analysis of the Energy Intensity of California's Water Systems, and An Assessment of Multiple Potential Benefits through Integrated Water-Energy Efficiency Measures, 2000.

[272]/ The proposed project's water supplies are based on WVWD District expected sources for the area. It is estimated that 69 percent will come from groundwater, 11 percent will come from the State Water Project, and 20 percent will come from surface water.

groundwater, and surface water is estimated to account for approximately 1,053 tonnes, 1,940 tonnes, and 219 tonnes of CO_2e emissions per year, respectively.

- **Potable water treatment and distribution**. Treatment and distribution of potable water within the proposed project is estimated to account for approximately 1,371 tonnes[273] and 1,157 tonnes of CO_2e emissions per year, respectively. As shown in Table 4.7-42 (GHG Emissions Factors for LCRSP Municipal Sources), based on the estimated potable water demand, these energy intensity factors and the SCE-carbon intensity factor, GHG emissions from potable water treatment and distribution were calculated.

- **Wastewater treatment**. Emissions associated with wastewater treatment include indirect emissions necessary to power the treatment process and direct emissions from degradation of organic material in the wastewater. Wastewater treatment's indirect emissions are estimated to account for 2,411 tonnes of CO_2e emissions per year. Wastewater treatment's direct emissions are estimated to account for 2,070 tonnes of CO^2e emissions per year.

  Indirect GHG emissions from the electricity necessary to power the wastewater treatment process were calculated for the proposed project. The electricity required to operate a wastewater treatment plant is estimated to be 815 kWh per acre-foot.[274] As shown in Table 4.7-42 (GHG Emissions Factors for LCRSP Municipal Sources), based on the expected amount of wastewater requiring treatment (10,174 AF/Y), this energy intensity factor and the SCE carbon-intensity factor, indirect emissions due to wastewater treatment were calculated.

  Direct emissions from wastewater treatment include emissions of CH_4 and N_2O. A per capita emission factor for these GHG emissions was developed based on a national 2005 GHG inventory for domestic wastewater treatment (25 teragrams CO_2e/year or 25 million tonnes CO_2e/year)[275] and the 2005 United State's population (approximately 296,410,404 individuals). As shown in Table 4.7-42 (GHG Emissions Factors for LCRSP Municipal Sources), direct emissions from wastewater treatment were calculated using the emission factor developed from this data (0.084 tonnes CO_2e per capita per year) and the projected population at LCRSP (24,539 residents[276,277]).

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[273]/ Treatment is based on the average value presented by the CEC (Source: California Energy Commission, California's Water-Energy Relationship, Final Staff Report. CEC-700-2005-011-SF, 2005).

[274]/ *Op. Cit*., California's Water-Energy Relationship, Final Staff Report. CEC-700-2005-011-SF, 2005.

[275]/ United States Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005, No.430-R-07-002, April 2007 (http://epa.gov/climatechange/emissions/downloads06/07Waste.pdf).

[276]/ Stoffel & Associates, Analysis of Retail Demand and Opportunities for the Lytle Creek Planned Community, Rialto, CA, October 2008 Update.

[277]/ A number of project-specific population estimates are presented in Section 4.2 (Population and Housing), ranging from 24,539 to 32,720 individuals. Within that range, the population estimate presented herein assuming a lower on-site population and, therefore, presents a worst-case assessment.

Table 4.7-35
ELECTRICITY END-USE DISTRIBUTION FOR NON-RESIDENTIAL BUILDING TYPES

CEUS Building Type	Air Compressors	Cooking	Cooling	Exterior Lighting	Heating	Interior Lighting	Miscellaneous	Motors	Office Equipment	Process	Refrigeration	Ventilation	Water Heating
All Commercial	1.0%	4%	18%	7%	1%	30%	7%	5%	4%	0.3%	12%	11%	1%
School	---	1%	26%	9%	0.4%	38%	3%	1.0%	6%	---	4%	11%	1.0%
Included in Title 24 Building Envelope Energy Budget?[1]	No	No	Yes	No	Yes	No	No	No	No	No	No	Yes	Yes

Notes:
1. Only end uses regulated by Title 24 are included in the Title 24 building envelope energy budget. Hard-wired lighting (exterior lighting and some interior lighting) are part of Title 24, but are not considered part of the building envelope energy budget.

Abbreviations:
CEUS - California Commerical End-Use Survey

Source:
California Commercial End-Use Survey. Perofrmed by Itron, under contract to the California Energy Commission. 2006.

Source: Environ International Corporation

Table 4.7-36
NATURAL GAS END-USE DISTRIBUTION FOR NON-RESIDENTIAL BUILDING TYPES

CEUS Building Type	Cooking	Cooling	Heating	Miscellaneous	Process	Water Heating
All Commercial	18%	1%	29%	0.7%	18%	33%
School	11%	---	47%	0.2%	7%	35%
Included in Title 24 Building Envelope Energy Budget?[a]	No	No	Yes	No	No	Yes

Notes:

a. Only end uses regulated by Title 24 are included in the Title 24 building envelope energy budget.

Abbreviations:
CEUS - California Commerical End-Use Survey

Source:
California Commercial End-Use Survey. Perofrmed by Itron, under contract to the California Energy Commission. 2006.

Source: Environ International Corporation

Table 4.7-37
ENERGY USAGE AND RESULTING GHG EMISSIONS FOR NON-RESIDENTIAL BUILDING TYPES

				Baseline						15% Improvement over Title 24 and RPS		Baseline	Annual Total (with 15% Improvement over Title 24 and RPS)	
CEUS Building Type	Total Area [SF]	Energy Source	Unit	Usage Rate[1] [Unit/SF-yr]					CO_2e EF[5] [tonnes/SF-yr]	Usage Rate[6] [Unit/SF-yr]	CO_2e EF[5] [tonnes/SF-yr]	CO_2e Emissions[5] [tonnes/yr]	Usage[7] [Unit/yr]	CO_2e Emissions[5] [tonnes/yr]
				Title 24[2,3]		Non-Title 24[4]		Overall	Overall	Overall	Overall	Overall	Overall	Overall
All Commercial	849,420	Electricity	kWh	3.58	+	9.01	=	12.59	3.60E-03	12.05	3.19E-03	3.06E+03	10,237,481	2,706
		Natural Gas	kBTU	13.43	+	9.35	=	22.78	1.21E-03	20.76	1.10E-03	1.03E+03	17,637,123	936
School	261,360	Electricity	kWh	3.40	+	6.30	=	9.70	2.78E-03	9.19	2.43E-03	7.25E+02	2,401,816	635
		Natural Gas	kBTU	7.19	+	1.79	=	8.98	4.77E-04	7.90	4.20E-04	1.25E+02	2,066,037	110
Grand Total Area	1,110,780									Electricity Total		3,786	12,639,297	3,341
										Natural Gas Total		1,151	19,703,160	1,046
										Grand Total				4,386

Notes:
1. Baseline usage rates were taken from the 2006 California Commercial End-Use Survey (CEUS), performed by Itron under contract to the California Energy Commission (CEC). ENVIRON used data for Southern California Edison (SCE), Zone 10, which is the sector in which the Lytle Creek Ranch development is located.
2. Baseline Title 24 usage rates shown in this table have been adjusted to reflect improvements in Title 24 building codes since their introduction in 2002. CEC discusses average savings for improvements from 2002 to 2005 ("Impact Analysis for 2005 Energy Efficiency Standards") as well as from 2005 to 2008 ("Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings"). ENVIRON used these CEC average savings percentages, which are: for electricity: 7.7% reduction in 2005 and 4.9% reduction in 2008; for gas: 3.2% reduction in 2005 and 9.4% reduction in 2008.
3. Includes only Title 24-regulated building envelope uses of electricity (heating, cooling, ventilation, water heating) and gas (heating, water heating), as discussed in footnote (a) of Table 4-17.
4. Includes all other uses of electricity (cooking, refrigeration, exterior lighting, interior lighting, office equipment, miscellaneous, process, motors, air compressors) and gas (cooling, cooking, miscellaneous, process) not included in the Title 24-regulated building envelope, as discussed in footnote 3 above.
5. GHG emission factors (EF) are calculated by multiplying the corresponding usage rates or usages by the conversion factors listed in Table 4-19.
6. The usage rate with 15% improvement over Title 24 is calculated as the baseline Title 24 usage reduced by 15% plus the baseline non-Title 24 usage.
7. The total annual usage is calculated as the usage rate (with 15% improvement over Title 24) multiplied by the total area.

Abbreviations:
CEC - California Energy Commission
CEUS - California Commerical End-Use Survey
CO_2e - carbon dioxide equivalent
EF - emission factor
GHG - greenhouse gas
kBTU - kilo (1000) British thermal units
RPS = Renewables Portfolio Standard
SCE - Southern California Edison
SF - square feet
tonnes - metric tonnes
yr - year

Source: Environ International Corporation

Table 4.7-38
EMISSION FACTORS BY ENERGY SOURCE

Energy Source	Scenario	Unit	Conversion Factor [lb CO_2/Unit]	Conversion Factor [tonne CO_2/Unit]
Electricity[1]	without RPS[3]	kWh	0.631	2.86E-04
	2010 RPS (20%)		0.583	2.64E-04
	2020 RPS (33%)		0.488	2.21E-04
Natural Gas[2]	-	kBTU	0.117	5.31E-05

Notes:
1. Emission factor for electricity provided by Southern California Edison for the year 2006, obtained from the California Climate Action Registry Database.
2. Emission factor for natural gas obtained from California Climate Action Registry Reporting Protocol, Table C7.
3. Estimated emission factors for total energy delivered before and after implementation of the Renewables Portfolio Standard. See Table 6-1 for derivation of these factors.

Abbreviations:
CO_2e - carbon dioxide equivalent
kBTU - 1000 British thermal units
kWh - kilowatt-hour
lb - pound
RPS - Renewables Portfolio Standard

Sources:

1. California Climate Action Registry General Reporting Protocol, Version 3.1 (January 2009). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

2. California Climate Action Registry Database: Southern California Edison Company 2007 PUP Report. 2008. Available at: https://www.climateregistry.org/CARROT/public/Reports.aspx

Source: Environ International Corporation

Table 4.7-39
MITIGATED TRIP GENERATION RATES AND VEHICLE MILES BASED ON TRAFFIC MODELING

Zone	Neighborhood	Total Daily Trip Ends[2]	Percent Production Ends (%)	Production (Added Daily Trips)[3]	Average Trip Length (miles)	Added Daily Vehicle Miles of Travel (VMT)
80	I	7,533	68.1%	5,130	14.5	74,385
81	I	2,697	72.1%	1,945	14.4	28,008
82	II	24,225	54.6%	13,227	9.2	121,688
83	III	46,614	46.3%	21,582	9.3	200,713
84	IV	10,444	54.2%	5,661	13	73,593
				47,545		**498,387**

Notes:
1. The data in this table was provided to ENVIRON by Crain and Associates in their memorandum dated September 15, 2009 re: Lytle Creek Development Mobile Emission Analysis Input. The analysis was conducted using the East Valley Transportation Model (EVTM). The EVTM model accounts for "physical design" mitigation measures inherent in the project plan, such as high residential density and local serving retail.
2. Daily trip ends per weekday.
3. "Production" refers to the origin of the trip (rather than the destination).

Abbreviations:
EVTM - East Valley Transportation Model
VMT - Vehicle Miles Traveled

Sources:
Crain and Associates. 2009. Re: Lytle Creek Development Mobile Emission Analysis Input.

Source: Environ International Corporation

Table 4.7-40
MITIGATED GHG EMISSIONS FROM VEHICLES FOR THE YEAR 2030

Neighborhood	Annual Products (Added Annual Trips)[1]	Added Annual Vehicle Miles of Travel (VMT)[1]	Emission Factor Running (g/mile)[2]	Emission Factor Starts (g/start)[3]	Annual CO_2 Emissions Running (tonne)	Annual CO_2 Emissions Starts (tonne)	Total Annual CO_2 Emissions (tonne)	Total Annual Adjusted CO_2 Emissions (tonne)[4]	Total Annual CO_2e Emissions (tonne)[5]
I	1,872,450	27,150,525			9,960	194	10,155	10,010	10,536
I	709,925	10,222,920			3,750	74	3,824	3,769	3,968
II	4,827,855	44,416,120			16,294	501	16,796	16,556	17,427
III	7,877,430	73,260,245	367	104	26,876	818	27,694	27,298	28,735
IV	2,066,265	26,861,445			9,854	215	10,069	9,925	10,447
Total	**17,353,925**	**181,911,255**			**66,735**	**1,802**	**68,537**	**67,558**	**71,114**

Notes:
1. Daily trips and VMT were modeled for weekday activity, consequently these estimates assume 365 weekdays.
2. Emission factors for vehicles based on EMFAC files for 2030, based on LDA, LDT1, LDT2, and motorcycle for San Bernardino at 30 mph (URBEMIS default).
3. Starting emission factors are based on the weighted average distribution of time between trip starts based on URBEMIS defaults.
4. Weekend traffic is approximately 95% of weekday traffic. Overall CO_2 emissions are consequently 98.6% of those calculated based on weekday activity only (1.0*5/7 + 0.95*2/7).
5. $CO_2e=CO_2/0.95$: The United States Environmental Protection Agency (USEPA) recommends assuming that CH_4, N_2O, and HFCs are 5% of emissions on a CO_2e basis.

Abbreviations:
CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide Equivalent
g - gram
GHG - Greenhouse Gas
HFC - Hydro fluorocarbon
mph - miles per hour
N_2O - Nitrous oxide
USEPA - United States Environmental Protection Agency
VMT - Vehicle Miles Traveled

Source: Environ International Corporation

Table 4.7-41
MITIGATED GHG EMISSIONS FROM VEHICLES FOR THE YEAR 2030 WITH PAVLEY STANDARDS

Neighborhood	Annual Products (Added Annual Trips)[1]	Added Annual Vehicle Miles of Travel (VMT)[1]	Emission Factor Running (g/mile)[2]	Emission Factor Starts (g/start)[3]	Annual CO_2 Emissions Running (tonne)	Annual CO_2 Emissions Starts (tonne)	Total Annual CO_2 Emissions (tonne)	Total Annual Adjusted CO_2 Emissions (tonne)[4]	Total Annual CO_2e Emissions (tonne)[5]
I	1,872,450	27,150,525			7,968	194	8,163	8,046	8,470
I	709,925	10,222,920			3,000	74	3,074	3,030	3,190
II	4,827,855	44,416,120			13,035	501	13,537	13,343	14,046
III	7,877,430	73,260,245	293	104	21,501	818	22,319	22,000	23,158
IV	2,066,265	26,861,445			7,883	215	8,098	7,982	8,402
Total	**17,353,925**	**181,911,255**			**53,388**	**1,802**	**55,190**	**54,402**	**57,265**

Notes:
1. Daily trips and VMT were modeled for weekday activity, consequently these estimates assume 365 weekdays.
2. Emission factors for vehicles based on EMFAC files for 2030, based on LDA, LDT1, LDT2, and motorcycle for San Bernardino at 30 mph (URBEMIS default).
3. Starting emission factors are based on the weighted average distribution of time between trip starts based on URBEMIS defaults.
4. Weekend traffic is approximately 95% of weekday traffic. Overall CO_2 emissions are consequently 98.6% of those calculated based on weekday activity only (1.0*5/7 + 0.95*2/7).
5. $CO_2e=CO_2/0.95$: The United States Environmental Protection Agency (USEPA) recommends assuming that CH_4, N_2O, and HFCs are 5% of emissions on a CO_2e basis.

Abbreviations:
CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide Equivalent
g - gram
GHG - Greenhouse Gas
HFC - Hydro fluorocarbon
mph - miles per hour
N_2O - Nitrous oxide
USEPA - United States Environmental Protection Agency
VMT - Vehicle Miles Traveled

Source: Environ International Corporation

Table 4.7-42 (1 of 2)
GHG EMISSIONS FACTORS FOR LCRSP MUNICIPAL SOURCES

Source[1]	Energy Requirements	Units	Emission Factor	Units	Source Quantity	Units	Total CO_2e Emissions [Tonne CO_2e per year]
Lighting							
Public Lighting[2]	149	kW-hr/capita/yr	0.043	tonne CO_2e/capita/year	24,539	residents (capita)	1,061
						Public Lighting Total:	**1,061**
Municipal Vehicles							
Municipal Vehicles[3]	--	--	0.05	tonne CO_2e/capita/year	24,539	residents (capita)	1,227
						Municipal Vehicles Total:	**1,227**
Water and Wastewater[12]							
Groundwater Supply and Conveyance (Potable)[4,5]	950	kW-hr/acre-foot	0.28	tonne CO_2e/acre-foot	7,020	acre-feet/yr	1,940
State Water Project Supply and Conveyance (Potable)[4,6]	3,236	kW-hr/acre-foot	0.94	tonne CO_2e/acre-foot	1,119	acre-feet/yr	1,053
Surface Water[4,6]	370	kW-hr/acre-foot	0.11	tonne CO_2e/acre-foot	2,035	acre-feet/yr	219
Water Treatment (Potable)[7]	463	kW-hr/acre-foot	0.13	tonne CO_2e/acre-foot	10,174	acre-feet/yr	1,371
Water Distribution (Potable)[8]	391	kW-hr/acre-foot	0.11	tonne CO_2e/acre-foot	10,174	acre-feet/yr	1,157
Wastewater Treatment (Indirect Emissions)[9]	815	kW-hr/acre-foot	0.24	tonne CO_2e/acre-foot	10,174	acre-feet/yr	2,411
Wastewater Treament Plant (Direct Emissions)[10]	--	--	0.084	tonne CO_2e/capita/year	24,539	residents (capita)	2,070
Recycled Water Distribution (Non-Potable)[11]	400	kW-hr/acre-foot	0.12	tonne CO_2e/acre-foot	0	acre-feet/yr	0
						Water and Wastewater Total:	**10,221**
						Municipal Sources Total:	**12,509**

Notes:

1. Public Lighting includes streetlights, traffic signals, area lighting and lighting municipal buildings. Emissions from the Water and Wastewater category are primarily due to the energy required for supply, treatment and distribution. GHG emissions attributed to electricity use are calculated using the Southern California Edison carbon-intensity factor.

2. Emission factor for public lighting is based on a study of energy usage and GHG emissions from Duluth, MN (Skoog, 2001) and the electricity generation emission factor from Southern California Edison. Lytle Development Company plans to incorporate energy-saving light fixtures where feasible (Lytle Creek Ranch Specific Plan, 2008). Energy savings from this potential measure were not quantified for this analysis.

3. Emission factors for municipal vehicles are based on the most conservative number from studies of GHG emissions for four cities of different sizes: Medford, MA; Duluth, MN; Northampton, MA; and Santa Rosa, CA. Population data provided by the US Census (2000).

4. Water supply and conveyance is based on three different sources: groundwater, water purchased from the State Water Project, and surface water. According to the Urban Water Management Plan for West Valley Water District, 69% of the water supply is from groundwater pumping, 11% is from the State Water Project, and 20% is from surface water.

5. Emission factor for groundwater supply and conveyance is based on information provided in CEC 2005 for Chino Basin and the electricity generation emission factor from Southern California Edison. This factor is applied to potable water demand.

Source: Environ International Corporation

Table 4.7-42 (2 of 2)
GHG EMISSIONS FACTORS FOR LCRSP MUNICIPAL SOURCES

6. Emission factors for the State Water Project and surface water supply and conveyance are based on information provided by Wilkinson 2000 and CEC 2005. The electricity generation emission factor is based on information from Southern California Edison.

7. Emission factor for water treatment is based on information provided in CEC 2005 and the electricity generation emission factor from Southern California Edison. This factor is applied to potable water demand.

8. Emission factor for water distribution is based on a Navigant Consulting refinement of a CEC study on the energy necessary to distribute 1 million gallons of treated water and the Southern California-specific electricity generation emission factor from Southern California Edison. This factor is applied to potable water demand.

9. Emission factor for wastewater treatment is based information provided in CEC 2005 and the electricity generation emission factor from Southern California Edison.

10. Emission factor for the wastewater treatment plant accounts for direct methane and nitrous oxide emissions from wastewater. The value used here is based on the 2005 US inventory of GHG emissions for domestic wastewater treatment plants (USEPA) divided by the 2005 US population. (25 Tg CO_2e/year/296,410,404 people = 0.084 tonne CO_2e/capita/year)

11. Emission factor for recycled water distribution is based on information provided in CEC 2005 and the electricity generation emission factor from Southern California Edison.This factor is applied to non-potable water demand.

Abbreviations:

CEC - California Energy Commission
CO_2e - carbon dioxide equivalent
EMWD - Eastern Municipal Water District
GHG - greenhouse gas
kW-hr - kilowatt hour
MW-hr - megawatt hour
NYSERDA - New York State Energy Research and Development Authority
USEPA - United States Environmental Protection Agency

Sources:

California Climate Action Registry (CCAR) Database. Southern California Edison PUP Report. 2006.

California Energy Commission. 2005. *California's Water-Energy Relationship*. Final Staff Report. CEC-700-2005-011-SF.

California Energy Commission. 2006. *Refining Estimates of Water-Related Energy Use in California.* PIER Final Project Report. Prepared by Navigant Consulting, Inc. CEC-500-2006-118. December.

City of Medford. 2001. Climate Action Plan. October. http://www.massclimateaction.org/pdf/MedfordPlan2001.pdf

City of Northampton. 2006. Greenhouse Gas Emissions Inventory. Cities for Climate Protection Campaign. June. http://www.northamptonma.gov/uploads/listWidget/3208/NorthamptonInventoryClimateProtection.pdf

City of Santa Rosa. Cities for Climate Protection: Santa Rosa. http://ci.santa-rosa.ca.us/City_Hall/City_Manager/CCPFinalReport.pdf

West Valley Water District. 2006. Urban Water Management Plan. January. http://www.scag.ca.gov/rcp/pdf/uwmp/SanBernardino/WVWD-UWMP-2006-2.pdf

Skoog., C. 2001. Greenhouse Gas Inventory and Forecast Report. City of Duluth Facilities Management and The International Council for Local Environmental Initiatives. October.http://www.ci.duluth.mn.us/city/information/ccp/GHGE

USEPA. 2007. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005. #430-R-07-002. April. http://epa.gov/climatechange/emissions/downloads06/07Waste.pdf

Wilkinson, Robert. 2000. Methodology for Analysis of the Energy Intensity of California's Water Systems, and An Assessment of Multiple Potential Benefits through Integrated Water-Energy Efficiency Measures.

Source: Environ International Corporation

In total, all water and wastewater supply, treatment, and distribution for the proposed project is expected to produce approximately 10,221 tonnes of CO_2e annually.

- **Public lighting**. Lighting sources contribute to GHG emissions indirectly, via the production of the electricity that powers these lights. Lighting sources considered in this source category include streetlights, traffic signals, area lighting for parks and lots, and lighting in public buildings. The emission factor for public lighting is shown in Table 4.7-42 (GHG Emissions Factors for LCRSP Municipal Sources). Data from a report by the City of Duluth shows that the amount of electricity demanded for all types of public lighting is 149 kWh per capita per year.[278,279] The Applicant plans to incorporate energy-saving light fixtures where feasible. Energy savings from this potential measure were not quantified for this analysis.

  Using the City of Duluth's study, the SCE-specific carbon-intensity emission factor and the proposed project's estimated population (24,539 persons), emissions from public lighting were calculated. The project-specific emission factor for public lighting would be about 0.043 tonnes CO_2e per capita per year. Public lighting emissions attributable to the proposed project are estimated to account for approximately 1,061 tonnes CO_2 per year. This number is likely a conservative estimate since the proposed project is a master-planned community and may require fewer lights than the City of Duluth.

- **Municipal vehicles**. GHG emissions from municipal vehicles are due to direct emissions from the burning of fossil fuels. Municipal vehicles considered in this source category include vehicles such as police cars, fire trucks, and garbage trucks. The emission factor for municipal vehicles is shown in Table 4.7-42 (GHG Emissions Factors for LCRSP Municipal Sources). Data from reports by the Cities of Medford, Massachusetts, Duluth, Minnesota; Northampton, Massachusetts; and Santa Rosa, California[280] show that the CO_2 emissions from municipal

[278]/ City of Duluth Facilities Management and The International Council for Local Environmental Initiatives (Skoog, Carlin), Greenhouse Gas Inventory and Forecast Report with Recommendations for the Development of Duluth's Local Action Plan, October 2001, Appendix B (http://www.ci.duluth.mn.us/city/information/ccp/GHGEmissions.pdf).

[279]/ This factor was calculated by summing the total electricity needs for municipal uses (municipal buildings, parks, and lots with area lighting, street lighting, and traffic signals), totaling 12,933,962 kWh, and dividing by the City of Duluth's estimated population. The City of Duluth's estimated population (86,998 persons) was calculated by dividing the City of Diluth's reported GHG emissions (2,322,834 tonnes) by its reported per capita emissions (26.7 tonnes).

[280]/ City of Medford, Massachusetts Climate Action Plan, October 2001 (http://www.massclimateaction.org/pdf/MedfordPlan2001.pdf); City of Northampton, Massachusetts, Greenhouse Gas Emissions Inventory, June 2006 (http://www.northamptonma.gov/uploads/listWidget/3208/NorthamptonInventory ClimateProtection.pdf); City of Santa Rosa, California, Cities for Climate Protection: Santa Rosa, 2001 (http://ci.santa-rosa.ca.us/City_Hall/City_Manager/CCPFinalReport.pdf); City of Duluth (Skoog, Carlin), Minnesota, Greenhouse Gas Inventory and Forecast Report with Recommendations for the Development of Duluth's Local Action Plan, October 2001 (http://www.ci.duluth.mn.us/city/information/ ccp/GHGEmissions.pdf).

vehicles would be approximately 0.05 tonnes per capita per year.[281] Using these studies and the expected LCRSP population of 24,539 individuals, emissions from municipal vehicles in the proposed project were calculated. Municipal vehicle emissions in the proposed project are estimated to account for approximately 1,227 tonnes CO_2e per year.

In total, all municipal sources including water, wastewater, public lighting and municipal vehicles for the proposed project are expected to produce approximately 12,509 tonnes of CO_2e annually.

◊ **Area sources**. Area sources emissions stem from hearths (including gas fireplaces, wood-burning fireplaces, and wood-burning stoves) and small mobile fuel combustion sources such as lawnmowers. Fuel combustion associated with these sources produce direct GHG emissions. Emissions from natural gas-fired stoves and natural gas heating are already included in the residential sources (see Table 4.7-29 [Energy Use per Residential Dwelling Unit: Appliances and Plug-Ins] through Tables 4.7-32 [Estimated CO_2e Emissions per Dwelling Unit]).[282] Calculations based on the URBEMIS method were performed for the remaining types of area sources, natural gas fireplaces, and lawn maintenance.

For the purpose of presenting a worst-case analysis, the proposed project will have 8,407 natural gas-burning fireplaces in its residential units. Wood-burning stoves or fireplaces are prohibited.[283] Direct GHG emissions from these sources were estimated by multiplying the energy use per year by the CO_2 emission factor for natural gas combustion. Annual energy use was determined by the number of fireplaces, the average energy use of each fireplace, and the URBEMIS default fireplace usage rate value of 200 hours/year.[284] In the absence of site-specific energy use values for fireplaces, the URBEMIS default values of 20,000 BTU/hour/fireplace for multi-family residences, and 30,000 BTU/hour/fireplace for single-family houses were used. Tables 4.7-43 (GHG Emissions from Area Sources - Hearth Fuel Consumption) and Tables 4.7-44 (GHG Emissions from Area Sources – Landscape Equipment Fuel Consumption) shows an estimated 2,339 tonnes CO_2 will be generated annually by fuel combustion in natural gas-burning fireplaces.

[281]/ In an effort to be conservative, the largest per capita number from these four reports was used (Source: City of Duluth Facilities Management and The International Council for Local Environmental Initiatives (Skoog, Carlin), Greenhouse Gas Inventory and Forecast Report with Recommendations for the Development of Duluth's Local Action Plan, October 2001).

[282]/ The methods used to calculate natural gas use for heating, water heating, and cooking described in the residential emission calculations are conservative and may cause slight differences in the natural gas usage determined using URBEMIS as was used in the assessment of criteria pollutants herein. Both methods are, however, appropriate for the purpose of the individual sections. URBEMIS is designed for worst-day local emissions of criteria pollutants as opposed to total emissions of GHGs.

[283]/ Pursuant to SCAQMD Rule 445(d), adopted March 7, 2008: "(1) No person shall install a permanently installed wood burning device into any new development. (2) Nothwithstanding the requirements of paragraph (d)(1), effective September 8, 2008, no person shall sell, offer for sale, supply, or install, a new or used permanently installed indoor or outdoor wood burning device or gaseous-fueled device unless it is one of the following: (A) A U.S. EPA Phase II-Certified wood burning heater; or (B) A pellet-fueled wood burning heater; or (C) A masonry heater; (D) A wood burning device or fireplace determined to meet the U.S. EPA particulate matter emission standard established by Title 40 Code of Federal Regulations, Part 60, Subpart AAA, February 28, 1988 or subsequent revisions; of (E) A dedicated gaseous-fueled fireplace."

[284]/ URBEMIS default value.

Landscaping emissions originate from equipment such as lawn mowers, blowers, trimmers and chain saws.[285] For residential areas, landscape-based GHG emissions are directly related to the number of residential units, the annual equipment usage rate, and landscape equipment CO_2 emissions factors. URBEMIS default values were employed for the annual usage rate. Tables 4.7-43 (GHG Emissions from Area Sources - Hearth Fuel Consumption) and Tables 4.7-44 (GHG Emissions from Area Sources – Landscape Equipment Fuel Consumption) shows an estimated 31 tonnes CO_2 will be generated per year.

◊ **Emissions sources not quantified in inventory**. Several emissions sources were not quantified in this inventory, due to their estimated relatively small contribution to GHG emissions.[286] These sources include emissions from recreational sources and refrigeration leaks, as described in more detail below.[287]

- **Pools and recreation centers**. The proposed project includes neighborhood community areas and parks which may also include pools and recreation centers. At the entitlement stage of development, the degree of uncertainty in the potential end-uses of these recreational areas makes a meaningful quantification of GHG emissions difficult. As a result of this uncertainty, these emissions were not quantified.

- **Refrigeration leaks**. Emissions associated with leaks of high GWP gases (such as from refrigeration leaks) were not quantified. At the entitlement stage, the degree of uncertainty in the potential facilities with sources that may have refrigeration leaks make a meaningful quantification of GHG emissions difficult. In addition, since refrigeration systems will be new, they are likely efficient and should be designed to reduce the amount of leaks of high global warming potential gases. As a result of this uncertainty, these emissions were not quantified.

◊ **Project design features that reduce GHG emissions**. The proposed project incorporates many design features to reduce GHG emissions. The follwing section describes those design features that were incorporated into this analysis, either directly or indirectly. This section also lists those features that were not quantified but would likely yield further GHG emissions reductions.

- **Project design features incorporated into this analysis.**

  - **Reductions in emissions from mobile sources**. (1) Project design will provide physical linkages between land uses that promote walking and bicycling and provide alternatives to automobile use; (2) Project design will link together parks and other activity nodes on the site via a 23.5-acre "Grand Paseo"; (3) The compact building design approach will reduce its footprint and allow for transportation and open space corridors; (4) The

[285]/ According to Appendix B of the URBEMIS User's Guide, landscaping emissions from non-residential land uses also includes contributions from air compressors, generators and pumps, which are affiliated with commercial applications.
[286]/ Typically less than 1 percent of the overall inventory.
[287]/ Black carbon was also not considered. Major sources of black carbon emissions are not proposed.

commercial areas will be centrally located and walkable; and (5) The circulation system has been designed to encourage residents to make multiple stops per trip.

- ✧ **Vegetation preservation**. (1) A minimum of 829.2 acres will be preserved as natural (undisturbed) open space; and (2) Up to 30,000 trees will be planted on the project site.

- ✧ **Energy savings**. (1) Homes and businesses will exceed 2008 Energy-Efficiency Standards by at least 15 percent; and (2) Where appliances are offered by the builder/developer, Energy Star appliances will be installed. The following project design features, while not individually quantified, may be incorporated to meet the 15 percent reduction over 2008 Energy-Efficiency Standards to which the Applicant has committed: Installation of: (a) energy-efficient heating and cooling systems, equipment, and control systems; (b) GE Energy Monitoring Dashboards to provide real-time and historic feedback to residents on their home's energy consumption; (3) lighting control systems; and (d) light-colored "cool" roofs.[288]

- ✧ **Area sources**. Wood-burning fireplaces are prohibited.

- ♦ **Features not incorporated into this analysis**. There are number of Applicant-proposed design features that will result in the reduction of GHG emissions from the proposed project. These cannot be quantified but they are listed below.

  - ✧ **Energy use in the built environment**. (1) Purchase of green power beyond the requirements of the RPS; (2) Installation of (a) additional energy-efficient appliances, such as clothes dryers, ventilation fans, and ceiling fans (e.g., Energy Star or equivalent); (b) efficient pumps and motors for pools and spas; and (c) LEDs for traffic and street; (3) Providing education on energy efficiency, water conservation, and waste recycling services; (4) For mechanically or naturally ventilated spaces in the building, meet minimum requirements of Section 121 of the California Energy Code or the applicable local code, whichever is more stringent; (5) Adhesives, paints, stains, coatings, and carpet shall be of low VOC; and (6) MERV 6 or higher filters are installed on central air and heating systems.

  - ✧ **Reductions in emissions from mobile sources**. Connections to mass transit to facilitate and promote alternative transportation;

[288]/ Cool-roof technology can reduce urban heat-island impacts. Specific features may include high solar reflectance index (SRI) roof materials (roofs sloped at 2:12 will have an SRI of at least 78 and roofs sloped greater than 2:12 will have an SRI of at least 29) and cool-roof coverings and coatings. Although these features are recognized by the Climate Action Team, they are difficult to quantify at the level of specification available for the proposed project. Consequently, this analysis does not take credit for these project design features when calculating the project's break from BAU. This may contribute to an underestimation of the net reduction from BAU.

- ✧ **Water conservation**. Turf will not occupy more than 60 percent of the landscaped area in the home lots.

- ✧ **Solid waste**. Recycling centers will be provided in readily accessible areas within buildings for depositing, storage, and collection of non-hazardous materials for recycling.

- **Summary of emissions from the proposed project.** The emissions and relative magnitude of emissions from the various aspects of the proposed project, when AB 1493 is taken into account, are presented in Table 4.7-45 (Summary of GHG Emissions for LCRSP Including Pavley Standards). One-time vegetation emissions are estimated to be approximately minus 1,120 tonnes CO_2 (net decrease in the amount of CO_2 released), the negative value indicates a one-time net decrease in emissions. One-time construction emissions are estimated to be approximately 257,552 tonnes CO_2e. Emissions from mobile sources are estimated to be approximately 53,144 tonnes CO_2e per year or 57 percent of the annual project emissions. Estimated emissions from residential buildings of 21,851 tonnes CO_2e per year comprise 23 percent of the annual project emissions. Estimated emissions from non-residential buildings of 4,133 tonnes CO_2e per year comprise 4 percent of the annual project emissions. Emissions from municipal sources (e.g., water distribution, public lighting, and municipal vehicles) are estimated to be approximately 13 percent of the annual project emissions. Emissions from area sources (e.g., fireplaces and lawn maintenance) are estimated to be 2,370 tonnes or less than 1 percent of annual project emissions. If the one-time emissions are annualized, assuming a 40-year development life, the annual emissions are approximately 104,538 tonnes per year.

  The Global Warming Solutions Act of 2006 (AB 32) requires that GHG emissions from California be reduced to 1990 levels by 2020. This represents a reduction of approximately 28.3 percent from projected 2020 growth. In addition to reducing overall energy consumption, the goals of AB 32 are likely to be reached by increasing renewable or non-carbon producing electricity production and changing the transportation system to rely on a set of low-carbon fuels. Although some measures that are being implemented as a part of AB 32 are incorporated into this analysis (such as the new fuel efficiency standards and the 33 percent renewable power standard), other measures that have yet to be implemented are not included. Accordingly, actual emissions are likely to be lower as more measures to implement AB 32 are enacted. The discussion below puts the proposed project's GHG emissions in context and includes an analysis of a BAU scenario compared to the proposed project.

  Governor Schwarzenegger's Executive Order S-3-05 set a target to reduce GHG emissions by 2050 to levels 80 percent less than the 1990 levels. It is likely that future measures will be implemented to reach this goal that similarly may result in reductions of GHG emissions for project-related sources beyond those stated in this report.

- **Life-cycle emissions of building materials**. An estimate of "life-cycle" GHG emissions (i.e., GHG emissions from the processes used to manufacture and transport materials used in the buildings and infrastructure) is presented in herein. This estimate is to be used for comparison purposes only and is not included in the final inventory as these emissions would be attributable to other industry sectors under AB 32. For instance, the concrete industry is required by law to report emissions and undergo certain early action

emission reduction measures under AB 32. Furthermore, for a life-cycle analysis for building materials, somewhat arbitrary boundaries must be drawn to define the processes considered in the life-cycle analysis.[289] Recognizing the uncertainties associated with a life-cycle analysis, the California Air Pollution Control Officers Association (CAPCOA) released a white paper which states: "The full life-cycle of GHG emissions from construction activities is not accounted for in the modeling tools available, and the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level."[290]

The calculations and results discussed herein are estimates and should be used only for a general comparison to the overall GHG emissions estimated presented in Appendix III-G (Climate Change Technical Report). Life-cycle assessment (LCA) emissions vary based on input assumptions and assessment boundaries (e.g., how far back to trace the origin of a material). Assumptions made in this report are generally conservative; however, due to the open-ended nature of LCAs, the analysis is highly uncertain.

The life-cycle GHG emissions include the embodied energy from the materials manufacture and the energy used to transport those materials to the site. The analysis presented in Appendix III-G (Climate Change Technical Report) compares the life cycle GHG emissions to the overall annual operational emissions. The materials analyzed include materials for: (1) residential and non-residential buildings; and (2) site infrastructure. The overall life-cycle emissions from construction materials was estimated to be approximately 41,833 – 356,138 tonnes CO_2/year. This represents 1 – 9 percent of the annualized GHG emissions from the proposed project, assuming a 40-year lifespan of the project.

The life-cycle GHG emissions for buildings were estimated by conducting an analysis of available literature on LCAs for buildings. According to these studies, approximately 75 – 97 percent of GHG emissions from buildings are associated with energy usage during the operational phase; the other 3 – 25 percent of the GHG emissions are due to material manufacture and transport. Using the GHG emissions from the operation of buildings, 3 to 25 percent of building emissions corresponds to approximately 0.8 – 9 percent of the project's emissions.

The analysis presented in Appendix III-G (Climate Change Technical Report) calculated the life-cycle GHG emissions for certain components of infrastructure, such as roads, storm drains, utilities, gas, electricity, and cable, and considered the manufacture and transport of concrete and asphalt only, as it was assumed that other construction materials such as steel would be present in much smaller quantities. Because the manufacture of concrete has a higher CO_2 emission factor and most construction estimates higher quantities of concrete than asphalt, the majority of the emissions for infrastructure result from the manufacture of concrete. Because the asphalt and concrete are locally sourced, the transportation emissions are relatively small. If a 40-

[289]/ For instance, in the case of building materials, the boundary could include the energy to make the materials, the energy used to make the machine that made the materials, and the energy used to make the machine that made the machine that made the materials.

[290]/ California Air Pollution Control Officers Association, CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008 (http://www.capcoa.org/ceqa/?docID=ceqa&PHPSESSID=df1348d6f7eff0fc2a8263d19f6d10dd).

year lifespan of the infrastructure is assumed, the total annualized emissions from embodied energy in infrastructure materials are approximately 0.24 percent of the project emissions.

The overall life cycle emissions, annualized by 40 years, are estimated at 1,046 – 8,903 tonnes CO_2/year or 1.1 – 9 percent of the annualized GHG emissions from the proposed project. The bulk of these emissions (0.8 – 9 percent) are from general life-cycle analysis studies and do not reflect specific information from the proposed LCRSP.

The calculations and results are estimates and should be used only for a general comparison to the overall GHG emissions estimated in Appendix III-G (Climate Change Technical Report). LCA emissions vary based on input assumptions and assessment boundaries (e.g., how far back to trace the origin of a material). Assumptions are generally conservative; however, due to the open-ended nature of LCAs and the fact that literature evaluation and not site-specific studies was used to analyze the embodied energy, the analysis should be considered to yield highly uncertain results. Additionally, these estimates likely double count emissions from other industry sectors.

◊ **Project GHG emissions inventory and consistency with AB 32 goals**

- **LCRSP GHG inventory in context**. This analysis is intended to place the GHG emissions from the proposed LCRSP in context with respect to intensity, consistency with AB 32 goals, and magnitude. For the intensity comparison, the built environment emissions were compared with that from a BAU comparison of standard energy use for buildings in California in the same climate zone. In addition, anticipated mobile emissions were compared to San Bernardino County and emissions savings from water usage in the development. For comparison with AB 32 goals, the GHG emissions were compared with the levels likely to be mandated under AB 32. Finally, the emissions from the project at build-out were compared to California and global GHG emissions in order to put the project's emissions in a global context.

  - **Characterization of emissions**. In 2004, 81 percent of GHG emissions (in CO_2e) from California were comprised of CO_2 emissions from fossil fuel combustion, with 4 percent comprised of CO_2 from process emissions. CH_4 and N_2O accounted for 5.6 and 6.8 percent of total CO2e, respectively, and high GWP gases[291] accounted for 2.9 percent of the CO_2e emissions. Transportation is by far the largest end-use category of GHG emissions. Transportation includes that used for industry (i.e., shipping) as well as residential use.

  - **Comparison with AB 32-mandated emissions limits**. AB 32 requires that statewide GHG emission in 2020 be equal to 1990 levels. California-wide GHG emissions in 1990 were 0.427 billion tonnes.[292] It is projected that emissions in 2020 under a BAU

[291]/ Such as HFCs and PFCs.
[292]/ California Air Resources Board (http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm).

scenario accounting for growth will be 0.596 billion tonnes.[293] This would require a 28.3 percent decrease in emissions from BAU by 2020 to achieve AB 32 goals. The population in California is projected to be 42,210,000 persons in 2020. In order to achieve AB 32-mandated goals, as indicated in calculation details presented in Table 4.7-46 (LCRSP Context Supporting Calculations), the per capita emissions would have to be 10.1 tonnes CO_2e. The proposed project's estimated emissions are approximately 100,396 tonnes per year or 4.0 tonnes per capita per year.[294] The California per capita CO_2 emissions includes industries such as heavy industry, refining, and transportation of materials while the proposed project's per capita CO_2 emissions do not include these emissions. AB 32 will be reducing emissions in a variety of different ways, including increasing energy efficiency and introducing more renewable energy sources. It is difficult to compare the proposed project's per capita emissions to the AB 32 goals as it is not clear what fraction of the reduction will be achieved in which sectors, what portion will be achieved from energy efficiency, and what fraction will be achieved by renewable resources. This is discussed more fully below.

- **BAU comparison**. In order to put the GHG emission inventory into context and justify an improvement heading towards meeting the reduction goals set for 2020, it is necessary to compare the GHG emission inventory expected for the proposed project to the GHG emissions that would occur from a community that would be built today without the project design features and energy reduction commitments made by the Applicant and without the regulations that have been promulgated to comply with AB 32. This baseline comparison is referred to as the BAU scenario. This represents the GHG emission inventory if things were continued to be built according to current standards, and was the scenario that the CARB used to estimate the required 28.3 percent reduction in emissions. The major categories of the GHG emission inventory are considered separately. These include residential and non-residential buildings, mobile sources, municipal lighting, and water sources. The remaining categories include municipal vehicles and area sources. These categories represent a small fraction of the total inventory and do not have appropriate emission factors to quantify the reductions that are likely to occur at the proposed project compared to BAU.

  - **Vegetation**. The Applicant has committed to preserving 908.0 acres of land as natural (undisturbed) open space instead of building out in this area. In addition, the Applicant has committed to planting 30,000 new trees. The BAU analysis for vegetation assumes that neither of these

[293]/ California Air Resources Board (http://www.arb.ca.gov/cc/inventory/data/forecast.htm#summary_forescast).
[294]/ Based upon 24,539 residents.

commitments is taken and the land is fully developed without replanting. Table 4.7-47 (BAU CO_2 Sequestration Change due to Land-Use Change), Table 4.7-48 (BAU Carbon per Acre for IPCC Land Types), Table 4.7-49 (BAU CO_2 Sequestration Capacity of New Vegetation Plantings), and Table 4.7-50 (BAU Change in CO_2 Sequestration due to Land-Use Changes and New Vegetation Plantings) follow the same methodology presented in discussion regarding vegetation change, above. The BAU vegetation results in a one-time release of approximately 12,988 tonnes CO_2e, the sequestration capacity of the removed vegetation. This is a 109 percent increase in CO_2e emissions from the proposed project.

- **The built environment**. The energy use and GHG emissions from the modeled homes for the proposed project were compared to the energy use and GHG emissions from a minimally 2005 Energy-Efficiency Standards-compliant building of the same size. It was assumed that the comparison homes had standard instead of Energy Star appliances. Finally, it was assumed that the fraction of renewable energy supplied to the project would remain at present levels. The same distribution of home sizes and climate zone location is used for the BAU analysis. As illustrated in the tables presented in Appendix III-G (Climate Change Technical Report), the proposed project is 29 percent better than the BAU home for emissions from energy use covered by the 2008 Energy-Efficiency Standards.

  When major appliances are considered, the homes within the proposed project are about 27 percent better than 2005 Title 24 and approximately 22 percent better than the 2008 Energy-Efficiency Standards-compliant homes. When the rest of plug-in energy use is considered, homes within the proposed project are about 29 percent better than 2005 Title 24 and approximately 24 percent better than the 2008 Energy-Efficiency Standards-compliant homes. These comparisons are summarized in Table 4.7-34 (CO_2e Emissions from Electricity and Natural Gas Usage in Residential Dwelling Units with 2020 Renewable Portfolio Standards. Areas where the developer/builder has control over the energy use (i.e. building envelope and major appliances), show an improvement over BAU. This comparison does not take into account the energy use of occupants, which is expected to decrease as people become more conscious of energy use and climate change issues and more sensitive to the cost of energy.

CO_2 emissions per dwelling unit for homes within the proposed project are about 13.5 tonnes per dwelling unit per year, excluding renewable energy reductions. For the BAU housing, emissions are approximately 16.7 tonnes per dwelling unit per year. Homes within the proposed project, per dwelling unit, emit approximately 3.2 tonnes less CO_2 per year than the BAU housing.

Homes within the proposed project are 15 percent more energy efficient than a minimally 2008 Energy-Efficiency Standards-compliant home. As such, the project's residential units are heading toward meeting AB 32 goals on a per dwelling unit basis, without any decrease in GHG intensity from energy production, which is likely to occur. It also does not account for changes in occupant behavior and on-site renewable energy.

A similar comparison for non-residential buildings compares the proposed project's non-residential buildings energy use and GHG emissions from a minimally 2005 Energy-Efficiency Standards-compliant building. The same mix of non-residential building types and square footage is assumed. For energy use subject to Title 24, the proposed project's non-residential buildings will be 15 percent better than 2008 Energy-Efficiency Standards. Unlike residential homes, the developer/ builder has little control over the appliances and plug-in energy use that will occur in the buildings. When typical plug-in energy use is considered for the non-residential buildings, the proposed project is 25 percent better than 2005 Energy-Efficiency Standards. This does not account for non-residential occupants using energy-efficient appliances.

There are some uncertainties and limitations regarding non-residential building BAU comparison. A baseline energy use value for non-residential buildings was used based upon survey data of current building stock. Although the correct comparison for BAU is with the Title 24 standards that were in effect in 2008 (i.e., 2005 Energy-Efficiency Standards) as assumed in the "Climate Change Scoping Plan," a direct comparison with those standards is not available. Current building stock is likely less efficient than the requirements for new buildings under Title 24, however, this was assumed to be the baseline values in this analysis since a better comparison of a standard Title 24-compliant building was not available.[295] Additionally, a

[295]/ In a comparative analysis it is important to consider the percent difference between the proposed scenario and the BAU scenario. The proposed scenario is based on energy consumption data for current building stock (rather than new buildings compliant with current building energy standards). Since the BAU scenario is based on the same core data set, the calculated percent difference is due only to the differences between the two scenarios.

generic mix of non-residential building uses was assumed in determining percentage reduction from electricity and natural gas. To the extent that the proposed project's mix changes, the calculated savings may differ.

- **Transportation**. Consistent with one of the options in the OPR Guidance, this section discusses a comparison of project emissions with the goals of AB 32.

The trip rates for a BAU scenario were estimated assuming no "project design features," such as local serving retail and pedestrian friendliness, and it was assumed that the same 8,407 dwelling units would be developed at a lower density, comparable to that of the nearby areas of the City. It was further assumed that the 8,407 dwelling units would be built with a mix of single-family and multi-family residences proportional to that in the City. The density for single-family homes in the BAU case was based on the minimum lot size in the City. The density for multi-family homes in the City was based on URBEMIS defaults.[296,297]

URBEMIS methodology was used to estimate the impact on trip generation of both the increased density of the project relative to the low-density unmitigated scenario and the mitigation factors. Two scenarios were modeled in URBEMIS, one using the proposed project's housing mix and density as well as the identified mitigation factors (mitigated scenario) and one using the housing mix and density based on the City, and not including mitigation factors (low-density unmitigated scenario). The input parameters to the URBEMIS operational mitigation factors used to model the mitigated scenario are shown in Table 4.7-51 (Trip Generation Rates based on URBEMIS).

The URBEMIS methodology for adjusting ITE trip generation rates results in an increase in the trip rates associated with these 8,407 dwelling units in the low-density unmitigated scenario due to the decreased density of the dwelling units and removal of other project design features. Table 4.7-51 (Trip Generation Rates based on URBEMIS) shows the residential land-use inputs and the trip rates and daily trips for the two scenarios, based on the URBEMIS output.

[296]/ The ratio of single-family to multi-family houses in the BAU case was based on 2005-2007 census data for the City. One-unit attached, one-unit detached, and 2-unit buildings were considered to be single family. All others, excluding mobile homes, were assumed to be multi-family. The definitions for these housing product types, based on URBEMIS modeling, differs from the definition of those unit types as presented in the LCRSP.

[297]/ The default for low-rise apartments (≤3 levels) and condominiums/townhouses (≤2 levels) was used.

The first step in estimating trip rates made by the residents under the low-density unmitigated scenario was to quantify the impact of the density of the proposed project and the mitigation factors included in the project relative to the BAU scenario. This was done using URBEMIS. Both scenarios were modeled using the same methodology, described in more detail below.

As discussed above, the trips generated by the residents of the proposed project represent growth; however, new non-residential areas do not necessarily represent growth since people would already be taking these trips. The new non-residential areas will only serve to displace the location of trips; therefore only those trips generated from the residential land uses will be accounted for in order to determine the GHG emissions from the mitigated scenario and the low-density unmitigated scenario.

URBEMIS uses the trip generation rates based on ITE trip generation rates for each land-use type. ITE trip generation rates vary over a range depending on several factors. For housing types, a key feature that changes trip rate is housing density. It has been determined that housing density scales with trip rates according to the following equation[298]:

Where:

$$Trip\ reduction = 0.6 \cdot \frac{1 - 19749 \cdot \left(\frac{4.814 + DU / Ac}{4.814 + 7.14} \right)^{-.0639}}{25914}$$

Trip reduction = The percent reduction from average ITE trip generation rate.

DU/ac = The number of dwelling units per acre for a specific land use type.

There is a sizable reduction in trips as compared to the average ITE trip generation rate for the housing density planned for the proposed project (mitigated scenario). URBEMIS has adopted the methodology of accounting for other project design features as reductions in the number of trips taken for a specific land use. For the proposed LCRSP, this includes a trip reduction for integrating both residential and non-residential development, incorporating local serving retail, mass transit, and a pedestrian factor and a bicycle friendliness factor.[299] These, along with

[298]/ South Coast Air Quality Management District (Jones & Stokes Associates), Software User's Guide, URBEMIS2007 for Windows, Appendix D, November 2007, p. D-15.
[299]/ All of these trip-rate reductions follow the methods described in URBEMIS user's guide, Appendix D.

housing density, modify the trip rate for the housing land-use categories.

It is likely that a portion of the project's residents would take public transportation when travelling out of the project. The proposed LCRSP includes specific enhancements to the public transportation in the region, including new bus stops and benches and coordination with Omnitrans. Trip reductions due to bus and Metrolink rail travel were taken into account in the URBEMIS model, as were reductions due to pedestrian and bicycle-friendly design. URBEMIS uses a transit service index which incorporates frequency of service but weights rail more heavily than bus transit. Trip reductions due to mode shifts incorporate the transit service index and a pedestrian/bicycle score.[300]

The value calculated herein includes all VMT generated by the project's residents commuting within the project area and all VMT generated by the project's residents commuting to and from the project site. According to the methodology above, 49,946 added trips per day are associated with the mitigated scenario,[301,302] as shown in Table 4.7-51 (Trip Generation Rates based on URBEMIS). The low-density unmitigated scenario generates an added 70,377 added trips per day or 141 percent of the trips associated with the mitigated scenario.

This ratio of trips generated for the low-density unmitigated scenario relative to the mitigated scenario was used to scale the VMT estimated using the EVTM model, resulting in an estimate of the VMT associated with the BAU scenario. This approach assumes that trip distances are the same in the two scenarios. This methodology results in an estimate of 66,970 added trips per day and 702,010 added vehicle miles traveled per day associated with the low-density unmitigated scenario, as shown in Table 4.7-52 (BAU Generation Rates and Vehicle Miles Based on Scaled Traffic Model).

These modified trip rates were applied to the same methodology outlined for the traffic calculations, including the weekend trip rate adjustment. Table 4.7-52 (BAU

[300]/ *Op. Cit*., Software User's Guide, URBEMIS2007 for Windows, p. 38.

[301]/ The 49,946 added weekday trips were predicted using the URBEMIS model. This URBMIS-based value was used in this analysis only to establish the percent trip reduction relative to the low-density unmitigated scenario also modeled in URBEMIS. The EVTM model estimate of 47,545 added daily trips provided by C&A was used to calculate project emissions. Note that the difference between the two methodologies is less than 5 percent.

[302]/ The analysis relies on the traffic numbers reported by C&A. To estimate the reductions due to the traffic mitigation measures, the trip generation in URBEMIS with and without the mitigation measures was calculated. The resulting percent reduction was used to scale the numbers provided by C&A to estimate the mitigated VMT consistent with the C&A analysis.

Generation Rates and Vehicle Miles Based on Scaled Traffic Model) shows a total VMT for the low-density unmitigated scenario as 256,263,761 miles per year. In addition, the BAU scenario would release approximately 100,168 tonnes of CO_2e per year. Table 4.7-53 (Mitigated GHG Emissions from Vehicles for the Year 2030 for BAU Scenario) shows that this is 30,479 miles per dwelling unit. The proposed project represents a 42 percent reduction in VMT and CO_2e emissions per year compared to BAU.

Additionally, there has been no reduction taken for changes in vehicle emissions anticipated from current regulations. Vehicle emissions will be reduced in the future independent of the development location, as the implementation of AB 32 will require improvements in vehicle mileage, increased use of public transit, and the incorporation of low-carbon fuels into the transportation fuel supply.[303] Transportation emissions presented here are based upon EMFAC2007 values, which are based upon past vehicle emission trends and do not incorporate the known regulatory actions described above. In fact, on a VMT basis, EMFAC2007 assumes that CO_2 emissions in 2030 are slightly higher than they are currently. This is clearly unlikely, given the mandates of AB 32 and the likelihood of federal regulation.

The annual VMT per dwelling unit for the proposed project is 21,638 miles. A 1995 study prepared for the CARB determined that annual VMT per dwelling units under “smart growth” principles should be 22,000 to 25,000 miles for suburban level 3 areas.[304] The proposed project will generate less VMT on a per dwelling unit basis than the CARB report suggests for a "smart growth" development.

- **Municipal sources**. With regards to water and wastewater, the BAU comparison for water and wastewater treatment and distribution was based on a community that would use approximately 10,174 acre-feet of water annually (10,174 acre-feet of potable water and no recycled water) and, absent more detailed assessment of project-related wastewater quantities, assumed a comparable 10,174 acre-feet of wastewater.[305]

[303]/ The Low Carbon Fuel Standard (LCFS) mandated under Governor Schwarzenegger's Executive Order S-01-07 and currently being developed by the CARB requires a reduction in carbon intensity of California's transportation fuels by at least 10 percent by 2020.

[304]/ JHK & Associates, Inc., Transportation-Related Land Use Strategies to Minimize Motor Vehicle Emissions: An Indirect Source Research Study, June 1995.

[305]/ For the purpose of this analysis, wastewater flows were assumed to equate potable water consumption. Wastewater flows are, however, typically less than water consumption based on water lost to lawn irrigation, swimming pools, washing cars, and other water consumption activities that do not result in the water being discharged into the sanitary sewer system.

Since the Applicant does not plan to implement any project design features beyond BAU for water and wastewater, these CO_2e emissions from the proposed project are expected to be equivalent to BAU. Table 4.7-54 (Municipal Sources Comparison of Business-as-Usual to Proposed Project) summarizes this analysis. The implementation of the RPS will reduce CO_2 emissions from this source, somewhat, but this reduction has not been quantified.

With regards to public lighting, the BAU comparison for public lighting assumes that energy efficient street lights will not be used. The proposed LCRSP encourages, but does not require, strategies to improve energy efficiency in lighting public areas. The Applicant to incorporate energy-saving lighting fixtures where feasible; however, any potential benefits were not quantified for this analysis. Table 4.7-54 (Municipal Sources Comparison of Business-as-Usual to Proposed Project) shows that the proposed project's public lighting is equivalent to BAU.

- **Comparison with State, global, and worldwide GHG emissions**. The emissions from the proposed project at build-out are compared to California and global GHG emissions to put the emissions from the project in context. The project's annual emissions are approximately 98,127 metric tonnes CO_2e per year and 256,432 tonnes of one-time emissions. If the one-time emissions are annualized by a development lifetime of 40 years (6,411 tonnes CO_2e per year), the overall yearly emissions are approximately 104,538 tonnes CO_2e per year. This is equivalent to approximately 4.3 tonnes per capita per year.[306]

  Worldwide emissions of GHGs in 2004 were 26.8 billion tonnes of CO_2e per year.[307] In 2004, the United States emitted about 7 billion tonnes of CO_2e.[308] Over 80 percent of the GHG emissions in the United States are comprised of CO_2 emissions from energy-related fossil fuel combustion. In 2004, California emitted 0.480 billion tonnes of CO_2e or about 7 percent of the United States emissions. Approximately 98,127 tonnes of CO_2e per year from the proposed project would be approximately 0.00039 percent of the worldwide emissions, 0.00149 percent of the United State's emissions, and 0.0218 percent of California's annual GHG emissions.

  In addition to the project design features that were taken into consideration in calculating the project's annual GHG emissions, as outlined in Table 4.7-17 (Sustainable Design Features), numerous "sustainable design features" are included in the proposed LCRSP or have been included as mitigation measures herein.

[306]/ Assuming, for the purpose of this analysis, a population of 24,539 individuals.
[307]/ Sum of Annex I and Annex II countries without counting Land-Use, Land-Use Change and Forestry (LLUCF). For countries that 2004 data was unavailable, the most recent year was used (http://unfccc.int/ghg_emissions_data/predefined_queries/items/3814.php).
[308]/ *Op. Cit.*, Inventory of U.S. Greenhouse Gas Emissions and Sinks (http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/RAMR6MBLP4/$File/06ES.pdf).

Table 4.7-43
GHG EMISSIONS FROM AREA SOURCES - HEARTH FUEL CONSUMPTION

Wood-burning Source	Quantity[1]	Amount of Wood per Fireplace[1]		Total Wood Burned Annually	CO_2 Emission Rate	Annual CO_2 Emission
		(lbs/year/unit)		(tonne/year)	(lbs CO_2/tonne wood)	(tonne/year)
Wood stoves	0	--		--	--	0
Wood fireplaces	0	--		--	--	0
					Wood Stoves and Fireplaces Total:	0
Natural Gas Fireplace Dwelling Unit Type	**Quantity[2]**	**Average Energy Use[3]**	**Usage Rate[4]**	**Energy Use per Year**	**CO_2 Emission[5]**	**Annual CO_2 Emission**
		(Btu/hour/unit)	(hours/year)	(Mbtu/year)	(lb CO_2/Mbtu)	(tonne/year)
Single-family	5,254	30,000	200	31,524	117	1,671
Multi-family	3,153	20,000	200	12,612	117	668
					Natural Gas Fireplaces Total:	2,339
					Hearth Fuel Combustion Total:	2,339

Notes:

1. There will be no wood-burning stoves or fireplaces at Lytle Creek Ranch.
2. For a conversative estimate, all single-family and multi-family residences were assumed to each have a natural gas fireplace. In addition, all dwelling units in the SFR-1, SFR-2, and SFR-3 land use categories were conservatively treated as single-family dwellings, regardless of the number of units per building.
3. Average energy use values are URBEMIS default values.
4. Usage rate of 200 hours/year is the URBEMIS default value.
5. Emission factor based on AP-42 value for natural gas combustion.

Abbreviations:
SFR = Single-Family Residential

Sources:
USEPA. 1995. AP-42, Fifth Edition. Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources. January. Available at: http://www.epa.gov/ttn/chief/ap42/
South Coast Air Quality Management District. Software User's Guide: URBEMIS2007 for Windows. Prepared by Jones & Stockes Associates. November.

Source: Environ International Corporation

Table 4.7-44
GHG EMISSIONS FROM AREA SOURCES – LANDSCAPE EQUIPMENT FUEL CONSUMPTION

Land Use Type	Quantity[1]	CO_2 emission factor[2]	Equipment Use Period[3]	Annual CO_2 emission
	(units)	(lbs/unit/day)	(days/year)	(tonne/year)
Single-family residential (DU)[4]	5,254	0.07	180	31
Landscape Equipment Fuel Combustion Total				**31**

Notes:

1. Land use information provided by Lytle Creek Ranch Specific Plan. All dwelling units in the SFR-1, SFR-2, and SFR-3 land use categories were conservatively treated as single-family dwellings, regardless of the number of units per building.
2. Emission factors provided by URBEMIS, based on estimates using CARB's OFFROAD2007 model.
3. Use period is assumed to be equal to the summer period of 180 days.
4. Based on estimates using the URBEMIS model, emissions from landscaping are mainly attributed to single-family residential land uses; the total acreage of non-residential land uses did not significantly impact the total landscaping CO_2 emissions. Thus, only landscaping emissions associated with single-family residences are calculated here.

Abbreviations:
BU = business unit
DU = dwelling unit
SFR = Single-Family Residential

Sources:

South Coast Air Quality Management District. Software User's Guide: URBEMIS 2007 9.2.4 for Windows. Prepared by Jones & Stockes Associates. November. Available at: http://www.aqmd.gov/CEQA/urbemis.html

Source: Environ International Corporation

Table 4.7-45 (1 of 2)
SUMMARY OF GHG EMISSIONS FOR LCRSP INCLUDING PAVLEY STANDARDS

Source	GHG Emissions		Percentage of Annual CO_2e Emissions[7] (%)
Vegetation[1]	tonnes CO_2e total	-1,120	NA
Construction (Non-Building)[2]		118,160	NA
Construction (Buildings)[2]		139,392	NA
Total (one time emissions)		**256,432**	NA
Residential[3]	tonnes CO_2e / year	21,530	22%
Non-Residential[4]		4,386	4%
Mobile[5]		57,265	58%
Municipal[6]		12,509	13%
Area		2,370	2%
Total (annual emissions)		**98,059**	NA
Annualized Total[8]	**tonnes CO_2e / year**	**104,470**	NA

Notes:

1. Vegetation emissions are one-time emissions resulting from the removal of existing vegetation and planting of new vegetation in Lytle Creek Ranch. The emissions are estimated assuming that all carbon currently sequestered in the biomass of the vegetation is released to the atmosphere upon removal of the vegetation. A total of 1356.3 acres of existing vegetation is considered to be removed for development purposes. Data for emissions calculations are primarily from the Intergovernmental Panel on Climate Change (IPCC) Guildelines for National Greenhouse Gas Inventories.
2. Construction emissions are one-time emissions reported in total metric tonnes during the construction period 2009-2011. Emissions are calculated using URBEMIS default values, EMFAC2007 and model inputs prepared by PCR Services . Sources of emissions include construction equipment (building-related emissions) and vehicles associated with worker commuting and vendor trips (non-building emissions).

3. Residential emissions for single family and apartment dwelling units include emissions associated with electricity and natural gas use. Emissions estimates were developed from Residential Energy Consumption Survey (RECS)database and the Building America Research Benchmark. As specified in the report "Lytle Creek Ranch DEIR No. 471", a total of 8407 dwelling units are considered.
4. Non-Residential emissions for grocery, misc. retail/commercial/office, hotel, public safety, and institutional buildings account for electricity and natural gas use. Emissions estimates for non-residential buildings were developed from the 2003 Commercial Buildings Energy Consumption Survey (CBECS), published by the US EIA.

Source: Environ International Corporation

Table 4.7-45 (2 of 2)
SUMMARY OF GHG EMISSIONS FOR LCRSP INCLUDING PAVLEY STANDARDS

5. Mobile source emissions were calculated using EMFAC emission factors with trip rates and VMT prepared by Crain and Associates. Mobile source emissions account for residential trips. CO2 emissions were scaled to reflect CO2e emissions based on data from the US Environmental Protection Agency (USEPA).

6. Municipal emissions account for emissions due to energy production associated with water supply, public/street lighting, and municipal vehicles. Energy use estimates for water supply are based primarily on CEC's 2005 "California's Water-Energy Relationship" report Emissions from street lighting and municipal vehicles were based upon studies of other cities.

7. Percentages only apply to annual CO_2e emissions; annual and one-time CO_2e emissions cannot be directly compared.

8. One-time emissions (vegetation and construction) are "annualized" in this Total row. This is done by dividing by an annualization factor, 40 years, effectively converting the one-time emission into an annual emission rate. One-time emissions are not annualized in their respective rows above.

Abbreviations:
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
EIA - Energy Information Administration
EIR - Environmental Impact Report
EMFAC - Emission Factors Database
GHG - Greenhouse Gas
N_2O - nitrous oxide
TBD - to be determined
VMT - Vehicle Miles Traveled

Source: Environ International Corporation

Table 4.7-46
LCRSP CONTEXT SUPPORTING CALCULATIONS

	Tonnes / Year	%
2004 World Emissions	2.68E+10	0.00039%
2004 USA Emissions	7.00E+09	0.00149%
2004 CA Emissions	4.80E+08	0.0218%
Total Project Annual Emissions	1.04E+05	

BAU Projected 2020 CO_2e emissions	5.96E+08	tonnes
CA 1990 CO_2e emissions	4.27E+08	tonnes
Difference	1.69E+08	tonnes
% reduction / increase	28%	%
CA 2020 population	4.22E+07	people
1990 emissions / 2020 population	10.1	tonnes / capita

Lytle Creek Ranch Population	24,539

	Tonnes CO_2 / year	Tonnes / capita / year
Lytle Creek Ranch Mobile Emissions	57,265	2.3
Lytle Creek Ranch Residential Emissions	21,530	0.9
Lytle Creek Ranch Mobile + Residential	78,794	3.2

Source: Environ International Corporation

Table 4.7-47
BAU CO_2 SEQUESTRATION CHANGE DUE TO LAND-USE CHANGE

Vegetation Type[1]	IPCC Designation[2]	IPCC Sub qualification	Tons Dry Matter Carbon/Acre[3]	Sequestered CO_2 / Acre[4]	Total Impacted Area[5]	CO_2 Sequestration Capacity of Removed Vegetation
			[tonne/acre]	[tonne/acre]	[acres]	[tonne]
Scrubland	Forest Land	Scrub	3.9	14.3	908.0	12,988
GRAND TOTAL			3.9	14.3	908.0	12,988

Notes:
1. Land types shown here represent vegetation that will be potentially removed upon development.
2. Land types are mapped to generalized IPCC Land Designations (IPCC 2006).
3. Dry matter carbon per acre was determined from information contained in Table 5-3.
4. It is conservatively assumed that all carbon is eventually converted into CO_2. Multiply the mass of carbon by 3.67 to calculate the final mass of CO_2 (the molecular mass of CO_2 / the molecular mass of carbon is 44/12 or 3.67).
5. Data provided by Lytle Development Company. A positive number indicates the amount of land removed and a negative number indicates that this land type is added. For the business as usual scenario, approximately 908 additional acres of shrublands are converted to settlements.

Abbreviations:
BAU - business as usual

Sources:
Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm
The Villages of Lakeview Hydromodification Technical Report (Final). August 2008.

Source: Environ International Corporation

Table 4.7-48
BAU CARBON PER ACRE FOR IPCC LAND TYPES

IPCC Designation	Sub qualification	Above Ground Biomass[1] [tonne d.m./acre]	Ratio of Above Ground / Below Ground Biomass[2]	Total Biomass [tonne d.m./Hectare]	Total Biomass[3] [tonne d.m./acre]	Tonnes Dry Matter Carbon/Acre[4] [tonne/acre]
Forest Land	Scrub	5.7	2.17	20.5	8.3	3.9
Forest Land	Trees	52.6	4.35	159.9	64.7	30.4

Notes:

1. Numbers listed are used in conjunction with above ground/below ground ratios to calculate total biomass per acre. Values from source converted to tonne/acre.
2. This value is used to calculate total biomass when data for the total biomass is not available for a particular land type.
3. Total biomass is either 1.) Listed directly in the IPCC protocol, or 2.) Calculated from above ground biomass and the Above Ground / Below Ground biomass ratios as follows: Total = Above + (Above / [Above:Below Ratio]). Values from source converted to tonne/acre as necessary.
4. Total biomass multiplied by carbon fraction in plant material (0.47) to calculate carbon content. From IPCC (2006), default value for Forest Land (Table 4.3 of IPCC). Here, it is assumed that agricultural vegetation has the same carbon fraction as other vegetation types.

Abbreviations:

BAU - business as usual

d.m. - dry mass

Sources:

Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm

Source: Environ International Corporation

Table 4.7-49
BAU CO_2 SEQUESTRATION CAPACITY OF NEW VEGETATION PLANTINGS

Vegetation Species[1]	IPCC Species Class Designation	Sequestered CO_2 / Unit[2] [tonne/unit/year]	Unit	Total Quantity of New Vegetation[1]	Unit	CO_2 Sequestration Capacity of New Vegetation[3] [tonne]
Pine	Pine	0.032	trees	0	trees	0
Miscellaneous	Miscellaneous Trees	0.035	trees	0	trees	0
Total				**0**	**trees**	**0**

Notes:
1. Site-specific planting data provided by Lytle Development Company.

2. Species class-specific sequestration values are provided in Table 8.2 of "2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4". For species that do not appear in Table 8.2, the species was classifed as "miscellaneous" and the average value of all listed data was used.
3. An active growing period of 20 years was assumed for the new trees planted.

Abbreviations:
BAU - business as usual

Sources:

Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.htm

Source: Environ International Corporation

Table 4.7-50
BAU CHANGE IN CO_2 SEQUESTRATION DUE TO LAND-USE CHANGES AND NEW VEGETATION PLANTINGS

CO_2 Sequestration Capacity of Vegetation	CO_2 Sequestration Capacity of New Vegetation	Net Change in CO_2 Sequestration Capacity[1]
[tonne]	[tonne]	[tonne]
-12,988	0	-12,988

Notes:
1. A positive value represents an increase in sequestration capacity and thus a net reduction in CO_2.

Abbreviations:
BAU - business as usual

Source: Environ International Corporation

Table 4.7-51
TRIP GENERATION RATES BASED ON URBEMIS

Residential Housing Type	Number of Units[1]	URBEMIS Trip Rate[4] (trips per day per unit)	URBEMIS based Unadjusted Daily Production Trips[2]
Mitigated Scenario[2]			
Single Family House	3,409	6.86	23,401
Condo/townhouse General	4,998	5.31	26,562
		Total Trips:	**49,964**
Unmitigated Low-Density Scenario[3]			
Single Family House	6,759	8.73	59,006
Condo/townhouse General	1,648	6.90	11,371
		Total Trips:	**70,377**
Ratio of low-density unmitigated scenario trips to mitigated scenario trips:			**141%**

Notes:

1. Number of units and housing type for each phase for the mitigated scenario are based on the Lytle Creek Ranch Specific Plan. Numbers of units and housing types for the low-density scenario are based on the City of Rialto. Proportions are derived from the 2005-2007 American Community Survey Housing Units data.

2. The mitigated scenario takes into account housing density, mixed of uses, local serving retail, mass transit, and pedestrian and bicycle friendliness.

3. The unmitigated low-density scenario takes into account the average density of the nearby section of the City of Rialto and does not account for any mitigation measures.

4. Based on numbers from URBEMIS file output. Unadjusted Daily Trips = No. Units x Trip Rate

Sources:

United States Census Bureau. Selected Housing Characteristics: 2005-2007. American Community Survey. http://factfinder.census.gov/servlet/ADPTable?_bm=y&-geo_id=16000US0660466&-qr_name=ACS_2007_3YR_G00_DP3YR4&-ds_name=ACS_2007_3YR_G00_&-_lang=en&-_sse=on

Source: Environ International Corporation

Table 4.7-52
BAU GENERATION RATES AND VEHICLE MILES BASED ON SCALED TRAFFIC MODEL

EVTM Mitigated Project Scenario[1]			URBEMIS based Ratio of Mitigated Trips to Unmitigated Low Density Trips[2]	Unmitigated Low-Density Scenario	
Total Daily Trip Ends	Product (Added Daily Trips)	Added Daily Vehicle Miles of Travel (VMT)		Equavalent Unmitigated Low-Density Daily Added Trip Productions	Equavalent Unmitigated Low-Density Daily VMT[3]
91,513	47,545	498,387	141%	66,970	702,010

Notes:

1. The data for this scenario was provided to ENVIRON by Crain and Associates in their memorandum dated September 15, 2009 re: Lytle Creek Development Mobile Emission Analysis Input. The analysis was conducted using the East Valley Transportation Model (EVTM). The EVTM model accounts for "physical design" mitigation measures inherent in the project plan, such as high residential density and local serving retail.

2. URBEMIS was used to quantify the relative difference in trip generation rates between the mitigated scenario and the unmitigated low-density scenario (see Table 4-27). The ratio of added trips in the two scenarios and the results of the EVTM model for the mitigated scenario were used to estimate the added daily trips and VMT for a unmitigated low-density scenario.

3. The two scenarios are assumed to have the same trip lengths, resulting in an increase in VMT proportional to the increase in trips.

Abbreviations:

BAU - business as usual
EVTM - East Valley Transportation Model
VMT - Vehicle Miles Traveled

Sources:

Crain and Associates. 2009. Re: Lytle Creek Development Mobile Emission Analysis Input.

Source: Environ International Corporation

Table 4.7-53
MITIGATED GHG EMISSIONS FROM VEHICLES FOR THE YEAR 2030 FOR BAU SCENARIO

Neighborhood	Annual Products (Added Annual Trips)[1]	Added Annual Vehicle Miles of Travel (VMT)[1]	Emission Factor Running (g/mile)[2]	Emission Factor Starts (g/start)[3]	Annual CO_2 Emissions Running (tonne)	Annual CO_2 Emissions Starts (tonne)	Total Annual CO_2 Emissions (tonne)	Total Annual Adjusted CO_2 Emissions (tonne)[4]	Total Annual CO_2e Emissions (tonne)[5]
Total	24,444,125	256,233,761	367	104	94,001	2,538	96,539	95,160	100,168

Notes:
1. Daily trips and VMT were modeled for weekday activity, consequently these estimates assume 365 weekdays.
2. Emission factors for vehicles based on EMFAC files for , .
3. Starting emission factors are based on the weighted average distribution of time between trip starts based on URBEMIS defaults.
4. Weekend traffic is approximately 95% of weekday traffic. Overall CO_2 emissions are consequently 98.6% of those calculated based on weekday activity only (1.0*5/7 + 0.95*2/7).
5. $CO_2e=CO_2/0.95$: The United States Environmental Protection Agency (USEPA) recommends assuming that CH_4, N_2O, and HFCs are 5% of emissions on a CO_2e basis.

Abbreviations:
CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide Equivalent
g - gram
GHG - Greenhouse Gas
HFC - Hydro fluorocarbon
mph - miles per hour
N_2O - Nitrous oxide
USEPA - United States Environmental Protection Agency
VMT - Vehicle Miles Traveled

Source: Environ International Corporation

Table 4.7-54
MUNICIPAL SOURCES COMPARISON OF BUSINESS-AS-USUAL TO PROPOSED PROJECT

Scenario	Water/Wastewater Energy Use	Public Lighting	Municipal Vehicles	Total Municipal[1]
	kW-hr/yr	Tonne CO_2e/yr		
BAU	8,151	1,061	1,227	12,509
Lytle Creek Ranch	8,151	1,061	1,227	12,509
Percent Reduction	0%	0%	0%	0%

Notes:
1. Total municipal includes water/wastewater treatment, public lighting, and municipal vehicles. The direct wastewater emissions and municipal vehicle calculations are based on per capita usage and there are no emission factors available to reflect improvements over BAU.

Abbreviations:
BAU - business as usual
CO_2e - Carbon Dioxide equivalents
kW-hr - kilowatt-hour
yr - year

Source: Environ International Corporation

Compared to California's 2020 BAU per capita emissions of 14.1 tonnes CO_2e per capita, a 28.3 percent decrease in emissions by 2020 is required to achieve AB 32 goals. In order to achieve AB 32 mandated goals, the per capita emissions would have to be 10.1 tonnes CO_2e. Assuming a population of 24,539 residents, the proposed project has estimated emissions of 98,127 tonnes per year or 4.3 tonnes per capita per year. This estimate does not include estimated emissions from heavy industry, refining, or commercial transportation.

As a result of the various design elements incorporated into the project, the proposed LCRSP meets AB 32's goal of 28.3 percent below BAU overall. As shown in Table 4.7-33 (CO_2e Emissions from Electricity and Natural Gas Usage in Residential Dwelling Units), as designed, the project's homes are expected to be 18 percent more energy efficient than the current housing stock in California. The non-residential buildings are 13 percent more energy efficient than the average California non-residential buildings stock. Vehicular emissions from the project's residents are 43 percent less per dwelling unit than BAU. The emission savings combined for the proposed project represent a 32.6 percent reduction from a BAU situation taking into consideration changes in emission factors due to implementation of the following two "Climate Change Scoping Plan" measures: (1) RPS; and (2) AB 1493 (Pavley) regulation.

It is yet unclear as to how to compare construction, vegetation change, municipal, and area emissions to AB 32-mandated goals. For the purposes of this comparison, differences between the vegetation change-related emissions in the proposed project scenario and the BAU scenario were annualized over a 40-year project lifetime. Emissions from construction, municipal sources, and area sources were included in the total inventory for both the proposed project and BAU scenarios but no differences between the two scenarios were quantified for these categories.

The GHG emission inventory for the proposed project was based on several conservative assumptions. In addition, anticipated State and federal regulatory developments are expected to result in lower GHG emissions from the proposed LCRSP than are represented in this analysis. For example, the increased CAFE standards under the EISA will result in a moderate decrease in the proposed project's GHG inventory as tailpipe emissions would be roughly 26 – 40 percent lower.

While the proposed project already results in an improvement over the BAU-scenario equivalent to the 28.3 percent improvement necessary to achieve AB 32's mandates, upon implementation of existing and anticipated legislative and regulatory mandates, actual emissions associated with the project will likely be considerably lower.

Because the proposed LCRSP results in an improvement over the BAU-scenario equivalent to the 28.3 percent improvement necessary to achieve AB 32's mandates, the project's cumulative impact on GHG emissions and global climate change is considered less than significant.

4.7.6 Recommended Mitigation Measures

- **Mitigation Measure 7-1**. The Applicant shall water active grading areas a minimum of three times per day (as opposed to two).

- **Mitigation Measure 7-2**. All construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.

- **Mitigation Measure 7-3**. The Applicant shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall turn their engines off when not in use to reduce vehicle emissions. Construction emissions shall be phased and scheduled to avoid emissions peaks to the extent feasible and discontinued during second-stage smog alerts.

- **Mitigation Measure 7-4**. The Applicant shall use line power instead of diesel- or gas-powered generators at all construction sites where ever line power is reasonably available.

- **Mitigation Measure 7-5**. Unless required for safety reasons, during construction, equipment operators shall limit the idling of all mobile and stationary construction equipment to no more than five minutes. The use of diesel auxiliary power systems and main engines shall also be limited to no more than five minutes when within 100 feet of homes or schools while driver is resting.

- **Mitigation Measure 7-6**. Active grading activities shall be limited to 10 acres per day or less when grading within 1,000 feet of residential receptors.

- **Mitigation Measure 7-7**. The Applicant shall implement measures to reduce the emissions of pollutants generated by heavy-duty diesel-powered equipment operating at the project site throughout the project construction. The Applicant shall include in all construction contracts the control measures required and recommended by the SCAQMD at the time of development. These measures presently include, but may not be limited to, the following: (1) Use Tier II (2001 or later) heavy-duty diesel-powered equipment at the project site; (2) Apply NO_x control technologies, such as fuel injection timing retard for diesel engines and air-to-air cooling, and diesel oxidation catalysts as feasible; feasibility shall be determined by using the cost-effectiveness formula developed by the Carl Moyer Program; and (3) General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions and keep all construction equipment in proper tune in accordance with manufacturer's specifications.

- **Mitigation Measure 7-8**. If stationary equipment, such as generators for ventilation fans, must be operated continuously, such equipment shall be located at least 100 feet from existing homes or schools, whenever possible.

- **Mitigation Measure 7-9**. The Applicant shall ensure that the construction contractors utilize architectural coatings that contain a VOC rating of 75 grams/liter of VOC or less.

- **Mitigation Measure 7-10**. The Applicant shall, to the extent feasible, promote, support, and encourage the scheduling of deliveries during off-peak traffic periods to encourage the reduction of trips during the most congested periods.

- **Mitigation Measure 7-11**. The specific plan shall include design and development standards and plans describing and delineating the location of all planned bicycle paths, routes, and trails and, excluding street-adjacent sidewalks, pedestrian pathways located within the project boundaries. Bicycle and pedestrian facility plans shall illustrate the

physical linkages between on-site residential, commercial, and publicly accessible recreational areas and show the connectivity between those on-site facilities and existing and proposed off-site facilities delineated on adopted City and County plans. Motorized and non-motorized travel routes shall be minimized to the maximum extent feasible.

- **Mitigation Measure 7-12**. During site plan review, due consideration shall be given to the provision of safe and convenient pedestrian and bicycle access to transit stops and to public transportation facilities.

- **Mitigation Measure 7-13**. Without forfeiting other development opportunities that may exist thereupon, development plans for Neighborhoods III or IV shall be revised to incorporate a park-and-ride/park-and-pool facility in proximity to the intersection of Sierra Avenue and Riverside Avenue (in the vicinity of PAs 27 or 33) or in an alternative location and of a size acceptable to the Director. Park-and-ride/park-and-pool facilities can be accommodated as part of or independent from a commercial development thought the provision of on-site parking opportunities in exceed of the parking requirements otherwise imposed by that use, accommodated at the perimeter of a residential development through the incorporation of appropriate design elements, or accommodated in a non-conservation open space area where such use can be shown not be produce a deleterious biological resource impact.

- **Mitigation Measure 7-14**. The Applicant shall provide covered transit benches at the park-and-ride/park-and pool facility and, should the local transit authority change existing and/or add new bus routes within the project site or along public roadways abutting the project site, at additional transit stops within the project boundaries.

- **Mitigation Measure 7-15**. The specific plan shall be modified to prohibit the on-site development of the following land uses: (1) heavy industrial; (2) landfills and transfer stations; (3) hazardous waste and medical waste incinerators; and (4) chrome plating facilities.

- **Mitigation Measure 7-16**. Future purchasers of real property located within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the main truck route and active mining areas at the Cemex USA quarry and the Vulcan Materials Company plant shall, in accordance with the disclosure requirements of the California Department of Real Estate, receive notification that residential occupants and other sensitive receptors may be exposed to excess cancer risks as a result of long-term exposure to toxic air contaminants, including diesel particulate matter, associated with diesel-powered vehicles traveling along and operating within those areas.

- **Mitigation Measure 7-17**. All dwelling units within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the main truck route and active mining areas at the Cemex USA quarry and Vulcan Materials Company plant shall incorporate an air filtration system designed to have a minimum efficiency reporting value (MERV) of 12 or better as indicated by the American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 52.2.

- **Mitigation Measure 7-18**. Excluding pedestrian and bicycle trails, sensitive public recreational uses, such as active outdoor playground, shall be prohibited within 500 feet of the I-15 Freeway right-of-way and within 500 feet of the main truck route and active mining areas at the Cemex USA and Vulcan Materials Company quarries.

4.7.7 Significant Unavoidable Adverse Effects

Air Quality

Based on the size of the proposed project and the development phasing plan now proposed, other than through a substantial reduction in the size of the project or the imposition of severe constraints on the number of acres to be grading during any single daily period, the number of dwelling units or non-residential space to be painted, and the square footage of area that could be paved on a daily basis, no feasible mitigation measures exist to reduce construction-term air emissions to below a level of significance. All feasible mitigation measures have been included herein. Those measures will reduce but not result in an avoidance of those construction-term air quality impacts. Similarly, during the project's operations, based on the number of vehicle trips generated by each of the proposed on-site land uses, mobile source emissions will remain significant.

With respect to potential impacts to on-site residential uses from off-site sources of TACs, the recommended air handling systems would substantially reduce carcinogenic exposure. Air quality impacts would, however, remain significant and unavoidable.

From a project-specific perspective, localized modeling shows that site construction would result in a substantial increase, defined as $\geq$10.4 µg/m^3 of PM_{10} and $PM_{2.5}$ averaged over a 24-hour period.[309] As such, the project adds cumulatively to an exceedance of particulate standards. Since the goal of the 2007 AQMP is to protect receptors from exceedance conditions, with regards to projected short-term particulate emissions, the project would not appear to comply with that provision of the 2007 AQMP.

With the continuing presence of significant construction and operational impacts, in accordance with SCAQMD recommendations, cumulative air quality impacts will remain significant.

Greenhouse Gas Emissions and Global Climate Change

Compared to California's 2020 BAU per capita emissions (14.1 tonnes CO_2e per capita), a 28.3 percent decrease in emissions by 2020 is required to achieve AB 32 goals. In order to achieve AB 32 mandated goals, the per capita emissions would have to be 10.1 tonnes CO_2e. The proposed project has estimated GHG emissions of approximately 98,127 tonnes per year or 3.8 tonnes per capita per year (assuming a population of 24,539 residents). As a result of the various design elements incorporated into the project, the proposed LCRSP meets AB 32's goal of 28.3 percent below BAU overall. As designed, the project's homes are expected to be 18 percent more energy efficient than the current housing stock in California. The non-residential buildings are 13 percent more energy efficient than the average California non-residential buildings stock. Vehicular emissions from the project's residents are 43 percent less per dwelling unit than the BAU scenario. The combined emission savings represent a 32.6 percent reduction from a BAU situation taking into consideration changes in emission factors due to implementation of the following two "Climate Change Scoping Plan" measures: (1) RPS; and (2) the Pavley regulation. Because the proposed LCRSP results in an improvement over the BAU-scenario equivalent to the 28.3 percent improvement necessary to achieve AB 32's mandates, the project's cumulative impact on GHG emissions and global climate change is considered less than significant.

[309]/ *Op. Cit*., Final Localized Significance Threshold Methodology, June 2003, revised July 2008, p. 1-5.

4.8 NOISE

4.8.1 Technical Reports

The following technical study, in combination with the City's independent analysis and other materials cited herein, serves, in part, as the basis for the Lead Agency's assessment of this topical issue:

- PCR Services Corporation, Noise Assessment Technical Report – Lytle Creek Specific Plan, City of Rialto, June 2008 (see Appendix III-H).

Since the above referenced technical report specifically addresses and describes on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, this document is incorporated by reference herein and is made a part of this DEIR.

4.8.2 Regulatory and Policy Setting

4.8.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Federal Noise Control Act**. The Federal Noise Control Act of 1972 (Public Law 92-574), along with its subsequent amendments (Quite Communities Act of 1978) (42 U.S.C. Parts 4901-4918) require the federal government, acting through the USEPA and FAA, to set and enforce uniform noise control standards for, among other things, aircraft and airports, interstate motor carriers and railroads, workplace activities, medium and heavy-duty trucks, motorcycles and mopeds, portable air compressors, and federally assisted housing projects. In addition, the act delegated to the states the authority to regulate environmental noise and directs governmental agencies to comply with local community noise standards and regulations.

- **Federal Occupational Safety and Health Act**. Under the Occupational Safety and Health Act of 1970 (29 U.S.C. 651-671), the United States Department of Labor Occupational Safety and Health Administration (OSHA) has adopted regulations (29 CFR 1910.95) that establish maximum noise levels to which workers at a facility may be exposed. OSHA noise regulations are designed to protect workers against the effects of noise exposure and lists permissible noise level exposure as a function of the amount of time during which the worker is exposed. Separate noise regulations have been established for construction noise exposure (29 CFR 1926.52), requiring hearing protection when noise levels exceed a certain level for a specified time period. OSHA regulations also dictate hearing conservation program requirements and workplace noise monitoring requirements.

  Under the provisions of the Federal Occupational Safety and Health Act of 1970, the California Department of Industrial Relations - Division of Occupational Safety and Health's (Cal/OSHA) occupational safety program is required to be at least as effective as the OSHA program. Cal/OSHA has promulgated Occupational Noise Exposure

Regulations (8 CCR 5095 *et seq*.) setting employee noise exposure limits equivalent to federal OSHA standards.

- **Federal Communications Commission Regulations**. Federal Communication Commission (FCC) regulations (47 CFR 15.25) prohibit the operation of any devices producing force fields that interfere with radio communications, even if such devices are not intentionally designed to produce radio-frequency energy. Such interference is due to the radio noise produced by the action of the electric fields on the surface of the energized conductor. The FCC requires each line operator to mitigate all complaints about interference on a case-specific basis.[1]

The USEPA has published guidelines that specifically addresses issues of community noise.[2] Those guidelines contain the following goals for noise levels affecting residential land use: (1) day-night average sound level (Ldn) ≤55 decibels, A-weighted decibel scale (dBA) for outdoors; and (2) ≤45 dBA Ldn for indoors noise. The USEPA stresses that these recommendations contain a factor of safety, do not consider technical or economic feasibility issues, and should not be construed as standards or regulations. As such, these levels are not a regulatory goal but are "intentionally conservative to protect the most sensitive portion of the American population" with "an additional margin of safety." For protection against hearing loss in the general population from non-impulsive noise, the USEPA guidelines recommend an equivalent noise level (Leq) of 70 dBA or less over a 40-year period.[3]

The United States Department of Housing and Urban Development (HUD) noise regulations (24 CFR Part 51[B]) establish standards for HUD-assisted projects and actions, requirements, and guidelines on noise abatement and control.[4] As indicated in 24 CFR 51.100(a), HUD "finds that noise is a major source of environmental pollution which represents a threat to the serenity and quality of life in population centers and that noise exposure may be a cause of adverse physiological and psychological effects as well as economic losses. As indicated in 24 CFR 51.101(a)(2), recipients of Community Development Block Grant (CDBG) funds "must take into consideration the noise criteria and standards in the environmental review process and consider ameliorative actions when noise sensitive land development is proposed in noise exposed areas. Grant recipients shall address deviations from the standards in their environmental reviews as required in 24 CFR Part 58."

It is HUD's general policy to provide minimum national standards applicable to HUD programs to protect citizens against excessive noise in their communities and places of residence. Standards of acceptability are contained in 24 CFR 51.103(c). As indicated therein, the noise environment inside a building is considered acceptable if: (1) the noise environment external to the building complies with the standards presented in Table 4.8-1 (United States Department of Housing and Urban Development Noise - Site Acceptability Standards); and (2) the building is constructed in a manner common to the area or, if of uncommon construction, has at least the

[1]/ Since the level of interference depends on factors such as line voltage, distance from the line to the receiving device, orientation of the antenna, signal level, line configuration, and weather conditions, maximum interference levels are not specified as design criteria for modern transmission lines.

[2]/ United States Environmental Protection Agency, EPA Levels Document, Report No. 556/9-74-664, undated.

[3]/ United States Environmental Protection Agency, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, EPA-550/9-74-004, March 1974.

[4]/ Presently, no aspect of the project has been identified as a HUD-funded activity. HUD's noise standards are, therefore, presented for informational purposes only and, in the absence of HUD assistance, do not constitute the noise standards against which the project or any component thereof should be appropriately measures.

equivalent noise attenuation characteristics. As indicated therein, sound not exceeding 65 dBA Ldn is considered "acceptable." Sound levels between 65-75 dBA Ldn are "normally unacceptable" unless measures are included to limit noise levels within residences (45 dBA Ldn or below). Sound levels exceeding 75 dBA Ldn are considered to be "unacceptable."

Table 4.8-1
UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT NOISE - SITE ACCEPTABILITY STANDARDS

Acceptability Standard	**Day-Night Average Sound Level** (decibels)	**Special Approval and Requirements**
Acceptable	Not exceeding 65 dB[1]	None
Normally Unacceptable	Above 65 dB but not exceeding 75 dB	Special Approvals[2] Environmental Review[3] Attenuation[4]
Unacceptable	Above 75 dB	Special Approvals[2] Environmental Review[3] Attenuation[4]

Notes:
1. Acceptable threshold may be shifted to 70 dB in special circumstances (24 CFR 51.105[a]).
2. See 24 CFR 51.104(b) for requirements.
3. 5 dB additional attenuation required for sites above 65 dB but not exceeding 70 dB and 10 dB additional attenuation required for sites above 70 dB but not exceeding 75 dB (24 CFR 51.104[a]).
4. Attenuation measures to be submitted to the Assistant Secretary for CPD for approval on a case-by-case basis.

Source: 24 CFR 51.103(c)

HUD assistance for the construction of new noise sensitive uses is prohibited generally for projects with "unacceptable" (above 75 decibels [dB]) noise exposures and is discouraged for projects with "normally unacceptable" (above 65 dB but not exceeding 75 dB) noise exposure. This policy applies to all HUD programs providing assistance, subsidy, or insurance for housing, college housing, mobile home parks, nursing homes, hospitals, and all programs providing assistance or insurance for land development, new communities, redevelopment or any other provision of facilities and services which are directed to making land available for housing or noise sensitive development (24 CFR 51.101[a][3]).

As indicated in "HUD Handbook 4150.1, Rev-1,"[5] if proposed housing locations lie in an area in which the noise factor exceeds 65 dB but not 75 dB, while normally not acceptable, may be mitigated by appropriate sound attenuation measures such as soundproofing, year-round air conditioning, or other treatment.

4.8.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **California Occupational Safety and Health Act**. The California Occupational Safety and Health Act of 1973, codified in Section 6300 *et seq*. of the California Labor Code

[5]/ United States Department of Housing and Urban Development, Handbook No. 4150.1, Rev-1, February 1990.

(CLC), establishes a mandate to assure safe and healthful working conditions for all California workers. Cal/OSHA is designated under the CLC to be responsible for administering the provisions of the California Occupational Safety and Health Act and the enforcement programs required to comply with that mandate.

- **California Government Code**. As required under Section 65300 of the CGC, each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city and any lands outside its boundaries that, in the planning agency's judgment, bear relation to its planning. Section 65302 of the CGC stipulates that the local general plan shall consist of seven mandated elements, including a noise element. As required under Section 65302(f) therein, the noise element shall identify and appraise noise problems in the community and shall recognize the guidelines established by the California Department of Health Service Office of Noise Control.

  Most jurisdictions in California utilize the weighted 24-hour community noise equivalency level (CNEL) noise exposure criterion not only as a planning tool but require actual verification of the ability to meet these standards as part of building plan approval process. These criteria are based on compatibility standards established by DHS' Office of Noise Control and HUD.

- **California Code of Regulations**. The California Noise Insulation Standard, codified in Title 24, Part 2, Appendix Chapter 35, Section 3501 of the CCR, sets specific limits on the interior noise exposure level within multi-family residential developments and noise insulation requirements through the common partitions separating different dwelling units within a multi-family residential development. A very similar set of noise standards is also contained in the Appendix Chapter 12 of the UBC. The application of the California Noise Insulation Standard (Title 24) is defined within its scope as follows: "The purpose is to establish uniform minimum noise insulation performance standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than detached single-family dwellings from the effects of excessive noise."

  In accordance with Title 24, interior noise levels attributable to exterior noise sources shall not exceed 45 dB in any habitable room. The noise metric shall be either the Ldn or the CNEL, consistent with the noise element of the local general plan. The Title 24 noise standard is defined as the combined effect of all noise sources and is implemented when existing or future exterior noise levels exceed 60 dB CNEL.

4.8.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **County of San Bernardino General Plan**. As indicated in the County General Plan, the "Noise Element is closely related to the Circulation and Land Use Elements. Transit

thoroughfares, such as freeways, arterial highways, and railways, generate the majority of noise within the County and influence the type and intensity of development within a given area. Likewise, land uses sensitive to noise are to be considered when determining land use patterns and planned mitigation measures related to noise impacts."[6] As further indicated in the County General Plan (Noise Element): "The purpose of the Noise Element is to limit exposure of the community to excessive noise levels."[7] In the context of the proposed project, those noise goals, objectives, and programs presented in the County General Plan that appear to be most closely related to the unincorporated County portion of the project site are presented below.

- Goal N-1. The County will abate and avoid excessive noise exposure through noise mitigation measures incorporated into the design of new noise-generating and new noise-sensitive land uses, while protecting areas within the County where the present noise environment is within acceptable limits.

  - ◊ Policy N1.1. Designate areas within San Bernardino County as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Chapter 83.01 of the [County] Development Code.

  - ◊ Policy N1.2. Ensure that new development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless effective mitigation measures are incorporated into the design to reduce noise levels to the standards of noise-sensitive land uses including residential uses, schools, hospitals, nursing homes, places of worship and libraries.

    Programs. (1) Require an acoustical analysis prior to approval of proposed development of new residential or other noise-sensitive land uses in a noise-impacted area or a new noise generating use in an area that could affect existing noise-sensitive land uses. The appropriate time for requiring an acoustical analysis is during the environmental review process so that noise mitigation may be an integral part of the project design. The acoustical analysis shall: (a) Be the responsibility of the applicant. (b) Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics. (c) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions. (d) Include estimated noise levels in terms of the descriptions shown in Figure II-8 and II-9 of the [County] Noise Background Report for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the [County] Noise Element. (e) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the [County] Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance. (f) Include estimates of noise exposure after the prescribed mitigation measures have been

[6]/ *Op. Cit.*, County of San Bernardino 2007 General Plan, Noise Element, p. VII-1.
[7]/ *Ibid.*, p. VII-7.

implemented. If compliance with the adopted standards and policies of the [County] Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided. (2) Develop and employ procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are implemented as part of the project review and building permit process.

◊ Policy N1.4. Enforce the State noise insulation standards (California Administrative Code, Title 24) and Chapter 35 of the California Building Code.

◊ Policy N1.5. Limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery, and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.

◊ Policy N1.6. Enforce the hourly noise-level performance standards for stationary and other locally regulated sources, such as industrial, recreational, and construction activities as well as mechanical and electrical equipment.

◊ Policy N1.7. Prevent incompatible land uses, by reason of excessive noise levels, from occurring in the future.[8]

- **Comprehensive Land Use Plan – Rialto Municipal Airport**. As indicated in the San Bernardino County Airport Land Use Commission's "Final Comprehensive Land Use Plan – Rialto Municipal Airport," California has adopted a 65 CNEL standard (Section 31669, Public Utilities Code) as the acceptable level of aircraft noise for persons living in the vicinity of airports. As illustrated in Figure 4.8-1 (Rialto Municipal Airport – 60 and 65 CNEL Noise Contour) identifies the 65 CNEL noise contour associated with those airport operations presented in the "Rialto Municipal Airport Master Plan."[9] The San Bernardino County Airport Land Use Commission's (ALUC) plan does, however, acknowledge that "as Rialto Airport caters mostly to VRF [visual flight rule] operations, the potential for annoyance exists anywhere within the airport traffic pattern and anywhere aircraft are flying below 500 feet. This is traditionally within the 55 CNEL contour which generally extends for up to a mile from the runway, at a width of between one quarter to one half a mile as flown by pilots."[10]

[8]/ *Ibid*., pp. VII-4 through VII-6.

[9]/ As indicated in City Council Resolution 5468 (A Resolution of the City Council of the City of Rialto, California, Declaring its Intent to Close the Rialto Municipal Airport and Approving the Draft Closure Plan and the Relocation Plan for the Proposed Rialto Municipal Airport Closure), as adopted on April 17, 2007, the City adopted a "Draft Closure Plan" and directed City staff to "take all necessary actions" to develop a final closure plan, culminating in the following actions: (1) closure of the Rialto Municipal Airport will occur no earlier than May 1, 2008 and no later than August 1, 2008, subject to the appropriate relocation of all qualified tenants; (2) after closure of the Rialto Municipal Airport in accordance with the final closure plan, the airport will no longer be open to normal flight operations; (3) after closure, only restricted operations will be permitted, including emergency take offs and landings and the operations of the County Sheriff's Department, Mercy Air, and Western Helicopter; and (4) an appropriate statutory 90-day notice of closure will be submitted to the FAA.

[10]/ San Bernardino County Airport Land Use Commission, Final Comprehensive Land Use Plan – Rialto Municipal Airport, January 1991, p. 2-3.

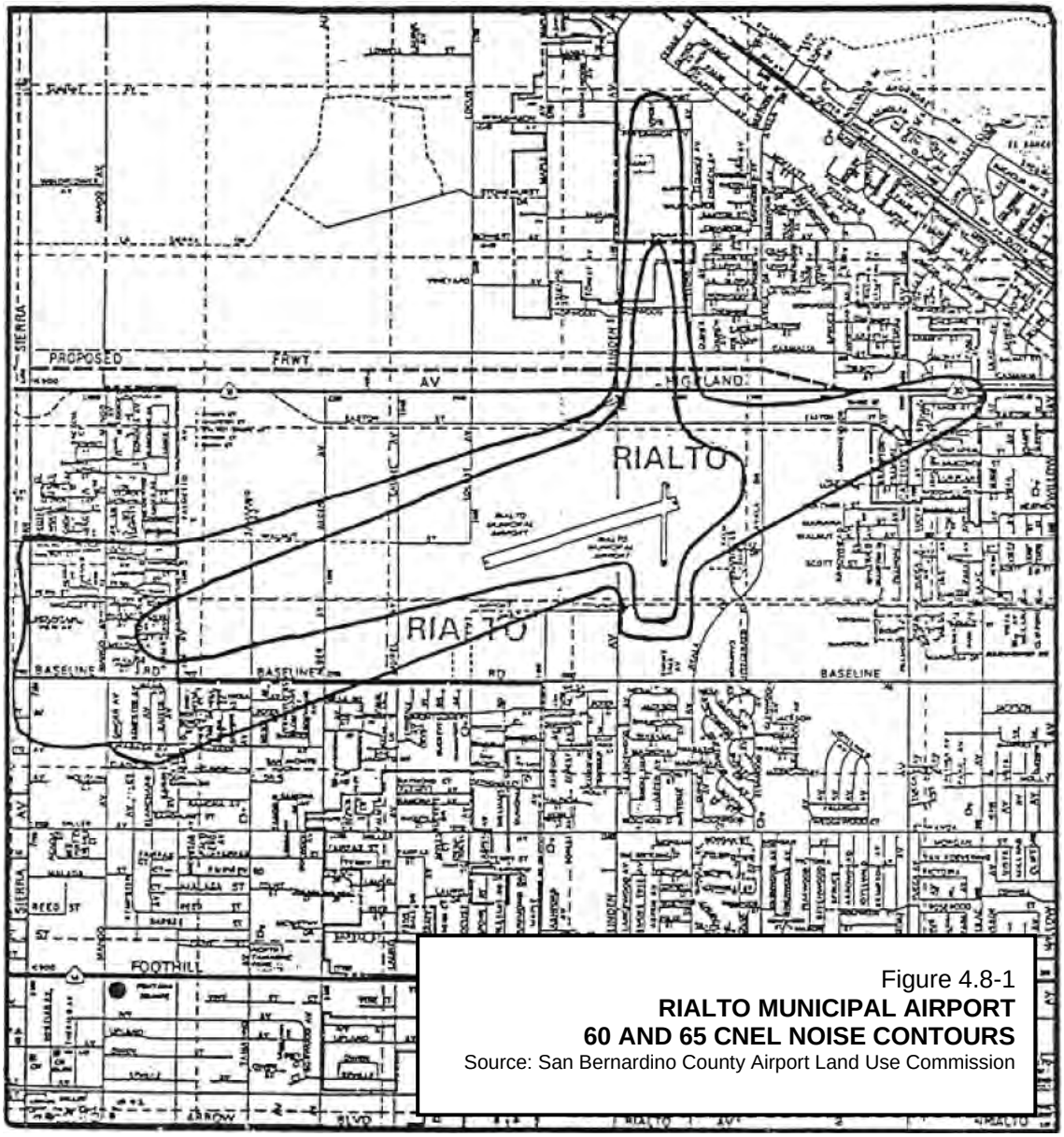

Figure 4.8-1
RIALTO MUNICIPAL AIRPORT
60 AND 65 CNEL NOISE CONTOURS
Source: San Bernardino County Airport Land Use Commission

As further indicated therein, Title 24 of the State Noise Insulation Standards requires that an acoustical analysis be prepared for all new developments of multi-family dwellings, condominiums, hotels, and motels proposed in areas within the 60 dB Ldn (or CNEL) contour of a major noise source for the purpose of documenting that an acceptable interior noise level of 45 dB Ldn (or CNEL) or below will be achieved with the windows and doors closed.

- **County of San Bernardino Development Code**. Pursuant to Section 83.01.080(c)(1) in Chapter 83.01 (General Performance Standards) in the County Development Code, presented in Table 4.8-2 (County of San Bernardino - Noise Standards for Stationary Noise Sources) are County standards from stationary noise sources. As further specified in Section 83.01.080(c)(2), no person shall operate or cause to be operated a source of noise at a location or allow the creation of noise on property, owned, leased,

occupied, or otherwise controlled by the person which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following: (1) the noise standard for the receiving land use for a cumulative period of more than 30 minutes in any hour; (2) the noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour; (3) the noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour; (4) the noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; and/or (5) the noise standard plus 20 dBA for any period of time.

Pursuant to Section 83.01.080(d) of the County Development Code, noise from mobile sources may adversely affect adjacent properties. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in Table 4.8-3 (County of San Bernardino - Noise Standards for Adjacent Mobile Noise Sources). If the measured ambient level exceeds any of the first four noise limit categories in Section 83.01.080(c)(2), the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Section 83.01.080(c)(2), the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level. If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 4.8-3 (County of San Bernardino - Noise Standards for Adjacent Mobile Noise Sources) shall be reduced 5 dBA.

The following sources of noise are except from the regulations of Chapter 83.01 (General Performance Standards): (1) motor vehicles not under the control of the commercial or industrial use; (2) emergency equipment, vehicles, and deliveries; and (3) temporary construction, maintenance, repair, or demolition activities between 7:00AM and 7:00PM, except Sundays and federal holidays. As specified in Section 83.01.080(h) of the County Development Code, all other structures shall be sound attenuated against the combined input of all present and projected exterior noise so as not to exceed the standards presented in Table 4.8-4 (Noise Standards for Other Structures).

4.8.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. As indicated in the City General Plan (Noise Element): "Noise concerns should be incorporated into land use planning to reduce future noise and land use incompatibilities. This is achieved by establishing standards and criteria that specify acceptable limits of noise for various land uses throughout the City. These criteria are designed to integrate noise considerations into land use planning to prevent noise/land use conflicts."[11] As presented in Figure 4.8-2 (City of Rialto - Land-Use Compatibility for Community Noise Equivalent Levels), as extracted from the City General Plan (Noise Element), the City has established specific guidelines for land-use

[11]/ *Op. Cit.*, City of Rialto General Plan, Noise Element, p. 22.

compatibility with community noise environments. In the context of the proposed project, those noise goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

- Goal 3.2.4. Residential neighborhoods in Rialto shall be protected from the noise, pollution and danger of excessive vehicular traffic.

  - ◊ Policy 3.2.4.3. Residential areas bordering arterials shall be protected from traffic noise, pollution and danger by buffer walls bordering the arterial.[12]

- Goal 3.0. To protect public health and welfare by eliminating existing noise problems and by preventing significant degradation of the future acoustic environment.

  - ◊ Policy 1a. Establish acceptable limits of noise for various land uses throughout the community. The City adopts the noise standards presented in Exhibit 16 which identify interior and exterior noise standards in relation to specific land uses; particularly residential areas, schools, hospitals, open space preserves, and parks. The standards would specify the maximum noise levels allowable for new development and impacted by transportation noise sources operating on public or quasi-public property.

    [Note: Exhibit 16, as referenced in Policy 1a, is presented as Figure 4.8-3 (City of Rialto - Exterior and Interior Noise Standards) herein].

  - ◊ Policy 1b. The City shall require an environmental and noise impact evaluation for all projects as part of the design review process to determine if unacceptable noise levels will be created or experienced. Should noise abatement be necessary, the City shall require the implementation of mitigation measures based on a detailed technical study prepared by a qualified acoustical engineer.

  - ◊ Policy 1c. The City shall not approve projects that do not comply with the adopted standards.

  - ◊ Policy 1e. The City shall minimize potential transportation noise through proper design of street circulation, coordination of routing, and other traffic control measures.

  - ◊ Policy 2a. The City shall require the construction of barriers to mitigate sound emissions where necessary or where feasible.

  - ◊ Policy 2b. The City shall require the inclusion of noise mitigation measures in the design of new roadway projects in Rialto.

[12]/ *Ibid*., Circulation Element, p. V-15.

- ◊ Policy 3b. Evaluate noise generated by construction activities, and subject them to the requirements of the Noise Ordinance.[13]

Applicable or potentially applicable noise policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. The City's Noise Ordinance restricts unnecessary or excessive noise.[14] The Noise Ordinance does not, however, define what constitutes a noise violation in terms of numeric standards. Rather, it characterizes a noise violation as any noise that is unreasonably loud, unnecessary, or unusual that disturbs the comfort, repose, health, peace and quiet, or which causes discomfort or annoyance to any reasonable person of normal sensitivity (Section 9.50.030). Among others, specific examples of violations cited in the Noise Ordinance include the following:

  - ◊ Loading and unloading any vehicle, or operating or permitting the use of dollies, carts, forklifts, or other wheeled equipment that causes any impulsive sound, raucous or unnecessary noise within one thousand feet of a residence, between the hours of 8:00 PM and 8:00 AM in residential zones or 8:00 PM and 7:00 AM in all other zones (Section 9.50.050[B]));

  - ◊ Activities conducted on the grounds of any public or private schools during regular hours of operation are exempt from the Noise Ordinance (Section 9.50.060B]).

  - ◊ Construction activities are confined to the following periods and durations: (1) October 1st through April 30th - 7:00 AM to 5:30 PM Monday through Friday, 8:00 AM to 5:00 PM on Saturday; construction activities are not permitted on Sundays and State holidays; (2) May 1st through September 30th - 6:00 AM to 7:00 PM Monday through Friday, 8:00 A.M. to 5:00 PM on Saturday; construction activities are not permitted on Sundays and State holidays.

4.8.3 Environmental Setting

4.8.3.1 Regional Setting

Both the Ontario International Airport and the San Bernardino International Airport (formally Norton Air Force Base) are located too far from the project site to have any materials efforts thereupon. No portion of the project site is located within the existing 55 dBA CNEL contours or the airport land-use compatibility plan (ALUCP) area for either facility. Existing noise levels in the general project area are typical of that found in other urban area and includes noise from an adjoining freeway (I-15 Freeway) and noise typically associated with residential, commercial, and open space areas.

[13]/ *Ibid*., Noise Element, pp. 23-24.
[14]/ City of Rialto, City of Rialto Municipal Code, Chapter 9.50 (Noise Control), approved January 2008.

Table 4.8-2
COUNTY OF SAN BERNARDINO
NOISE STANDARDS FOR STATIONARY NOISE SOURCES

Affected Land Use (Receiving Noise)	**7AM – 10PM** Leq	**10PM – 7AM** Leq
Residential	55 dBA	45 dBA
Professional Services	55 dBA	55 dBA
Other Commercial	60 dBA	60 dBA
Industrial	70 dBA	70 dBA

Source: San Bernardino County Development Code, Table 83-2

Table 4.8-3
COUNTY OF SAN BERNARDINO
NOISE STANDARDS FOR ADJACENT MOBILE NOISE SOURCES

Land Use		**Ldn (or CNEL) dBA**	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single and multi-family, duplex, mobile homes	45	60[3]
Commercial	Hotel, motel, transient housing	45	60[3]
	Commercial retail, bank, restaurant	50	NA
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	NA
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	NA	65

Notes:
1. The indoor environment shall exclude bathrooms, kitchens, toilets and corridors.
2. The outdoor environment shall be limited to: hospital/office building patios, hotel and motel recreational areas, mobile home parks, multi-family private patios or balconies, park picnic areas, private yard of single-family dwellings, and school playgrounds.
3. An exterior noise level of up to 65 dBA (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technologies, and interior noise exposure does not exceed 45 dBA (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

Source: San Bernardino County Development Code, Table 83-3

Table 4.8-4
COUNTY OF SAN BERNARDINO
NOISE STANDARDS FOR OTHER STRUCTURES

Typical Land Use	**12-Hour Equivalent Sound Level (Interior) in dBA Ldn**
Educational, institutional, libraries, meeting facilities, etc.	45
General office, reception, etc.	50
Retail stores, restaurants, etc.	55
Other areas of manufacturing, assembly, testing, warehousing, etc.	65

Source: San Bernardino County Development Code, Table 83-4

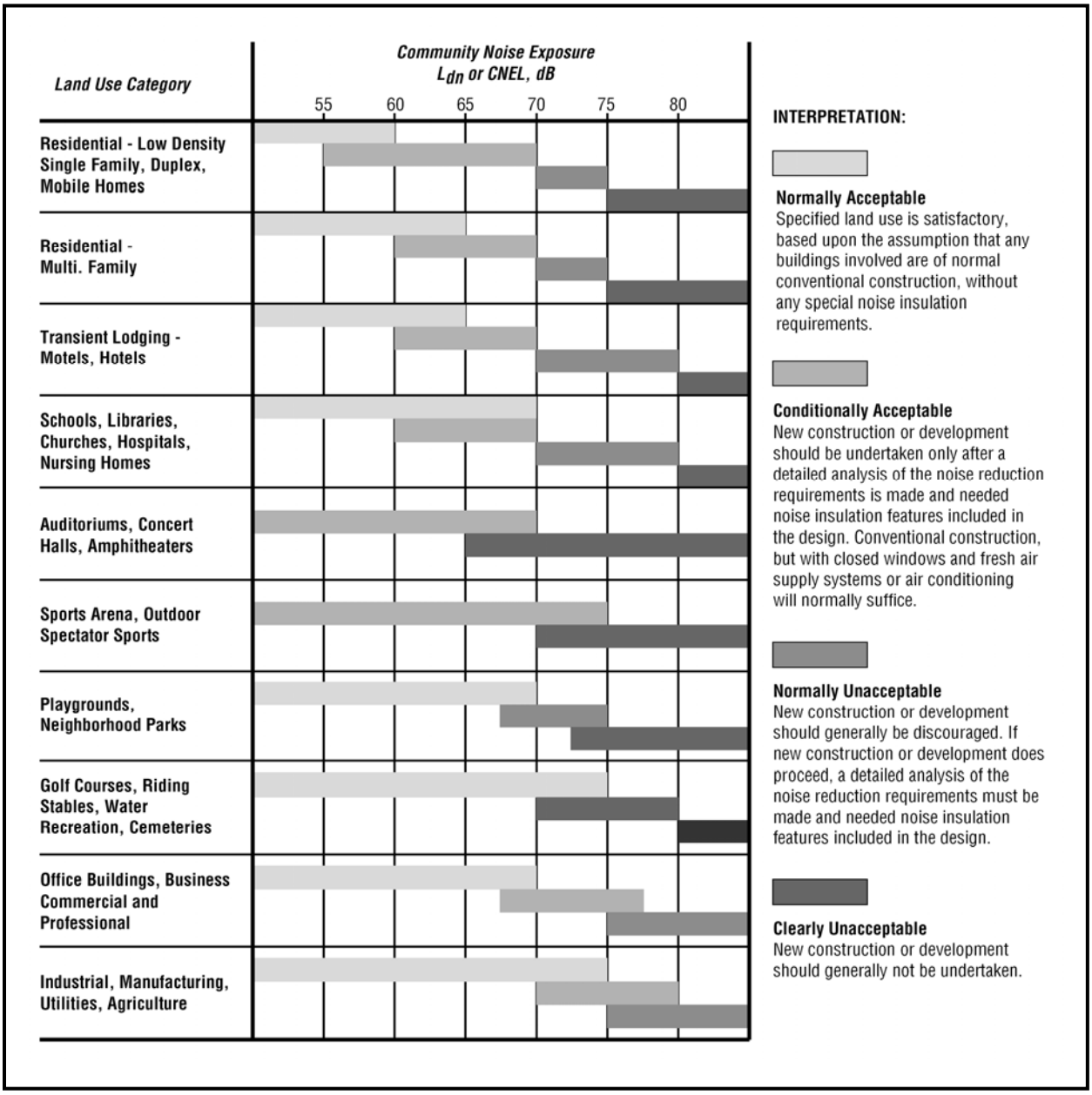

Figure 4.8-2
CITY OF RIALTO - LAND-USE COMPATIBILITY FOR COMMUNITY NOISE EQUIVALENT LEVELS
Source: City of Rialto

LAND USE CATEGORIES		ENERGY AVERAGE CNEL	
CATEGORIES	USES	INTERIOR [1]	EXTERIOR [2]
RESIDENTIAL	Single Family, Duplex, Multiple Family	45 [3]	60 [3]
	Mobile Home	45*	60 [3]
COMMERCIAL INDUSTRIAL INSTITUTIONAL	Hotel, Motel, Transient Lodging	45	60 [3,4]
	Commercial Retail, Bank Restaurant	50	65
	Office Building, Research and Development, Professional Offices, City Office Building	45	-----
	Amphitheatre, Concert Hall Auditorium, Meeting Hall	45	-----
	Gymnasium (Multipurpose)	50	-----
	Sports Club	55	-----
	Manufacturing, Warehousing, Wholesale, Utilities	65	-----
	Movie Theatres	45	-----
INSTITUTIONAL	Hospital, Schools' classroom	45	65
	Church, Library	45	-----
OPEN SPACE	Parks	------	65

INTERPRETATION

1. Indoor environment excluding: Bathrooms, toilets, closets, corridors.
2. Outdoor environment limited to: Private yard of single family
   Multi-family private patio or balcony which is served by a means of exit from inside.
   Mobile home Park
   Hospital patio, office patio
   Park's picnic area
   School's playground
   Hotel and motel recreation area
3. An exterior noise level of up to 65 CNEL will be allowed provided exterior levels have been substantially mitigated with a noise barrier of at least 6 feet in height, and interior noise exposure does not exceed 45 CNEL with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level will necessitate the use of air conditioning or mechanical ventilation.
4. Except those areas affected by aircraft noise.

* Due to the variable nature of mobile homes, a 15 dB outdoor to indoor noise reduction with windows closed should be assumed for indicating compliance with this standard.

Figure 4.8-3
CITY OF RIALTO - EXTERIOR AND INTERIOR NOISE STANDARDS
Source: City of Rialto

4.8.3.2 Local Setting

Noise Sources

The predominant noise sources in the project vicinity include traffic noise, predominately the I-15 Freeway and Riverside Avenue, and noise generated by proximal land uses, including Hyundai Pavilion at Glen Helen, the County Sheriff's Department's Glen Helen Training Center, and Cemex USA Lytle Creek Plant. Each of those existing land uses are individually addressed below.

- **Hyundai Pavilion at Glen Helen**. Hyundai Pavilion at Glen Helen (Pavilion) is purported the nation's largest amphitheater, with the capacity to accommodate over 65,000 people. Located where the I-15 and I-215 Freeways meet in Devore, the Pavilion hosts some of Southern California's biggest concert events. Situated within the Glen Helen Regional Park, the venue is separated from the project site by a ridgeline and is located approximately one-half mile northeast of the project site. The concert season typically runs from mid April through October as well as special events. No events occurred within the noise measurement period and, therefore, ambient noise levels were characterized based on available studies.

  An acoustical analysis was conducted as part of environmental analysis accompanying the "Glen Helen Specific Plan."[15] That noise study included measurements during the concert of a loud rock and roll band (Motley Crue/Scorpion) at the Pavilion. The noise monitoring location most representative of the LCRSP site was conducted in the Sycamore Flats area, approximately 1,500 feet east of the I-15 Freeway and 50 feet south of Glen Helen Parkway near the northern boundary of Neighborhood I. The 11-minute sound reading was obtained from 10:27 PM and recorded a L_{eq} of 55.9 dBA and a L_{max} of 61.5 dBA. The study showed that neither music nor crowd noise were audible and only pyrotechnic effects at the concert could be heard. In addition, it was concluded that the dominate noise source was traffic along Glen Helen Parkway and the I-15 Freeway. Considering that the proposed project is located at a significantly farther distance from the Pavilion than the monitoring location, the proposed project would not be impacted by the noise from the amphitheater and further assessment of this noise source is not warranted.

- **County Sheriff's Department Glen Helen Training Center**. The facility is located approximately one-half mile to the east of the project site (Neighborhood I). Training activities include firing of weapons at the gun range, SWAT exercises, and live-fire training. In addition, occasional bomb disposal operation training occurs on a portion of the facility site. The training operations generally occur from 8 AM to 11 PM, Monday through Friday, with occasional operations on weekends. The bomb disposal training operations do not have a regular schedule and occur as needed. Based on a study conducted in June 2000, the noise associated with blast operations of 10 pounds of dynamite with a 1 pound booster (among loudest practices), as measured at the property line nearest to the project site boundary, reached a maximum level (L_{max}) of

[15]/ County of San Bernardino (Michael Brandman Associates), Final Environmental Impact Report – Glen Helen Specific Plan, SCH No. 2000011093, certified November 15, 2005, Appendix E (Noise Study), pp. 7, 8, and 16.

55.1 dBA.[16] According to the County's Noise Ordinance, the L_{max} at the residential property line shall not exceed 75 dBA during the day or 65 dBA at night. As such, based on the study and the recorded values, the maximum noise level would not exceed the County's standards of 75 dBA for daytime peak noise level and 65 dBA nighttime peak noise level.[17] Because a blast lasts only a fraction of a second, L_{eq} and other time weighted values are not applicable.

While larger charges may be exploded at the facility, those charges would only be expected under emergency procedures. Section 87.0905(e) (Exempt Noises) of the County Development Code notes that the noise from "emergency equipment, vehicles, and devices" is exempt for local regulation." Furthermore, because the blast noises are of such short duration, they do not add measurably to the ambient noise level which is logarithmically averaged over a 24-hour period. Based on this information, no further characterization of bomb disposal activities is necessary.

As described below, long-term measurements near the project site property line were conducted to determine whether gun range activities exceeded County standards.

- **Cemex USA Lytle Creek Plant**. The quarry and a tile manufacturing facility are located in proximity to Neighborhoods II and III. Although Cemex USA quarry's hours of operation vary with the regional demand for aggregate and cement, these facilities generally operate between 5:00 AM and 5:00 PM, Monday through Friday. As of June 2008, hours of mining and processing were from 4:00 AM to 12:30 PM, with the facility open for haul truck and cement trucks from 3:00 AM to 6:00 PM.[18] Should aggregate demands increase, the plant's current operating hours could be expanded.

  As described below, long-term measurements along the project site's property line (nearest to the Cemex USA mining operations) were conducted to determine whether noise levels from these facilities exceeded County standards.[19]

Existing Ambient Noise Measurements (2006)

To characterize the existing noise environment on the project site, sound measurements of ambient conditions were conducted. The monitoring locations are identified in Figure 4.8-4 (Noise Measurement Locations [2006]).[20] Four long-term ambient sound measurements were conducted continuously from June 2, 2006 to June 5, 2006 (Noise Measurement Locations "R1" to "R4"). In addition, ambient noise levels at three locations near the project sites (Noise Measurement Locations "R5," "R6A," and "R6B"), measured from March 23, 2006 to March 26, 2006 are also included in this analysis.[21]

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[16]/ *Ibid.,* p. 17.
[17]/ *Ibid.*
[18]/ Pers. communication with Brian Mastin, Cemex USA - Environmental Affairs Manager and Darren Janiakowski, Cemex USA - Lytle Creek Operations Manager, June 2008.
[19]/ Cemex USA is located in the County and subject to County criteria.
[20]/ Regarding the 2006 noise readings at Noise Measurement Locations "R2" and "R3," as obtained near the Cemex USA quarry, the technical reports did not indicate to what extent the noise measurements reflected ongoing quarry operations levels.
[21]/ PCR Services Corporation, Lytle Creek North, Noise Assessment Technical Report, 2006.

Noise Measurement Location "R1" was located at the south side of the project boundary, approximately 50 feet north Riverside Avenue, and selected in order to characterize the ambient noise along the project's south boundary. Noise Measurement Location "R2" was positioned near the northeast corner of the Neighborhood II and the Cemex USA quarry in order to provide ambient noise, including mining and tile manufacturing facilities. Noise Measurement Location "R3" was located at the east side of Neighborhood III, near the quarry area. Noise Measurement Location "R4" was located approximately in the center of Neighborhood III, at the north boundary of the proposed residential area. Location "R5" is close to the southeast corner of Neighborhood I and the County Sheriff's Glen Helen Training Center in order to provide ambient noise levels from the existing gun range. Noise Measurement Locations "R6A" and "6B" are approximately 30 feet and 200 feet from the I-15 Freeway, respectively, and were selected in order to characterize the noise level from freeway traffic.

A summary of noise measurement data is provided in Table 4.8-5 (Summary of Measured Ambient Noise Measurements). As shown therein, the measured CNEL at Locations "R2," "R3," and "R4" (51.6 to 59.8 dBA) are below County standards for residential development (i.e., less than 60 dBA CNEL). Based on the measurement data (Noise Measurement Locations "R2," "R3," "R4," and "R5") proposed on-site residential uses would not be subject to noise levels from the County Sheriff's Glen Helen Training Center and/or Cemex USA quarry that exceed County standards.

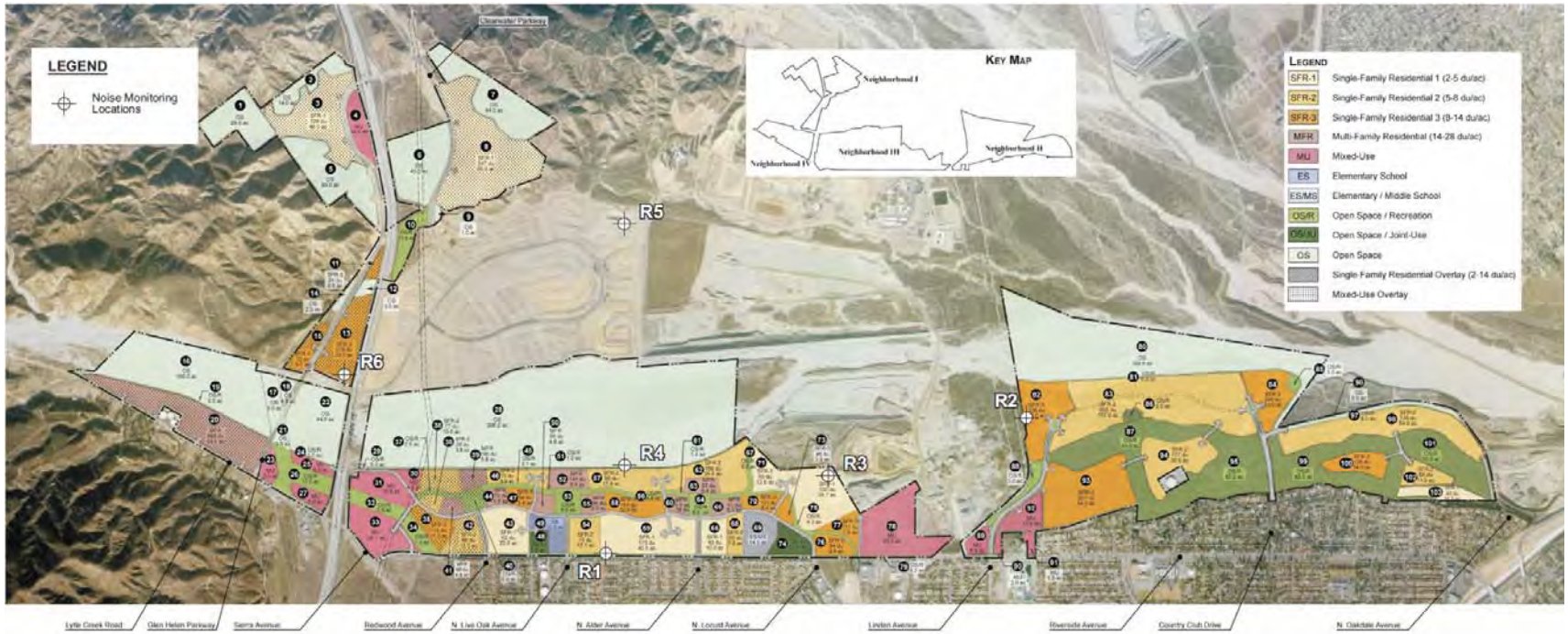
Noise levels near Riverside Avenue (Noise Measurement Location "R1") and the I-15 Freeway (Noise Measurement Locations "R6A" and "R6B"), however, substantially exceed County standards and, as such: (1) exterior noise levels must be mitigated to 65 dBA CNEL through a reasonable application of the best available noise reduction technology; and (2) interior noise exposure must not exceed 45 dBA CNEL with windows and doors closed.

To further characterize the area's noise environment, the CNEL generated by existing traffic on local roadways was established using a spreadsheet noise model based on calculation methodology provided in Caltrans' "Technical Noise Supplement"[22] (TeNS) document and traffic volume data provided in the project's traffic analysis.[23] The roadway noise calculation procedures provided in the TeNS are consistent with the Federal Highway Administration (FHWA) RD-77-108 roadway noise prediction methodologies. This methodology allows for the definition of roadway configurations, barrier information, and receiver locations. To represent a simplified analysis, consistent with the amount of project-related technical information currently available, the noise model assumes a "hard-site" condition (i.e., this is a conservative assumption which limits sound attenuation due to ground condition to a maximum of 3 dBA per doubling of distance) and no barriers between the roadway and receivers.

The traffic noise prediction model calculates the 24-hour CNEL noise levels based on specific information, including average daily traffic volume (ADT); percentages of day, evening, and nighttime traffic volumes relative to ADT; vehicle speed; and distance between the receptor and the roadway. As indicated in Table 4.8-6 (Existing Vehicular Traffic Noise Levels), the calculated CNEL from existing traffic volumes on the analyzed roadway segments ranged from 58.2 dBA (along Knollwood Avenue) to 70.8 dBA (along Riverside Avenue), at 25 feet from the roadway right-of-way. These CNEL noise levels are based on surface-street traffic volumes only.

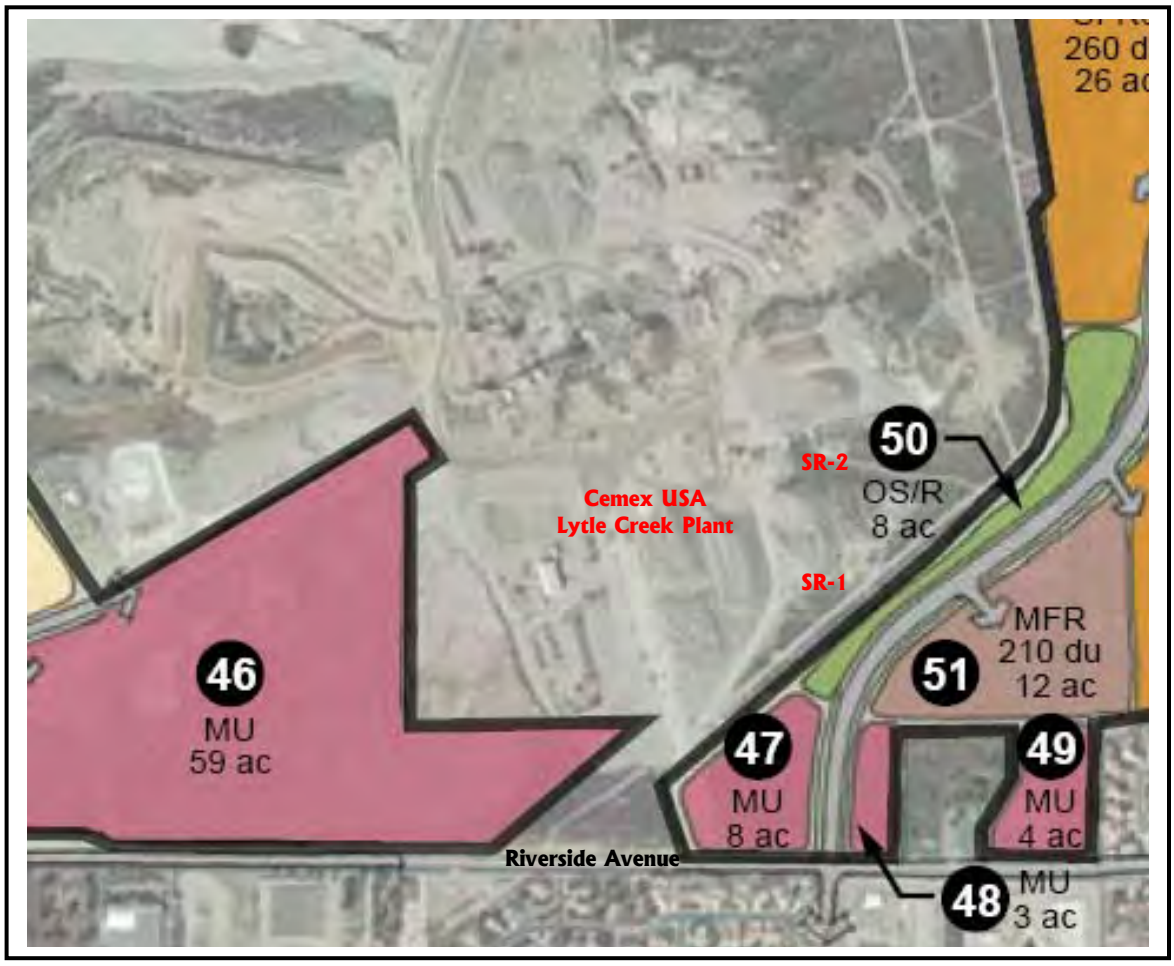
[22]/ California Department of Transportation, Technical Noise Supplement – A Technical Supplement to the Traffic Noise Analysis Protocol, October 1998.

[23]/ Crain & Associates, Traffic Impact Analysis Report for the Lytle Creek Ranch Planned Development Project, August 2007.



Note: The noise measurement locations presented herein were plotted on an earlier version of the proposed LCRSP which was subsequently superseded. The land uses presented in this exhibit are not intended to reflect the proposed project.

Figure 4.8-4
2006 NOISE MEASUREMENT LOCATIONS
Source: PCR Services Corporation



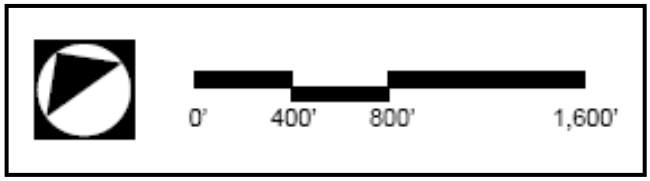


Figure 4.8-5
SUPPLEMENTAL NOISE MEASUREMENT LOCATIONS (2008)
Source: Environmental Impact Sciences

Table 4.8-5
SUMMARY OF MEASURED AMBIENT NOISE MEASUREMENTS[1] (dBA)

Noise Measurement Location[2]	Date	CNEL	L_{eq} (1 Hour)					
			Daytime			Nighttime		
			Avg	Min	Max	Avg	Min	Max
Location "R1" – South boundary of Neighborhood III, 50 feet north of Riverside Avenue								
Weekday	6/02/06	70.7	64.9	63.3	66.4	63.9	58.7	67.9
Weekend	6/03/06	68.7	63.0	61.7	64.3	61.4	60.0	62.6
Weekend	6/04/06[3]	--	--	--	--	--	--	--
Weekday	6/05/06[3]	--	--	--	--	--	--	--
Location "R2" – Northeast boundary of Neighborhood II								
Weekday	6/02/06	57.6	50.4	43.4	56.3	50.6	43.1	54.9
Weekend	6/03/06	52.4	47.0	41.1	50.5	45.3	41.9	46.6
Weekend	6/04/06	51.6	49.2	42.0	58.3	43.3	40.4	47.3
Weekday	6/05/06	59.8	49.1	43.2	51.9	53.7	40.0	62.4
Location "R3" – West of Neighborhood III								
Weekday	6/02/06	58.0	49.0	42.1	52.4	51.7	44.4	58.4
Weekend	6/03/06	58.4	49.4	43.4	54.8	51.9	45.3	55.6
Weekend	6/04/06	55.6	48.8	44.6	55.6	49.0	44.3	52.8
Weekday	6/05/06	54.9	48.6	43.8	51.6	47.9	45.8	49.6
Location "R4" – North side of proposed residential area of Neighborhood III								
Weekday	6/02/06	55.6	49.4	43.9	55.6	49.0	42.9	54.2
Weekend	6/03/06	51.9	48.4	41.6	54.9	44.5	42.0	48.3
Weekend	6/04/06	54.2	49.3	41.4	56.5	47.1	41.7	54.2
Weekday	6/05/06	55.2	54.4	45.0	61.3	46.3	40.1	49.7
Location "R5" – East of Neighborhood I near the County Sheriff's Glen Helen Training Center gun range								
Weekday	3/23/06[4]	61.6	60.8	43.9	65.9	52.7	44.2	60.9
Weekday	3/24/06	55.7	51.8	42.8	57.0	48.4	44.6	53.1
Weekend	3/25/06	49.8	49.3	38.5	53.8	40.2	35.3	43.4
Weekend	3/26/06	52.0	50.8	42.5	55.4	43.0	30.7	46.6
Location "R6A" – Northwest corner of Neighborhood IV, 200 feet from the I-15 Freeway right-of-way								
Weekday	3/23/06	71.8	66.2	62.4	69.1	64.7	60.4	66.7
Weekday	3/24/06	73.1	68.6	67.3	70.1	65.7	62.7	67.3
Weekend	3/25/06	75.2	69.0	68.0	70.3	68.5	65.9	70.8
Weekend	3/26/06	72.1	67.4	61.4	69.4	64.4	59.0	69.5
Location "R6B" – Northwest corner of Neighborhood IV, 30 feet from the I-15 Freeway right-of-way								
Weekday	3/23/06	82.7	77.1	76.0	78.4	75.8	72.5	78.4
Weekday	3/24/06	83.4	78.3	76.1	79.6	76.4	73.7	79.2
Weekend	3/25/06	82.4	77.9	75.4	78.8	75.2	73.8	77.8
Weekend	3/26/06	81.3	76.9	72.5	78.4	73.7	70.1	77.8

Notes:
1. Based on ambient sound measurements conducted from June 2-5, 2006, using Larson-Davis 820 Type 1 Integrating Sound Level Meters. Noise measurement data is provided in Appendix III-H (Acoustical Analysis). Noise data for Noise Measurement Locations "R5," "R6A," and "R6B" were extracted from the noise study for the Lytle Creek North Project (PCR 2006).
2. Noise measurement locations are depicted in Figure 4.8-4 (Noise Measurement Locations).
3. No noise measurement taken.
4. Elevated noise levels are a result of ongoing construction activities near the monitoring locations.

Source: PCR Services Corporation

Table 4.8-6
EXISTING VEHICULAR TRAFFIC NOISE LEVELS

Roadway Segment	Adjacent Noise Sensitive Land Use	Existing CNEL at Referenced Distances from Roadway Right-of-Way[1]		
		Adjacent	25 Feet	50 Feet
Lytle Creek Road				
West of Sierra Avenue	Residential	64.8	62.3	60.8
Riverside Avenue				
Between Sierra Avenue & Alder Avenue	Residential	70.9	68.4	66.9
Between Alder Avenue & Locust Avenue	Residential	70.3	67.9	66.3
Between Locust Avenue & Linden Avenue	Residential	71.7	69.3	67.7
Between Linden Avenue & Knollwood Avenue	Residential School	72.7	70.2	68.7
Between Knollwood Avenue & Country Club Drive	Residential	73.2	70.8	69.2
East of Country Club Drive	Residential School	73.0	70.6	69.0
Between Easton Street & Baseline Road	Residential	72.4	69.9	68.4
South of Baseline Road	Residential	72.2	69.8	68.2
Baseline Road				
West of Sierra Avenue	Residential	69.6	67.2	65.6
Between Sierra Avenue & Alder Avenue	Residential	70.6	68.1	66.6
Between Alder Avenue & Ayala Drive	Residential	71.8	69.3	67.8
Between Ayala Drive & Riverside Avenue	Residential	72.7	70.3	68.7
East of Riverside Avenue	Residential	72.4	70.0	68.4
Sierra Avenue				
South of Summit Avenue	Residential	71.6	69.2	67.6
North of Baseline Road	Residential	71.1	68.7	67.1
South of Baseline Road	Residential	70.6	68.2	66.6
Summit Avenue				
Between I-15 & Sierra Avenue	Residential	72.3	69.8	68.3
Casa Grande Drive				
West of Alder Avenue	Residential	64.0	61.0	59.2
East of Alder Avenue	Residential	66.5	63.6	61.8
Live Oak Avenue				
South of Riverside Avenue	Residential	66.0	63.6	62.0
Alder Avenue				
Between Riverside Avenue & Casa Grande Drive	Residential School	68.3	65.3	63.5
Between Casa Grande Drive & Casmalia Street	Residential	67.1	64.1	62.3
Between Easton Street & Baseline Road	Residential	69.7	67.2	65.7
South of Baseline Road	Residential	68.8	66.3	64.8

Table 4.8-6 (Continued)
EXISTING VEHICULAR TRAFFIC NOISE LEVELS

Roadway Segment	Adjacent Noise Sensitive Land Use	Existing CNEL at Referenced Distances from Roadway Right-of-Way[1]		
		Adjacent	25 Feet	50 Feet
Locust Avenue				
South of Riverside Avenue	Residential	67.4	64.4	62.6
Linden Avenue				
South of Riverside Avenue	Residential	62.6	60.2	58.6
Ayala Drive				
South of Riverside Avenue	Residential	69.7	66.7	65
Knollwood Avenue				
North of Riverside Avenue	Residential	61.2	58.2	56.4
Country Club Drive				
North of Riverside Avenue	Residential	65.1	62.2	60.4
Cedar Avenue				
South of Baseline Road	Residential	70.3	67.9	66.3
State Street				
North of Highland Avenue	Residential	66.9	64.5	62.9
Palm Avenue				
East of I-215 Freeway	Residential	72.0	69.5	68.0
University Parkway				
East of I-215 Freeway	Residential	70.5	68.3	66.9
Cajon Boulevard				
South of Glen Helen Parkway	Residential	66.9	64.5	62.9

Notes:
1. Calculated based on existing traffic volumes.

Source: PCR Services Corporation

Program-Level Acoustical Analysis

In order to assess acoustical impacts, a project-specific noise study, including supplemental noise readings, was conducted and is included in Appendix III-H (Acoustical Analysis). In the information in that study serves to augment the information presented herein.

As per Figure 4.8-4 (Noise Measurement Locations [2006]), the reading at Noise Measurement Location “R2” appears to have been obtained near open space, while the reading at Noise Measurement Location “R3” appears to have been obtained near a quarry pond area. Since it could not be ascertained whether either location was subject to nearby active mining or processing operations, in order to determine noise associated with the proximate Cemex USA Lytle Creek Plant, additional on-site measurements were conducted on June 24, 2008 (Tuesday). The 2008 field study included two sets of readings obtained to the east of the Cemex USA quarry, near the processing/crushing facility.

The L_{eq}, L_{min}, L_{max}, L_{02}, L_{08}, L_{25}, and L_{50} values were recorded to document the Cemex USA plant noise.[24] The Leq value is representative of the equivalent noise level or logarithmic average noise level obtained over the measurement period. The L_{min} and L_{max} represent the minimum and maximum root-mean-square noise levels obtained over a period of one second. The L_{02}, L_{08}, L_{25}, and L_{50} represent the values that are exceeded 2, 8, 25, and 50 percent of the time or 1, 5, 15, and 30 minutes per hour if the readings were extrapolated out to an hour's duration. The approximate noise reading locations are shown in Figure 4.8-5 (Supplemental Noise Measurement Locations [2008]). The readings are summarized below and the results of the field study are presented in Table 4.8-7 (Supplemental Noise Level Measurements).

Table 4.8-7
SUPPLEMENTAL NOISE LEVEL MEASUREMENTS

Monitoring Location	Leq (dBA)	L_{02} (dBA)	L_{08} (dBA)	L_{25} (dBA)	L_{50} (dBA)	Lmin (dBA)	Lmax (dBA)
SR-1	44.6	49.2	47.1	45.5	43.8	38.8	55.1
SR-2	47.9	52.9	50.9	48.9	46.6	41.2	56.5

Notes:
1. The Leq represents the equivalent sound level and is the numeric value of a constant level that over the given period of time transmits the same amount of acoustic energy as the actual time-varying sound level. The L_{02}, L_{08}, L_{25}, and L_{50} are the levels that are exceeded 2, 8, 25, and 50 percent of the time, respectively. Alternatively, these values represent the noise level that would be exceeded for 1, 5, 15, and 30 minutes during a 1-hour period. The L_{min} and L_{max} represent the minimum and maximum root-mean-square noise levels obtained over a period of 1 second.

Source: Environmental Impact Sciences

- **SR-1**. This supplemental reading was obtained to characterize noise associated with the Cemex USA facility. The meter was placed toward the east side of the facility approximately 1,500 feet southeast of the crusher that was partially obscured by the aggregate stockpiles. A front-end loader was observed to operate at a distance of about 400 feet as were trucks taking on water. Additionally, trucks were observed to queue up and pass the meter on the way to receive materials with a close distance of about 200 feet. Ambient noise included the noted equipment and trucks. The 15-minute reading began at 11:03 AM.

- **SR-2**. This supplemental reading was obtained along the southeast side of the Cemex USA facility. In this location, the view of the operating equipment including the crusher, a front-end loader, and a truck washing area, each of which were largely not obscured. These pieces, along with trucks operating along the on-site roadway, served as the dominant sources of noise. Additionally, a light plane was observed to fly over the area. The 15-minute reading began at 11:35 AM.

[24]/ Noise monitoring was performed using a Quest Technologies Model 2900 Type 2 Integrating/logging Sound Level Meter. The unit meets the American National Standards Institute (ANSI) Standard S1.4-1983 for Type 2, International Electrotechnical Commission (IEC) Standard 651 - 1979 for Type 2, and IEC Standard 651 - 1979 for Type 2 sound level meters. The unit was first field calibrated at 10:49 AM using a Quest Technologies QC-10 calibrator immediately prior to the readings. The calibration was then rechecked at 11:55 AM after the two readings and no meter "drift" was noted. The accuracy of the calibrator and meter are maintained through a program established through the manufacturer and are traceable to the National Bureau of Standards. The calibration unit meets the requirements of ANSI Standard S1.4-1984 and IEC Standard 942: 1988 for Class 1 equipment.

4.8.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant noise impact if the project or if project-related activities were to:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.
- Produce a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Produce a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.[25]

Changes in noise levels of less than 3 dBA are generally not discernable to most people,[26] while changes greater than 5 dBA are readily noticeable and would be considered a significant increase. The significance threshold is, therefore, based on human perceptibility to changes in noise levels (increases), with consideration of existing ambient noise conditions and the City's land use noise compatibility equivalents (see Figure 4.8-2 [City of Rialto - Land-Use Compatibility for Community Noise Equivalent Levels] and Figure 4.8-3 [City of Rialto – Exterior and Interior Noise Standards]).

A threshold of 5 dBA is used where existing ambient noise conditions fall within the City's acceptable noise environment. Generally, the dividing line for acceptable noise is between "normally acceptable" and "normally unacceptable," as shown in Figure 4.8-2 (City of Rialto Land-Use Compatibility for Community Noise Equivalent Levels). Where the existing ambient noise level is already above the City's acceptable noise zone, a more conservative 3 dBA threshold is used. For purposes of interpreting the first and third threshold stated above, a significant impact would occur if the project or if project-related activities were to:

- Criterion 1. Cause ambient noise levels to increase by 5 dBA CNEL or more at a sensitive receptor location and the resulting noise is 65 dBA CNEL or lower; or
- Criterion 2. Cause ambient noise levels to increase by 3 dBA CNEL or more at a sensitive receptor location and the resulting noise exceeds 65 dBA CNEL.

Other thresholds of significance have been formulated by other agencies, published in source documents presently in use by the Lead Agency, or reflect acceptable industry standards. With respect to interior noise levels and ground-borne vibration, the proposed project would normally be deemed to produce a significant or potentially significant noise impact if the project or project activities were to:

[25]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section XI (Noise).

[26]/ As indicated in both the City General Plan and City General Plan MEIR, "the level at which changes community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people" (Source: City of Rialto, City of Rialto General Plan, Noise Element, March 13, 1992, p. 19; City of Rialto, Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, March 31, 1992, p. 4.7-27).

- Result, based on the placement of a residential unit in proximity to an external noise sources, in an annual interior CNEL of 45 dB or greater in any habitable room.
- Produce or expose sensitive receptors to vibrations with a motion velocity of 0.01 inches/second over the range of 1 to 100 Hz beyond the property boundaries.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or other environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative noise impacts.

4.8.5 Impact Analysis

4.8.5.1 Construction Impacts

Environmental Impact 8-1*. Although all construction activities will fully comply with the City's Noise Ordinance, those activities (especially the use of heavy equipment) will result in short-term noise increases at individual construction sites and may be perceptible to near-site receptors.*

Preliminary Determination 8-1*. Less-than-significant impact.*

Construction Phasing

Although there will likely be a number of smaller increments and although development between phases may overlap, the project will be built-out in four general phases or neighborhoods (Neighborhoods I, II, III, and IV) with full build-out occurring by 2030 or as required by an approved development agreement. It is anticipated that construction will begin in Neighborhood I, followed by development in Neighborhoods II and III. Neighborhood IV will likely be the final neighborhood to be developed. These phases may occur either sequentially or concurrently and the contemplated phasing is subject to change in response to market demand.

Project development activities would primarily include site preparation (grading and excavation) and construction of internal roadways and other infrastructure, driveways, and structures. In order to construct the proposed improvements, the on-site areas would be graded with a total of approximately 4.0 million cubic yards of earthwork. The cut-and-fill would be generally balanced at the project site and, with the exception of large boulders and other deleterious materials deemed by the engineering geologist or geotechnical engineer not to be suitable for fill, large quantities of soil are not expected to be imported to or exported from the project site. Site preparation activities typically involve the use of heavy equipment, such as scrapers, dozers, tractors, and loaders. Trucks would also be used to deliver equipment and building materials and to haul away landscape and construction debris. Smaller equipment, such as jackhammers, pneumatic tools, saws, and hammers would also be used throughout the site during the construction phases.

The construction noise impact analysis assumes that all site grading and major roadway/ infrastructure construction would occur prior to any on-site building construction, although these construction stages would overlap to some degree. In such an event, the overlap would cause only minimal increases in construction noise because, among other reasons, sound pressure

levels are added logarithmically rather than arithmetically and construction activities would be spatially located in different areas of the project site.

Construction Equipment Noise Levels

As shown in Table 4.8-8 (Maximum Noise Levels Generated by Typical Construction Equipment), individual pieces of construction equipment used for project construction produce maximum noise levels of 76 dBA to 90 dBA at a reference distance of 50 feet from the source. These maximum noise levels would occur when equipment is operating under "full-power" conditions or during "impact" activities, such as percussive pile driving. Equipment used on construction sites often operates under less than "full-power" condition or "partial power." Actual measurements performed while equipment is performing work indicate that shift-long equivalent L_{eq} sound levels are typically 2 dBA to 15 dBA less than the referenced maximum noise levels.[27]

Table 4.8-8
MAXIMUM NOISE LEVELS GENERATED BY TYPICAL CONSTRUCTION EQUIPMENT

Type of Equipment	Maximum Sound Levels at Indicated Distance[1]			
	25 Feet	50 Feet	100 Feet	200 Feet
Air Compressor	84	78	72	66
Backhoe	84	78	72	66
Concrete Mixer	85	79	73	67
Crane, Mobile	87	81	75	69
Dozer	88	82	76	70
Grader	91	85	79	73
Jack Hammer	95	89	83	77
Loader	85	79	73	67
Paver	83	77	71	65
Pneumatic Tool	91	85	79	73
Pump	87	81	75	69
Roller	86	80	74	68
Saw (concrete)	96	90	84	78
Scraper	90	84	78	72
Truck	82	76	70	64
Minimum Sound Level	82	76	70	64
Maximum Sound Level	96	90	84	78

Notes:
1. Sound levels at 25 feet, 100 feet and 200 feet are calculated based on reference noise levels at 50 feet. Calculation assumes a drop-off rate of 6-dB per doubling of distance, which is appropriate for use in characterizing point-source (such as construction equipment) sound attenuation over a hard surface propagation path.

Source: Federal Highway Administration

To more accurately characterize construction-period noise levels, the average (L_{eq}) noise level associated with each construction stage is provided in Table 4.8-9 (Construction Stage/Phase/

[27]/ Beranek, Leo. L. and Vér, István L. (ed.), Noise and Vibration Control Engineering, Principles and Applications, 1992, p. 652.

Process Average L_{eq} Noise Levels by Distance).[28] These average noise levels are based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage and is typically attributable to multiple pieces of equipment operating simultaneously. As shown therein, the average construction-period noise level is expected to range from 79 dBA to 89 dBA at a reference distance of 50 feet. The higher construction noise values (i.e., 89 dBA) represent older generations of equipment with either minimal or older sound suppression technologies. Today's construction equipment is usually equipped with "state of art" noise suppression devices, such as mufflers, sound attenuated engine enclosures and lower engine noise technologies. In order to present a worst-case analysis, the project's construction noise analysis utilizes the upper level of construction noise levels (89 dBA).

Table 4.8-9
CONSTRUCTION STAGE / PHASE / PROCESS AVERAGE L_{eq} NOISE LEVELS BY DISTANCE

Construction Stage / Phase/ Process	Referenced Sound Level in dBA (L_{eq}) at Indicated Distance[1,2]				
	25 Feet	50 Feet	100 Feet	150 Feet	200 Feet
Site Preparation / Grading	95	89	83	79	77
Foundations	84	78	72	68	66
Structural	91	85	79	75	73
Finishing	95	89	83	79	77

Notes:
1. Reference sound levels used for this project are based on published data from the "L.A. CEQA Thresholds Guide – Your Reference for Preparing CEQA Analyses in Los Angeles" (Exhibit I.1-2 [Outdoor Construction Noise Levels], p. I.1-9) (City of Los Angeles, 2006). The "L.A. CEQA Thresholds Guide" noise levels are based on the information provided by in the USEPA's "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances" (Bolt, Beranek, and Newman, 1971)." As indicated by the USEPA, the reference sound levels are with all pertinent equipment present at the site.
2. Sound levels at 25 feet, 100 feet, 150 feet, and 200 feet are calculated based on the reference noise levels at 50 feet. Calculation assumes a hard surface propagation path drop-off rate of 6-dB per doubling of distance, which is appropriate for use in characterizing point-source (such as construction equipment) sound attenuation.

Source: City of Los Angeles and United States Environmental Protection Agency

In general, the first and noisiest construction phase is site preparation (i.e., grading and excavation), which would involve movement of construction equipment to the project site, earth moving, excavation, and compaction of soils. High noise levels created during site preparation would be associated with the operation of heavy-duty trucks, scrapers, dozers, graders, backhoes, and front-end loaders. The estimated noise level during site preparation is approximately 89 dBA at a distance of 50 feet from the construction site. During the second stage of construction, foundation forms are constructed and concrete foundations are poured. Primary noise sources include heavy concrete trucks and mixers, cranes, and pneumatic drills, with an estimate average noise level of 78 dBA at 50 feet from the construction site. The third and fourth stages consist of interior and exterior building construction and site cleanup. Primary noise sources associated with these phases include hammering, diesel generators, compressors, and light truck traffic. Noise levels are typically in the 85 dBA range at a distance of 50 feet. The fifth and final construction stage typically involves the use of trucks, landscape rollers, and compactors, with noise levels in the 89 dBA range at a distance of 50 feet.

[28]/ United States Department of Transportation, Federal Highway Administration, FHWA Roadway Construction Noise Model User's Guide, Final Report, FHWA-HEP-05-054, January 2006.

Grading Noise Impacts

It is assumed that rough grading operations would be completed prior to building construction with only minimal finish grading activities occurring concurrent with site occupancy. Future on-site residences would, therefore, not be expected to be exposed to substantial noise associated with grading operations.

Currently, the nearest existing residential uses are located along the south boundary of Neighborhood II. Other existing residential uses are located along the south side of Neighborhoods III and IV, along the south side of Riverside Avenue and Lytle Creek Road, respectively. Since those constitute existing neighborhoods, grading activities would occur in close proximity to off-site sensitive receptors.

High noise levels created during grading would be associated with the operation of heavy-duty haul trucks, scrapers, graders, backhoes, front-end loaders, and water trucks. When construction equipment is operating, noise levels would be approximately 89 dBA at a distance of 50 feet from the perimeter of construction activities. Grading would occur over much of the proposed development area, with grading occurring adjacent to the western and southernmost boundaries.

With regards to exterior construction-term noise impacts, along the perimeter of much of the project site are existing natural features (e.g., Lytle Creek Wash), public lands (e.g., SBNF, GHRP), and other public rights-of-way (e.g., I-15 Freeway, Riverside Avenue, Lytle Creek Road) which create physical separation between interior noise sources and exterior receptors. The presence of those existing rights-of-way (ROWs) will provide additional opportunities for "spreading loss."[29]

Riverside Avenue separates Neighborhood III from existing residential receptors (e.g., Las Colinas) and other sensitive uses located along the west side of that roadway. As proposed, within a 127-foot-wide ROW, Riverside Avenue will be improved to consist of a 14-foot wide striped median, three travel lanes in each direction (with a collective width of 38 feet), a 24-foot wide landscaped parkway containing a 5-foot wide parkway-adjacent sidewalk along the eastern side of the street and a 13-foot wide landscaped parkway with a 4.5-foot wide parkway-adjacent sidewalk along the western side of the street. An existing masonry block wall presently separates the ROW from those existing homes backing onto Riverside Avenue.

Lytle Creek Road separates the area of Neighborhood IV from those existing residential receptors located along the west side of that roadway. Lytle Creek Road has a 104-foot-wide ROW north of the I-15 Freeway.

Building Construction Noise Impacts

In summary, the construction phases include infrastructure, building construction, finish grading, and site cleanup. Primary noise sources include backhoes, loaders, hammering, diesel generators, compressors, forklifts, cranes, concrete mixers, and light truck traffic. Noise levels

[29]/ Because noise spreads in an ever-widening pattern, the given amount of noise striking an object, such as an eardrum, is reduced with distance from the source. This is known as "spreading loss." The typical spreading loss for point source noise is 6 dBA per doubling of the distance from the noise source. Conversely, the noise "gain" (the closer the receptor is to the source) is via the addition of 6 dBA to each halving of the distance.

associated with these sources are temporary but would typically range from 78 to 89 dBA at a distance of 50 feet. Any location with an uninterrupted line-of-sight to the construction noise sources could periodically be exposed to temporary noise levels that would exceed 75 dBA at distance of less than 150 feet from the noise source.

Noise levels generated during building construction would affect occupants of future on-site residential uses constructed during the project's early development phases. Additional future sensitive on-site uses proposed within the LCRSP include public and private recreational areas and facilities, schools, and other potential uses (e.g., churches).

Because construction activities would be confined to daytime hours, compliance with the City's Noise Ordinance would result in a less-than-significant impact. In accordance therewith, construction activities shall be restricted to the following hours: (1) October 1 through April 30 – 7:00 AM and 5:30 PM on weekdays and 8:00 AM to 5:00 PM on Saturdays; and (2) May 1 through September 30 – 7:00 AM and 6:00 PM on weekdays and 8:00 AM to 5:00 PM on Saturdays. City code enforcement officers and peace officer are both authorized to respond to construction noise complaints.

4.8.5.2 Operational Impacts

Environmental Impact 8-2*. Upon completion, vehicular traffic added to those off-site roadways within the general project area will introduce new mobile noise sources and may create a higher noise exposure to residents and other sensitive receptors beyond the noise levels currently experienced or otherwise predicted in the absence of the proposed project.*

Preliminary Determination 8-2*. Significant and unavoidable impact.*[30]

Off-site locations in the project vicinity could experience an increase in noise resulting from the additional traffic generated by the proposed project. Ambient noise levels will also increase due to increased traffic volumes (from anticipated ambient growth and other related projects), independent of any contributions attributable to the proposed project. As such, the roadway traffic volumes under the proposed project were analyzed to determine if any traffic-related noise impacts would occur as a result of the project's approval and implementation. Table 4.8-10 (Off-Site Traffic Noise Analysis – Project-Related and Cumulative Noise Impacts) provides the calculated CNEL for the analyzed roadway segments for the following scenarios: (1) existing (2007) conditions; (2) future (2030) without development of the proposed project; and (3) future (2030) with development of the proposed project. Potential noise impacts due to project-related off-site traffic were analyzed by estimating the increase in noise levels due to project-related traffic at full build-out (2030) compared with the future (2030) ambient noise levels that would exist without the proposed project.

[30]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; (2) produce a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; (3) produce a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; (4) result, based on the placement of a residential unit in proximity to an external noise sources, in an annual interior CNEL of 45 dB or greater in any habitable room; and (5) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Table 4.8-10
OFF-SITE TRAFFIC NOISE ANALYSIS
PROJECT-RELATED AND CUMULATIVE NOISE IMPACT

Roadway Segment	Calculated Traffic Noise Levels 25 feet from Roadway Right-of-Way CNEL (dBA)			Project Increment[1] (dBA)	Cumulative Increment[2] (dBA)
	Existing (2007) Conditions	Future (2030) without Project	Future (2030) with Project		
Lytle Creek Road					
West of Sierra Avenue	62.3	68.7	69.5	0.8	7.2
Riverside Avenue					
Between Sierra Ave. & Alder Ave.	68.4	69.8	72.7	2.9	4.3
Between Alder Ave. & Locust Ave.	67.9	69.0	72.1	3.1	4.2
Between Locust Ave. & Linden Ave.	69.3	69.8	71.9	2.1	2.6
Between Linden Ave. & Knollwood Ave.	70.2	70.6	72.6	2.0	2.4
Between Knollwood Avenue & Country Club Drive	70.8	70.9	71.8	0.9	1.0
East of Country Club Drive	70.6	69.7	71.1	1.4	0.5
Between Easton St. & Baseline Road	69.9	70.3	70.0	(0.3)	0.1
South of Baseline Road	69.8	70.1	69.7	(0.4)	(0.1)
Baseline Road					
West of Sierra Avenue	67.2	67.9	67.3	(0.6)	0.1
Between Sierra Avenue & Alder	68.1	68.7	68.1	(0.6)	0.0
Between Alder Avenue & Ayala Drive	69.3	68.7	68.2	(0.5)	(1.1)
Between Ayala Dr. & Riverside Avenue	70.3	69.7	68.9	(0.8)	(1.4)
East of Riverside Avenue	70.0	70.3	70.0	(0.3)	0.1
Sierra Avenue					
South of Summit Avenue	69.2	69.9	69.4	(0.5)	0.2
North of Baseline Road	68.7	70.2	69.8	(0.4)	1.1
South of Baseline Road	68.2	70.0	69.5	(0.5)	1.3
Summit Avenue					
Between I-15 Freeway & Sierra Ave.	69.8	69.4	68.9	(0.5)	(0.9)
Casa Grande Drive					
West of Alder Avenue	61.0	65.7	66.0	0.3	5.0
East of Alder Avenue	63.6	63.6	64.3	0.7	0.7
Live Oak Avenue					
South of Riverside Avenue	63.6	64.6	66.2	1.6	2.6
Alder Avenue					
Between Riverside Ave. & Casa	65.3	64.5	66.7	2.2	1.4
Between Casa Grande Drive & Casmalia Street	64.1	68.8	69.3	0.5	5.2
Between Easton St. & Baseline Rd.	67.2	69.1	68.9	(0.2)	1.7
South of Baseline Road	66.3	69.1	68.8	(0.3)	2.5
Locust Avenue					
South of Riverside Avenue	64.4	61.7	63.1	1.4	(1.3)
Linden Avenue					
South of Riverside Avenue	60.2	59.0	60.7	1.7	0.5

Table 4.8-10 (Continued)
OFF-SITE TRAFFIC NOISE ANALYSIS
PROJECT-RELATED AND CUMULATIVE NOISE IMPACT

Roadway Segment	Calculated Traffic Noise Levels 25 feet from Roadway Right-of-Way CNEL (dBA)			Project Increment[1] (dBA)	Cumulative Increment[2] (dBA)
	Existing (2007) Conditions	Future (2030) without Project	Future (2030) with Project[1]		
Ayala Drive					
South of Riverside Avenue	66.7	67.2	67.8	0.6	1.1
Between Easton St. & Baseline Rd.	70.5	70.9	70.9	0.0	0.4
Knollwood Avenue					
North of Riverside Avenue	58.2	58.4	59.7	1.3	1.5
Country Club Drive					
North of Riverside Avenue	62.2	62.9	67.3	4.4	5.1
Cedar Avenue					
South of Baseline Road	67.9	70.6	69.9	(0.7)	2.0
State Street					
North of Highland Avenue	64.5	68.8	68.3	(0.5)	3.8
Palm Avenue					
East of I-215 Freeway	69.5	70.4	69.8	(0.6)	0.3
University Parkway					
East of I-215 Freeway	68.3	70.1	69.5	(0.6)	1.2
Cajon Boulevard					
South of Glen Helen Parkway	64.5	67.9	67.9	(0.3)	3.1

Notes:
1. Increase relative to traffic noise levels associated with ambient growth without the proposed project compared with ambient growth plus project development.
2. Cumulative increase relative to existing traffic noise levels, resulting from ambient growth and related projects, plus project development.

Source: PCR Services Corporation

As shown in Table 4.8-10 (Off-Site Traffic Noise Analysis – Project-Related and Cumulative Noise Impacts), increases in project-related traffic noise levels would exceed the significance threshold of 3.0 dBA CNEL at two intersections, resulting in an increase of 3.1 dBA CNEL on Riverside Avenue (between Alder Avenue and Locust Avenue) and 4.4 dBA CNEL on Country Club Drive (north of Riverside Avenue). Project-related noise impacts along Country Club Drive (north of Riverside Avenue) and along the south (west) side of Riverside Avenue (between Alder Avenue and Locust Avenue) would be considered significant under Criterion 2 (Cause ambient noise levels to increase by 3 dBA CNEL or more at a sensitive receptor location and the resulting noise exceeds 65 dBA CNEL) and the impacts would remain significant and unavoidable. No feasible noise attenuation measures have been identified to reduce project-related operational traffic noise impacts along those roadway segments to a less-than-significant level.

All other roadway segments would be less than the 3.0 dBA CNEL increase in noise levels. A mitigation measure (Mitigation Measure 8-1) has been formulated specifying the construction of on-site noise barriers adjacent to the I-15 Freeway, Lytle Creek Road, Glen Helen Parkway,

Sierra Avenue, and Riverside Avenue to reduce the exterior noise levels in order to meet City's noise standard with regards to sensitive on-site land uses. Incorporation of that measure would reduce project-related traffic noise impacts along those roadways and with regards on on-site uses to a less-than-significant level.

Traffic noise can also be minimized through reduction of vehicular speed and/or implementation of traffic calming measures, such as speed humps and traffic circles. Given the nature of these road segments, alternative noise attenuation measures would not appear to be feasible mitigation due to legal considerations, specifically, the Applicant's inability to legally reduce travel speeds or reconfigure off-site public streets.

Similarly, the existing orientation and proximity of existing residences along Riverside Avenue (between Alder Avenue and Locust Avenue) Country Club Drive (north of Riverside Drive) makes infeasible the implementation of noise attenuation measures along that road segment. Vehicular access to and from existing residential uses is provided via driveways along Country Club Drive. Construction of landscaped berms and/or other noise barriers at these locations would interfere with vehicular access to those properties. If provided, requisite openings to allow access to these residences would dilute the effectiveness of those measures. Moreover, given the orientation of these homes to the street, a noise barrier would block existing views from many of these residences.

Given that the establishment of speed limits along Country Club Drive is the responsibility of the County, further reduction of vehicle speed along this roadway segment as a project mitigation measure would not be feasible as the Applicant does not have the ability to implement any reductions or otherwise construct or install traffic calming measures on off-site City or County streets.

Project-related traffic noise levels would, therefore, result in significant and unavoidable impacts, for the existing sensitive uses located along Riverside Avenue (between Alder Avenue and Locust Avenue) and Country Club Drive (north of Riverside Drive). Project-related noise impacts along Riverside Avenue (between Alder Avenue and Locust Avenue) and Country Club Drive (north of Riverside Drive) would be considered significant under significance Criterion 2 (Cause ambient noise levels to increase by 3 dBA CNEL or more at a sensitive receptor location and the resulting noise exceeds 65 dBA CNEL) and the impact would remain significant and unavoidable. No feasible noise attenuation measures have been identified to reduce project-related operational traffic noise impacts along those road segments to a less-than-significant level.

***Environmental Impact 8-3**. At project build-out, traffic internal to the project site could expose proximal receptors to noise levels in excess of City residential standards.*

***Preliminary Determination 8-3**. Potentially significant unless mitigation incorporated.*[31]

[31]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; (2) produce a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; (3) produce a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and (4) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Future project residents would generate and would be exposed to typical urban on-site noise sources, including people, air conditioning units, lawn care equipment, domestic animals. These noise sources contribute to the ambient noise levels experienced in all similarly-developed areas and typically do not exceed the noise standards for the types of land uses proposed on the LCRSP site. In addition, these noise sources are consistent with adjacent uses in the project vicinity and proximal off-site receptors would experience project-related noise levels consistent with noise levels generated by those existing residences. Residential-related on-site noise impacts would, therefore, be less than significant.

Noise from schools and parks would be generated by a variety of sources, including voices, public address systems, parking lot use, and sports activities. If located adjacent to residential uses, noise levels from schools and parks may exceed the exterior noise standards presented in the City Noise Ordinance for adjacent residential uses.

Public schools and parks are commonly located near residential areas and, in many cases, compatibility problems do not surface. Public schools and parks are often designed to incorporate features that make them compatible with adjoining land uses such that noise levels do not exceed the standards set forth in the City's Noise Ordinance. These design features can include, but are not necessarily limited to, constructing classroom buildings such that they serve as a buffer between athletic fields and adjoining residences, locating student pick-up and drop-off areas as far away from residences as feasible, and constructing noise barriers.

Nonetheless, as site-specific designs for public school and park uses are not available and the adjacencies of noise sensitive uses are not known, it is concluded that school and park uses could generate noise levels in excess of City standards for residential uses if proper design consideration and features are not put in place. A number of mitigation measures (Mitigation Measure 8-2 through Mitigation Measure 8-4) have been formulated to address these issues, ensure that the interior noise environments of residential, schools, and commercial office structures comply with applicable interior noise insulation requirements, and require that the planning and the design of on-site schools and parks strive to minimize noise impacts upon adjacent residential areas. With the implementation of those measures, associated operational noise impacts would be reduced to a less-than-significant level.

Environmental Impact 8-4*. Residential and non-residential development would be exposed to noise levels that range from 65.2 dBA CNEL (at 25 feet distance) along Live Oak Avenue (new internal roadway) to 83.5 dBA CNEL along the I-15 Freeway, exceeding the City's exterior noise standard of 65 dBA CNEL for noise sensitive land uses.*

Preliminary Determination 8-4*. Potentially significant unless mitigation incorporated.*[32]

[32]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; (2) produce a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; (3) produce a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; (4) result, based on the placement of a residential unit in proximity to an external noise sources, in an annual interior CNEL of 45 dB or greater in any habitable room; and (5) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The existing and future traffic both surrounding and located within the project site would affect proximal sensitive receptors. Table 4.8-11 (Roadway Noise Levels at Project Site) provides the projected traffic noise levels for roadway segments adjacent to the proposed developments at a reference distance of 25 feet and 50 feet from the edge of a given roadway. As project building layouts and site development plans are not yet available for review, the noise model assumes straight line attenuations/reductions in noise levels at a rate of 3 dBA per doubling distance with no intervening structures. Although some attenuation of noise levels would occur as a result of the construction of intervening structures, for the purpose of this analysis, no structural attenuation is assumed.

As indicated on Table 4.8-11 (Roadway Noise Levels at Project Site), the project site would be exposed to noise levels that range from 65.2 dBA CNEL (at 25 feet distance) along Live Oak Avenue (new internal roadway) to 83.5 dBA CNEL along the I-15 Freeway, exceeding the City's exterior noise standard of 65 dBA CNEL for noise sensitive land uses. Less noise sensitive uses would be compatible up to 75 dBA CNEL and 80 dBA CNEL.

Table 4.8-11
ROADWAY NOISE LEVELS AT PROJECT SITE

Roadway Segment	**Applicable Project Area** (Neighborhood)	**Calculated Traffic Noise Levels Reference Distance from Roadway CNEL** (dBA)		
		Adjacent	**25 Feet**	**50 Feet**
I-15 Freeway				
Between Sierra Avenue & Glen Helen Parkway	I, III, and IV	86.0	83.5	81.9
Glen Helen Parkway				
Between Lytle Creek Road & I-15 Freeway	I and IV	68.5	66.1	64.5
Lytle Creek Road				
West of Glen Helen Parkway	IV	73.4	70.9	69.4
East of Glen Helen Parkway	IV	71.9	69.5	67.9
Sierra Avenue				
Between Lytle Creek Road & I-15 Freeway	IV	73.1	70.7	69.1
Riverside Avenue				
Between Sierra Avenue & Alder Avenue	III	75.1	72.7	71.1
Between Alder Avenue & Locust Avenue	III	74.5	72.1	70.5
Between Locust Avenue & Linden Avenue	III	74.3	71.9	70.3
Live Oak Avenue				
North of Riverside Avenue	III	67.7	65.2	63.7
Alder Avenue				
North of Riverside Avenue	III	69.4	67.0	65.4
Locust Avenue				
North of Riverside Avenue	III	68.5	66.1	64.5
Linden Avenue				
North of Riverside Avenue	II	69.6	67.1	65.6
Country Club Drive				
North of Riverside Avenue	II	70.3	67.3	65.6

Source: PCR Services Corporation

A number of mitigation measures (Mitigation Measure 8-1 and Mitigation Measure 8-5) have been formulated which would ensure that exterior noise levels will be reduced to meet the applicable noise standards and will reduce the noise impact to a less-than-significant level, including: (1) requiring that noise barriers be constructed along the residential lots adjacent to the I-15 Freeway, Lytle Creek Road, Glen Helen Parkway, Sierra Avenue and Riverside Avenue; (2) recommending that the upper levels of residential lots adjacent to I-15 Freeway be constructed with no balconies facing the freeway or that such balconies include noise barriers.

In addition to the exterior noise impacts, the interior noise environment of new residential construction, attributable to exterior noise sources, shall be limited to 45 dBA CNEL. New residential constructions, typically includes the use of stucco walls, double-pane windows, solid entrance doors with seals. Assuming that the windows are closed and air ventilation is provided, those measures provide a minimum 20 dBA exterior/interior noise reduction. Where the exterior noise levels exceed 65 dBA CNEL, specially manufactured sound-rated windows and/or doors can be used to achieve the interior noise levels.

A number of mitigation measures (Mitigation Measure 8-2 and Mitigation Measure 8-3) contain recommendations for reducing noise impacts to a less-than-significant level. With the implementation of those measures, associated operational noise impacts would be reduced to a less-than-significant level.

Environmental Impact 8-5*. Existing sand and gravel mining operations in the vicinity of Neighborhoods II and III will continue in accordance with the terms and conditions of an existing surface mining permit. Those operations have the potential to generate operational noise levels adversely affecting proximal sensitive receptors.*

Preliminary Determination 8-5*. Less-than-significant impact.*

Ongoing sand and gravel extraction activities may be audible at the nearest residential receptors when the activity is loud and there is minimal grade separation between the two activities. The potential for noise nuisance also depends upon the character of the noise, its time of occurrence, masking effects of the background, and a number of additional factors.

As discussed in Section 4.8.3.2 (Local Setting), Noise Measurement Location “R2” was located near the northeast corner of the Neighborhood II and the quarry area in order to assess ambient noise levels, including the mining and tile manufacturing facilities. Noise Measurement Location “R3” was located at the east side of Neighborhood III, also near the quarry area. A summary of noise measurement data is provided above in Table 4.8-5 (Summary of Measured Ambient Noise Measurements [2006]). As shown therein, the measured CNEL at Noise Measurement Locations “R2” and “R3” (51.6 dBA to 59.8 dBA, respectively) are below the County’s standards for residential development (i.e., less than 60 dBA CNEL). However, those two locations may not be representative of future development being located more proximate to quarry processing and crushing operations.

Active mining is and will continue to occur in the north quarry area, which is located north of the flood control channel, thus providing greater separation distances between the mining and project receptors. Pit mining progressively depresses the source location of the noise and is a factor in shielding noise. Cemex USA’s hours of operations, however, vary with the regional

demand for aggregate and cement.[33] As of June 2008, hours of mining and processing were from 4:00 AM to 12:30 PM, with the facility open for haul truck and cement trucks from 3:00 AM to 6:00 PM.[34] Given that general construction and development and demand for aggregate and cement was low in June 2008, in the future, operating hours may be further extended.

Two supplemental noise readings were obtained (Noise Measurement Locations "SR-1" and "SR-2") and the noise readings presented in Table 4.8-7 (Supplemental Noise Level Measurements [2008]). Those readings were obtained approximately 1,500 feet (Location "SR-1") to 1,300 (Location "SR-2") feet from crushing and processing operations and included the crusher, a front-end loader, an operating water truck, and a truck washing area which were largely unobscured. These pieces, along with haul trucks and cement trucks operating along the on-site roadway, served as the dominant sources of noise at those locations. As shown, for Noise Measurement Locations "SR-1" and "SR-2," the measured L_{eq} was 44.6 and 47.9 dB and the measured L_{max} was 55.1 and 56.5 dB, respectively.

The Cemex USA Lytle Creek Plant (3221 N. Riverside Drive, Rialto) is located in an unincorporated County area not identified by the Applicant for annexation as part of the proposed project. The most stringent County noise standard is 55 dB (L_{50} level) during daytime and 45 dB at night. A reference L_{50} noise level of 85 dB can occur at 50 feet from a quarry if the jaw crusher operates continuously for one hour. The L_{50} level for Noise Measurement Locations "SR-1" and "SR-2" were 43.8 and 46.6 dB, respectively. Table 4.7-12 (Noise Levels per Distance from Source [dB L_{50}]) gives the distances between source and receptor with the corresponding noise levels. As shown therein, Noise Measurement Location "SR-1" would meet the daytime standard at a distance of 375 feet or greater and Noise Measurement Location "SR-2" would meet the daytime standard at a distance of 490 feet or greater. Nighttime standards are exceeded at Locations "SR-1" and "SR-2," except at "SR-1" at a distance of 1,500 feet.

Table 4.8-12
NOISE LEVELS PER DISTANCE FROM SOURCE (dB L_{50})

Noise Measurement Location "SR-1"		**Noise Measurement Location "SR-2"**	
Distance (feet)	**dB L_{50}**	**Distance** (feet)	**dB L_{50}**
1,500	43.8	1,300	46.6[2]
750	49.8[2]	650	52.6[2,3]
375	54.8[2]	325	58.6[1,2]
187.5	60.8[1,2]	-	-

Notes:
1. Does not meet County daytime standards.
2. Does not meet County nighttime standards.
3. The 55 dB criterion is met at a distance of 490 feet.

Source: Environmental Impact Sciences

At this time, because the distances from sensitive receptors to noise sources associated with quarry operations is not now known, there may be the potential for noise levels to exceed applicable standards, potentially resulting in significant adverse impacts.

[33]/ As stipulated, in pertinent part, in the "declaration of covenants, conditions and restrictions," as recorded in the Office of the County Clerk of the County of San Bernardino on July 29, 1992 (Instrument No. 92-314964), with regards to the Cemex USA Lytle Creek Plant, the "business of Sunbelt and its affiliates as described in paragraph C, D and E hereof, together with uses incidental thereto, that is being or may be operated on a twenty-four hour basis."

[34]/ Pers. Communication with Brian Mastin, Cemex Environmental Affairs Manager and Darren Janiakowski, Cemex Lytle Creek Operations Manager, June 2008.

As required under the County Development Code: "No person shall operate or cause to be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measures on any other property, either incorporated or unincorporated, to exceed: (A) The noise standard for that receiving land use for a cumulative period of more than thirty (30) minutes in any hour; or (B) The noise standard plus 5 dB(A) for a cumulative period of more than fifteen (15) minutes in any hour; or (C) The noise standard plus 10 dB(A) for a cumulative period of more than five (5) minutes in any hour; or (D) The noise standard plus 15 dB(A) for a cumulative period of more than one (1) minute in any hour; or (E) The noise standard plus 20 dB(A) for any period of time."[35]

Unless otherwise exempted under the County Development Code or subject to use-specific permit authorization, for uses operating in County unincorporated areas, all land uses must fully comply with the County Noise Ordinance. Failures to comply could subject the violating party to specific penalties, including the possible cessation of operations pending the initiation of corrective actions to bring the offending activity into compliance. As such, subject to any provisions or exemptions contained in its SMARA permit, Cemex USA is required to operate in conformity with County standards.

In June 2008, the hours of mining and processing at the Cemex USA quarry were from 4:00 AM to 12:30 PM, with the facility open for haul truck and cement trucks from 3:00 AM to 6:00 PM, as new residential development is constructed proximate to the Cemex USA Lytle Creek Plant, notwithstanding the presence of any waivers that may be obtained from proximal residents, based on the introduction of near-site sensitive receptors, if that facility is not presently operating in strict accordance with County standards, compliance with the County noise ordinance could potentially require adjustments to the imposition of limitations on the future operation of the Cemex USA Lytle Creek Plant.

Should the proposed project be approved, adherence to the City General Plan (Noise Element) will be required. Section 4.0 (The Plan for Control and Management of Noise) of the City's Noise Element provides an implementation program to reduce the number of people exposed to excessive noise and minimize the future effect of noise in the City. As specified therein, Issue 3 (Community Noise Control for Non-Transportation Noise Sources) includes measures intended to protect people from noise generated on adjacent properties. Two actions potentially apply to the Cemex USA facility: (1) Action 12 - Designate one agency in the City to act as the noise control coordinator; this will ensure the continued operation of noise enforcement efforts of the City; and (2) Action 13 - Enforce the new community Noise Ordinance in the event that noise impacts occur on residential land uses planned along Riverside Avenue due to possibly future mining operations occurring in the Lytle Creek Wash area.

Jurisdictionally, compliance with the County Noise Ordinance and the City Noise Ordinance are mandatory within the jurisdiction within which those noise ordinances apply. With the mining operation's adherence to County standards and coordination between the City and the County in monitoring quarry noise and enforcement, quarry operational noise impacts will be less than significant.

In addition, under the provisions of a recorded "declaration of covenants, conditions and restrictions," as recorded with the County Clerk of the County of San Bernardino on July 29,

[35]/ *Op. Cit*., San Bernardino County Development Code, Section 87.0905(b)(2), pp. 7-60 and 7-61).

1992 (Instrument No. 92-314964), the Applicant and subsequent holders of real property interests to the project site located within 500 feet of the Cemex USA Lytle Creek Plant have waived certain rights to assert the presence of a noise-related nuisance arising from active mining operations.[36] The Lead Agency makes no representations as to the currency or enforceability of that private agreement but merely discloses it existence.

4.8.5.3 Cumulative Impacts

Environmental Impact 8-6*. Areawide development activities will result in increased traffic along local roadways. With increased traffic volumes, additional mobile source noise generators are introduced into the project area which can impact those sensitive receptors located adjacent to those roadways.*

Preliminary Determination 8-6*. Significant and unavoidable impact.*[37]

Cumulative noise impacts attributable to roadway traffic would occur as a result of increased traffic on local roadways due to the proposed project and other projects within the study area. Cumulative traffic-generated noise impacts have, therefore, been assessed based on the contribution of the proposed project to the future cumulative traffic volumes in the project vicinity at the project's build-out (2030). Based on current and projected traffic volumes, Table 4.8-10 (Off-Site Traffic Noise Analysis – Project-Related and Cumulative Noise Impacts) provides the calculated CNEL for the analyzed roadway segments for the following scenarios: (1) existing conditions; (2) future (2030) cumulative "without project" conditions; (3) future (2030) cumulative "with project" at full build-out; (4) the increase attributed to project-generated traffic; and (5) the cumulative increase above existing noise levels. As indicated therein, eight roadway segments would have a cumulative noise increase (ranged from 3.1 to 7.2 dBA CNEL) exceeding the 3.0 dBA significance threshold and, therefore, cumulatively significant under Criterion 2. The cumulative traffic noise increase at all other roadways would be less than the 3.0 dBA significance threshold.

Those roadway segments projected to experience cumulative noise increases above 3.0 dBA include: (1) Lytle Creek Road (west of Sierra Avenue) (cumulative increase 7.2 dBA CNEL, project-related contribution 0.8 dBA CNEL); (2) Riverside Avenue (between Sierra Avenue and

[36]/ As indicated in pertinent part therein, "with respect to those portions of the Lytle Property which lie within 500 feet of any portion of the Mining Property and which are used for residential purposes and uses incidental thereto, waive and release any rights, claims, complaints, objections, protests, actions, judgments, liabilities, demands, losses, fees, costs and expenses (collectively 'Claims') of every nature and kind known, suspected or unsuspected, whether arising now or in the future, arising out of or relating to any Mining Operations on or about the Mining Property, whether now existing or hereafter lawfully conducted or commenced, including, without limitation, all Claims based upon nuisance, trespass or property damage resulting from directly or indirectly, sand, gravel, dust, smoke, noise, blast, shock, subsidence or odor or other elements emanating from the Mining Property into, on, over, under or about the Lytle Property, provided, however, that such waiver and release shall not apply to Claims arising out of Mining Operations that are conducted in an unlawful manner."

[37]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; (2) produce a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; (3) produce a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; (4) result, based on the placement of a residential unit in proximity to an external noise sources, in an annual interior CNEL of 45 dB or greater in any habitable room; and (5) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Alder Avenue) (cumulative increase 4.3 dBA CNEL, project-related contribution 2.9 dBA CNEL); (3) Riverside Avenue (between Alder Avenue and Locust Avenue) (cumulative increase 4.2 dBA, project-related contribution 3.1 dBA); (4) Casa Grande Drive (west of Alder Avenue) (cumulative increase 5.0 dBA CNEL, project-related contribution 0.3 dBA CNEL); (5) Alder Avenue (between Casa Grande Drive and Casmalia Street) (cumulative increase 5.2 dBA CNEL, project-related contribution 0.5 dBA CNEL); (6) Country Club Drive (north of Riverside Drive) (cumulative increase 5.1 dBA CNEL, project-related contribution 4.4 dBA CNEL); (7) State Street north of Highland Avenue (cumulative increase 3.8 dBA CNEL, project-related contribution minus 0.5 dBA CNEL); and (8) Cajon Boulevard (south of Glen Helen Parkway) (cumulative increase 3.1 dBA CNEL, project-related contribution minus 0.3 dBA CNEL).

For the purpose of impact assessment, based on the threshold of significance criteria stated herein, the contribution of the project to the cumulative environment is considered significant if the project were to contribute 3 dBA CNEL to a cumulative noise increase of more than 5 dBA CNEL.

The increase in noise levels attributable to the proposed project would only exceed Criterion 2 (Cause ambient noise levels to increase by 3 dBA CNEL or more at a sensitive receptor location and the resulting noise exceeds 65 dBA CNEL) at two of the impacted roadway segments: (1) Riverside Avenue (between Alder Avenue and Locust Avenue) (project contribution 3.1 dBA CNEL); and (2) Country Club Drive (north of Riverside Avenue) (project contribution 4.4 dBA CNEL).

While, under Criterion 2, significant cumulative noise impacts would result at eight off-site roadway segments, the project's contribution to the cumulative impacts at six of these off-site roadway segments would be less than the 3.0 dBA thresholds of significance criteria. Consequently, the proposed project would not result in a cumulatively considerable contribution to the cumulative noise impacts at those six road segments. The cumulative impact of the proposed project on those six segments would, therefore, be less than significant.

A mitigation measure (Mitigation Measure 8-1) has been formulated that would reduce exterior noise at the project site to meet City noise standards with regards to sensitive on-site land uses. In addition, there are existing sound walls located along the rear property line of those existing residences on Riverside Avenue (between Alder Avenue and Locust Avenue) and Locust Avenue (north of Riverside Avenue).

With respect to those residences along Country Club Drive north of Riverside Avenue, the existing orientation and proximity of existing residences make infeasible the implementation of noise attenuation measures to reduce cumulative operational noise impacts to a less-than-significant level along that road segment. Vehicular access to and from existing residential uses is provided via driveways along Country Club Drive. Construction of landscaped berms and/or other noise barriers at these locations would interfere with vehicular access to those properties. If provided, requisite openings to allow access to these residences would dilute the effectiveness of those measures. Moreover, given the orientation of these homes to the street, a noise barrier would block existing views from many of these residences.

Traffic noise can also be minimized through reduction of vehicular speed, implementation of traffic calming measures, such as speed humps or traffic circles. Given the nature of the road segments, alternative noise attenuation measures would not appear to be feasible mitigation

due to legal considerations, specifically, the Applicant's inability to legally reduce travel speeds or reconfigure off-site public streets.

Cumulative traffic noise levels would result in significant and unavoidable impacts for the existing sensitive uses located along Riverside Avenue (between Alder Avenue and Locust Avenue) and Country Club Drive (north of Riverside Drive). No feasible noise attenuation measures have been identified to reduce cumulative operational traffic noise impacts along those road segments to a less-than-significant level.

4.8.6 Recommended Mitigation Measures

- **Mitigation Measure 8-1**. Noise barrier shall be constructed along any residential lots and school sites adjacent to the I-15 Freeway, Lytle Creek Road, Glen Helen Parkway, Sierra Avenue, and Riverside Avenue. Depending on the final lot grade elevations relative to the roadway elevations, noise barrier height of ranging between 5-8 feet would reduce the traffic noise to 65 dBA CNEL at outdoor noise sensitive uses, including residential backyards and courtyards and school playgrounds. A higher noise barrier will likely be required to mitigate I-15 Freeway noise. Overall height of noise barrier can be achieved by solid walls, earthen berms or combination of walls and earthen berms. Final noise barrier height shall be assessed when the final site and grading plans are completed. Prior to the issuance of grading permits for development projects located along I-15 Freeway, Lytle Creek Road, Glen Helen Parkway, Sierra Avenue, and Riverside Avenue, an acoustical analysis shall be prepared by a qualified acoustical consultant and submitted to, and when deemed acceptable, accepted by the City Engineer. The report shall determine the need for any noise barriers or other mitigation strategies and, if required, identify noise barrier heights, locations, and configurations capable of achieving compliance with applicable City standards.

- **Mitigation Measure 8-2**. The interior noise environment of residential structures (habitable rooms) and school classrooms shall not exceed 45 dBA CNEL. Prior to the issuance of building permits for those uses, an acoustical analysis shall be prepared by a qualified consultant and submitted to, and when deemed acceptable, accepted by the City Engineer for all new residential and school developments where exterior areas are projected to be 65 dBA CNEL or higher at the project's build-out, documenting that an acceptable interior noise level of 45 dB L_{dn} (or CNEL) or below will be achieved with the windows and doors closed and identifying any design or development measures that would be required to achieve that standard.

- **Mitigation Measure 8-3**. Prior to the issuance of building permit for non-residential uses within the "Village Center Commercial (VC) district and "General Warehousing Overlay, an acoustical analysis shall be prepared by a qualified acoustical consultant and submitted to, and when deemed acceptable, accepted by the City Engineer demonstrating that an acceptable interior noise level of 45 dB L_{dn} (or CNEL) or below will be achieved for adjacent residential uses (including hotel, motel, transient lodging), office buildings, amphitheaters, auditoriums, meeting halls, movie theaters, churches, and other similar sensitive uses and that an acceptable interior noise level of 50 dB L_{dn} (or CNEL) or below will be achieved for retail commercial uses, banks, restaurants, and other similar uses with the windows and doors closed and identifying any design or development measures that would be required to achieve those standards.

- **Mitigation Measure 8-4**. To the extent feasible, schools and parks shall be designed to: (1) locate and orient vehicle access points, including pick-up and drop-off areas, away from noise sensitive uses; (2) locate loading and shipping facilities away from adjacent noise sensitive uses; (3) minimize the use of outdoor speakers and amplifiers oriented toward adjacent sensitive receptors; and (4) incorporate fences, walls, landscaping, and other noise buffers and barriers between the proposed use and other abutting noise sensitive uses.

- **Mitigation Measure 8-5**. Since the upper levels of residential units located adjacent to I-15 Freeway could be exposed to noise levels in excess of City standard, design plans for residential projects adjacent to the I-15 Freeway shall either exclude balconies facing the I-15 Freeway or incorporate noise barriers in the design of those balconies, such as transparent plexiglass, which would reduce freeway noise at those balconies to 65 dBA CNEL.

4.8.7 Significant Unavoidable Adverse Effects

With respect to off-site traffic, the project would contribute a maximum noise level increase of 4.4 dBA along roadway segments adjacent to the project site, which would be a significant impact under Criterion 2 (Cause ambient noise levels to increase by 3 dBA CNEL or more at a sensitive receptor location and the resulting noise exceeds 65 dBA CNEL). Mitigation is recommended to reduce the off-site traffic noise to new developments along most roadway segments adjacent to the project site to a less-than-significant level. Because of driveway configuration and orientation of existing residences, in combination with existing legal constraints, there are no feasible mitigation measures for sensitive receptors located along Riverside Avenue (between Alder Avenue and Locust Avenue) and along Country Club Drive (north of Riverside Avenue). Off-site traffic noise levels would, therefore, result in a significant and unavoidable impact along those roadway segments.

In addition, because the project's contribution exceeds 3.0 dBA CNEL, off-site traffic noise levels would result in significant and unavoidable cumulative impacts for sensitive receptors located along Riverside Avenue (between Alder Avenue and Locust Avenue) and along Country Club Drive (north of Riverside Drive).

4.9 PUBLIC SERVICES AND RECREATION

As indicated in the State CEQA Guidelines, public services include fire protection, police protection, schools, parks, and other public facilities. As addressed herein, public services and recreation includes police services, fire protection and paramedic services, public school facilities,[1] libraries, and public recreational facilities.

4.9.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- City of Rialto, Hazard Mitigation Plan, Community of City of Rialto, CA, August 29, 2004.
- County of San Bernardino, Open Space Background Report, November 1, 2006.
- Hunt Research Corporation, Conceptual Fire Agencies Emergency Response Study for the Lytle Creek Ranch Development, Rialto, California, February 10, 2008 (see Appendix III-I).
- Rialto Fire Department, Hazard Mitigation Plan – Community of City of Rialto, CA, adopted February 1, 2005.
- San Bernardino County Fire Department, Office of Emergency Services, San Bernardino County Operational Area Multi-Jurisdictional Hazard Mitigation Plan, April 2005.

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.9.2 Regulatory and Policy Setting

4.9.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Healthy Forests Restoration Act**. Title I of the Healthy Forests Restoration Act of 2003 (Public Law 108-148) (HFRA) focuses primarily on expedited hazardous-fuel treatment on some National Forest System (NFS) and United States Department of the

[1]/ Public education in California consists of two distinct systems. One system includes local school districts that provide elementary and secondary education. The other system, commonly referred to as "higher education," includes California community colleges, the California State University system, and the University of California. California's system of public higher education, which includes 140 campuses in three distinct segments, serves about 2.3-million students. California community colleges provide instruction to about 1.7-million students at 108 campuses operated by 72 locally governed districts throughout the State. The community colleges grant associate degrees and also offer a variety of vocational skill courses. The California State University system includes 23 campuses, with an enrollment of about 395,000 students. The system grants bachelor and master degrees, and a small number of joint doctoral degrees in combination with the University of California. The University of California includes 8 general campuses and one health sciences campus, serving about 184,000 students. This system offers bachelor, master, and doctoral degrees, and is the primary State-supported agency for research. In the context of this EIR, education relates only to public schools providing kindergarten (K) through 12th grade (K-12) schooling. Pre-kindergarten-level schools, community colleges, State colleges, and universities, and private schools are not addressed herein.

Interior - Bureau of Land Management (BLM) lands at risk of wildland fire and insect or disease epidemics. These lands include areas where vegetation treatment will provide long-term benefits to threatened and endangered species. The HFRA encourages federal agencies to involve State and local governments and citizens when developing plans and projects for vegetation treatment on federal and adjacent non-federal lands. The HFRA is consistent with community-based wildland fire planning, watershed planning, and related efforts under the "National Fire Plan" and "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy Implementation Plan."[2]

The HFRA provides improved administrative procedures for hazardous-fuel-reduction projects on NFS and BLM lands in the wildland urban interfaces (WUIs) of "communities in the vicinity of federal lands at risk from wildfire." The act encourages the development of community wildfire protection plans under which communities will designate their WUIs, where HFRA projects may take place. The HFRA is intended to accelerate the interest of listed at-risk communities.

The USFS defines "wildland urban interface zones" as "those areas of resident population at imminent risk from wildfire, and human developments having special significance, including critical communication sites, municipal watersheds, high voltage transmission lines, observatories, church camps, research facilities, and other structures that if destroyed by fire, would result in hardships to communities. These areas encompass not only the sites themselves, but also the continuous slopes and fuels that lead directly to the sites, regardless of the distance involved."[3] In the general project area, interface communities include Devore, Devore Heights, Fontana, Lytle Creek, Rancho Cucamonga, and San Bernardino.[4] The City of Rialto was not specifically listed in the Federal Register notice.

The HFRA called for the preparation of community wildfire protection plans (CWPPs) or comparable plans to define the WUI and establish locally based strategies for wildfire preparedness and hazardous fuels reduction work in these areas. In June 2003, the National Association of State Foresters (NASF) developed guidance for identifying and prioritizing communities at risk. In March 2004, the NASF, in partnership with the Western Governors' Association (WGA) and other parties, developed a handbook[5] for the preparation of CWPPs.

A major component of the "National Fire Plan" was funding for projects designed to reduce fire risks to people and their property. A fundamental step in realizing this goal was the identification of areas that are at high risk of damage from wildfire. Federal fire managers authorized State Foresters to determine which communities were under significant risk from wildland fire on federal lands. The California Department of Forestry and Fire Prevention (CDF or CALFIRE) undertook the task of generating the State's list

[2]/ United States Forest Service and Bureau of Land Management, The Healthy Forest Initiative and Healthy Forests Restoration Act, Interim Field Guide, FS-799, February 2004.

[3]/ United States Forest Service, Forest Service Manual 5140, R3 Supplement No. 5100-2000-2.

[4]/ 66 FR 751 (January 4, 2001) and 66 FR 43384 (August 17, 2001).

[5]/ National Association of State Foresters, Society of American Foresters, Western Governors' Association, National Association of Counties, and the Communities Committee of the 7th American Congress, Preparing a Community Wildfire Protection Plan – A Handbook for Wildland-Urban Interface Communities, March 2004.

of "communities at risk."[6] With the State's extensive urban wildland-urban interface, the list of communities at risk extended beyond federal lands. The following three main factors were used to determine wildland fire threat to wildland-Urban Interface areas of California: (1) ranking fuel hazards (ranking vegetation types by their potential fire behavior during a wildfire); (2) assessing the probability of fire (annual likelihood that a large damaging wildfire would occur in a particular vegetation type; and (3) defining areas of suitable housing density that would create wildland-urban interface fire protection strategy situations (areas of intermingled wildland fuels and urban environments that are in the vicinity of fire threats).

The City and the communities of Bloomington, Grand Terrance, and Muscoy, among others, were identified by the CALFIRE as "federal threat."[7]

- **Code of Federal Regulations**. OSHA's "Safety and Health Regulations for Construction" (29 CFR 1926.150[a]) requires that employers performing demolition and construction work shall be responsible for the development of a fire protection program to be followed throughout all phases of the construction and demolition and shall provide the specified firefighting equipment identified under those regulations. As fire hazards occur, there shall be no delay in providing the necessary equipment. Access to all available firefighting equipment shall be maintained at all times and shall be conspicuously located. A temporary or permanent water supply, of sufficient volume, duration, and pressure, as required to properly operate the firefighting equipment, shall be made available as soon as combustible materials accumulate. Where underground water mains are to be provided, they shall be installed, completed, and made available for use as soon as practicable (29 CFR 150[b]). Internal combustion engine powered equipment shall be so located so that the exhausts are well away from combustible materials. Smoking is prohibited at or in the vicinity of operations that constitute a fire hazard and prohibitions must be conspicuously posted (29 CFR 1926.151[a]).

- **Americans with Disabilities Act**. The Americans with Disabilities Act of 1990 (ADA) was created to protect the civil rights of persons with disabilities and established requirements to ensure that buildings, facilities, rail passenger cars, and vehicles are accessible, in terms of architecture and design, transportation, and communication, to individuals with disabilities. Titles II and III of the ADA applies to recreation facilities and requires public and private entities which have "public accommodations" to be accessible to persons with disabilities.

  The term "place of public accommodation" is defined as a facility, operated by a private entity, whose operations affect commerce and fall within at least one of twelve specified categories. The term "public accommodation" is reserved for the private entity that owns, leases (or leases to), or operates a place of public accommodation. It is the "public accommodation" and not the "place of public accommodation" that is subject to the regulation's nondiscrimination requirements. Both "places of recreation" and "places of exercise or recreation" are specifically listed among the twelve "public accommodations."

[6]/ As defined by the NASF: "A community is considered at risk from wildland fire if it lies within the wildland/urban interface, as defined in the federal register (FR Vol. 66, No. 3, Pages 751-754, January 4, 2001" (Source: National Association of State Foresters, Field Guidance – Identify and Prioritizing Communities at Risk, June 27, 2003, p. 1).

[7]/ California Fire Alliance, Communities at Risk (http://www.cafirealliance.org/communities_at_risk/communities_at_risk_history).

On October 18, 2000 (65 FR 62498), the Architectural and Transportation Barriers Compliance Board issued final accessibility guidelines (36 CFR Part 1191) to serve as the basis for standards to be adopted by the United States Department of Justice for new construction and alterations of play areas covered by the ADA. The guidelines include scoping and technical provisions for ground-level and elevated play components, accessible routes, ramps and transfer systems, ground surfaces, and soft contained play structures. The guidelines are intended to ensure that newly constructed and altered play areas meet the requirements of the ADA and are readily accessible to and usable by individuals with disabilities.

The National Fire Protection Association (NFPA) is an international organization that establishes organizational guidelines followed by many fire departments, including the San Bernardino County Consolidated Fire District and the City of Rialto Fire Department.[8] In 2001, the NFPA adopted NFPA 1710 (Standards for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments), setting forth recommended staffing and deployment standards and minimum criteria for the staffing of fire fighter crews and how they will respond and operate during emergency operations. The purpose of this standard is to specify the minimum criteria addressing the effectiveness and efficiency of the career public fire suppression operations, emergency medical service, and special operations delivery in protecting the citizens of the jurisdiction and the occupational safety and health of the fire department employees.[9]

As indicated in NFPA 1710, with regards to structural fires, fire departments shall establish the following time objectives: (1) one minute (60 seconds) for turnout time[10]; (2) four minutes (240 seconds) or less for the arrival of the first arriving engine company at a fire suppression incident and/or eight minutes (480 seconds) or less for the deployment of a full first-alarm assignment at a fire suppression incident; (3) four minutes (240 seconds) or less for the arrival of a unit with first responder or higher level capability at an emergency medical incident; and (4) eight minutes (480 seconds) or less for the arrival of an advanced life support unit at an emergency medical incident, where this service is provided by the fire department.[11] The fire department shall establish a performance objective of not less than 90 percent for the achievement of those response time objectives.[12] The NFPA 1710 standard does not include call-processing time.

The fire department's fire suppression resources shall be deployed to provide for the arrival of an engine company within a 4-minute initial response time and/or full alarm assignment within an 8-minute response time to 90 percent of the incidents.[13] Engine companies shall be staffed with a minimum of four on-duty personnel.[14] This service delivery requirement is intended to have a fire department plan and situate its resources to consistently meet a 4-minute initial company fire suppression response and an 8-minute full alarm fire response assignment. It is

[8]/ Hunt Research Corporation, Conceptual Fire Agencies Emergency Response Study for the Lytle Creek Ranch Development, Rialto, California, February 10, 2008, p. 1.

[9]/ National Fire Protection Association, NFPA 1710 - Standards for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, 2004 Edition, Section 1.2.1.

[10]/ Turnout time is defined as the time beginning when units acknowledge notification of the emergency to the beginning point of response time.

[11]/ *Op. Cit.*., NFPA 1710 - Standards for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, Section 4.1.2.1.

[12]/ *Ibid*., Section 4.1.2.2.

[13]/ *Ibid*., Section 5.2.4.1.2.

[14]/ *Ibid*., Section 5.2.3.1.1.

recognized that while on some occasions the initial company response may not be met in the 4-minute requirement, the 8-minute criterion must always be met.[15] The correct number of fully staffed and strategically located fire stations must exist to accomplish these standards.

In addition, NFPA 1710 establishes three time benchmarks standards for emergency medical response: (1) turnout time within one minute 90 percent of the time; (2) arrival of a unit with first responder or higher level of capability (basic life support) within six minutes (1-minute dispatch, 1-minute turnaround, 4-minute response) 90 percent of the time; and (3) where the service is provided by the fire department, arrival of an advanced life support unit within 10 minutes (1-minute dispatch, 1-minute turnaround, 8-minute response) 90 percent of the time.

NFPA 1710 has not been adopted by the State or the County as a legal mandate or performance standard.[16] It does, however, provide a potential yardstick against staffing levels, fire station placement, and service provider response times can be evaluated.

4.9.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **California Government Code**. Applicable or potentially applicable provisions of the CGC are individually identified below. For convenience, although the discussion may be inclusive of additional statutes and regulations, information is grouped under single legislative headings.

  - ◊ **Subdivision Map Act**. The Subdivision Map Act, codified in Sections 66410-66499.37 of the CGC, provides the statutory framework under which local public entities regulate land use and development within their jurisdictions by controlling the design and improvement of subdivisions. The purposes of the law include uniformity of mapping procedures (for conveyance and title insurance regularity), regulation and control of development (for consumer protection), and dedication of land within a subdivision, such as for streets, sewers, and parks.

    Pursuant to Section 66478 of the CGC, "a city or county may adopt an ordinance requiring any subdivider who develops or completes the development of one or more subdivisions in one or more school districts maintaining an elementary school to dedicate to the school district, or districts, within which such subdivisions are to be located, such land as the local legislative body shall deem to be necessary for the purpose of constructing thereon such elementary schools as are necessary to assure the residents of the subdivision adequate public school service. In no case shall the local legislative body require the dedication of an amount of land which would make development of the remaining land held

[15]/ *Ibid*., Annex A, Section A4.1.2.1.1(2).

[16]/ In 2004, AB 2406 (Bermundez) was passed by the State Legislature. The bill made legislative findings and declarations related to fire protection services and requires the State Fire Marshall and the State Board of Fire Services to adopt regulations that would require statistical information to include response time and staffing level information that is compatible with the National Fire Incident Reporting System. The bill was subsequently vetoed by Governor Schwarzenegger. In rejecting the reporting of fire response times, the Governor stated, in part: "Fire protection service standards are directly dependent on the local decision-making process. Local agencies are in the best position to evaluate their conditions to match community needs with available resources" (http://www.leginfo.ca.gov/pub/03-04/bill/asm/ab_2401-2450/ab_2406_cfa_20041019_165213_asm_floor.html).

by the subdivider economically unfeasible or which would exceed the amount of land ordinarily allowed under the procedures of the State Allocation Board."

◊ **Mitigation Fee Act**. In 1987, the California Legislature enacted AB 1600 (Mitigation Fee Act), codified in Section 66000 *et seq*. of the CGC. This legislation was enacted in response to developers concerns that local public agencies were requiring developers to pay for infrastructure improvement costs that developers contended should have been borne by the public as a whole. The act closely regulates the adoption, levy, collection, and challenge to development fees imposed by local public agencies. It applies to both fees imposed on a broad class of projects by legislation of general applicability and fees imposed on a project-specific basis.

The act applies to development impact fees imposed by local agencies to finance all or part of the cost of public facilities, such as streets, traffic signals, bridges and major thoroughfares, drainage and flood control facilities, water and sewer and government buildings. These requirements do not apply to taxes or special assessments (which are not fees), park fees, processing fees, fees collected under a development agreement, or certain fees collected by redevelopment agencies. Whenever establishing, imposing, or increasing a fee as a condition of development, the local public agency imposing the fee must identify the purpose of the fee and the use to which the fee will be put. The agency must also explain why there is a reasonable relationship (nexus) between the fee and the development on which it is imposed. Fees must not exceed the estimated reasonable cost of providing the service for which the fee is collected.

◊ **Quimby Act**. Pursuant to Section 66477(a) of the CGC: "The legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative map or parcel map" subject to specific requirements."[17] In accordance therewith, cities and counties have the authority to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements.

The goal of the Quimby Act is to require developers to help mitigate the impacts of new development on existing park resources. As authorized therein, the dedication of land or the payment of fees or both shall not exceed the

[17]/ Those requirements include the provision that: (1) the implementing ordinance has been in effect for a period of at least 30 days prior to the filing of the tentative map; (2) the implementing ordinance includes definite standards for determining the proportion of a subdivision to be dedicated and the amount of any fees to be paid in lieu thereof; (3) the land, fees, or combination thereof are to be used only for the purpose of developing new or rehabilitating existing neighborhood or community parks or recreational facilities to serve the subdivision; (4) the legislative body has adopted a general or specific plan containing policies and standards for park and recreational facilities and the park and recreational facilities are in accordance with definite principles and standards; (5) the amount and location of land to be dedicated or the fees to be paid shall bear a reasonable relationship to the use of the park and recreational facilities by the future inhabitants of the subdivision; (6) the public agency to which the land or fees are to be conveyed or paid shall develop a schedule specifying how, when, and where it will use the land or fees or both to develop park and recreational facilities to serve the residents of the subdivision; (7) only the payment of fees may be required in subdivisions containing 50 parcels or less; (8) subdivisions containing less than 5 parcels and not used for recreational purposes are exempted from these requirements; and (9) if the subdivider provides park and recreational improvements to the dedicated land, the value of the improvements together with any equipment located thereupon shall be a credit against the payment of fees or dedication of land required by the ordinance.

proportionate amount necessary to provide three acres of park area per 1,000 persons residing within each eligible subdivision unless the amount of existing neighborhood and community park area exceeds that limit, in which case the legislative body may adopt a higher standard of not more than five acres per 1,000 persons. The land, fees, or such combination thereof as may be collected by the local public agency are to be used only for the purpose of developing new or rehabilitating existing park or recreational facilities to serve the subdivision.

Land or fees shall be conveyed or paid directly to the local public agency which provides park and recreational services on a community-wide level and to the area within which the proposed development will be located, if such agency elects to accept the land or fee. The local public agency accepting such land or funds shall develop the land or use the funds in the manner as so prescribed.

◊ **School Facilities Act**. In 1986 the Legislature approved Assembly Bill 2926 (School Facilities Act of 1986), codified in Section 17620 of the California Education Code (CEC), authorizing school districts to charge development fees to fund the construction and reconstruction of public schools.[18] When noticed of a school facility exaction, a city or county may not issue a building permit to an affected development project until the district has certified that the project has complied with the school board's resolution or is not subject to the exaction.

Local school districts are authorized to impose and collect school “impact fees” for all residential and non-residential development activities that occur within their jurisdiction to off-set the additional costs associated with the new students that result directly from the construction of new homes and indirectly from the creation of new employment opportunities. The governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of school facilities. The fee that can be imposed by the affected school district can vary based on the type of use proposed. Under the enabling legislation, for residential construction, an initial fee of $1.93 per square foot of assessable space was established. In the case of any commercial or industrial construction, an initial fee of $0.31 per square foot of chargeable covered and enclosed space was established. The Legislature further authorized local school districts to adjust that fee for inflation every two (even numbered) years, as determined by the State Allocation Board (SAB) at its January meeting.

On January 30, 2008, the SAB increased the maximum allowable levels of base statutory school fees that can be levied on residential and commercial/industrial development projects. The increased school fee maximums were accompanied by an increase in the allowable grant amounts school districts may receive per pupil under the State School Facilities Program. The maximum base Level 1[19]

[18]/ In 1986, AB 2926 was enacted by the State of California and authorized entities to levy statutory fees on new residential and commercial/industrial development in order to pay for school facilities. AB 2926 was expanded and revised in 1987 through the passage of AB 1600 which created Section 66000 *et seq*. of the CGC. Under this statute, payment of such statutory fees by developers would serve as total mitigation in accordance with CEQA to satisfy the impact of development on school facilities.

[19]/ Level 1 fees are the current statutory fees allowed under Section 17620 of the CEC. This code section provides the basic authority for school districts to levy fees against residential and commercial construction for the purpose of funding school construction and reconstruction of facilities.

school fees were increased to $2.97 per assessable square foot of residential construction and commercial/industrial fees were increased to $0.47 per square foot of enclosed and covered space.

While the SAB authorizes the increases, school districts seeking to impose such increased amounts must legally justify the amount of the Level 1 school fee they impose by conducting a study pursuant to the Mitigation Fee Act (Section 66000 *et seq*., CGC) to show that there is a reasonable relationship between the amount of the school fees being imposed and the costs of providing school facilities to be financed by those fees. The increased school fees become effective 60 days after adoption of the fee resolution by a school district.

The increase in the amount of the residential Level 1 school fee does not affect the ability of a school district to charge an alternative residential Level 2 fee in excess of the Level 1 fee if it meets the criteria set forth in the provisions of the State School Facilities Act.[20] In order to adopt a Level 2 fee, a school district must affirmatively participate in the State School Facility Program by making a timely application to SAB for new construction funding, prepare a facilities needs analysis, and meet two of four statutory requirements. Level 2 fees are adopted by resolution and are only effective for one year. Prior to renewing or increasing the amount of a Level 2 fee, a district must prepare an updated needs analysis.

In lieu of the payment of school impact fees under Section 17620 of the CEC, pursuant to Section 65995(g)(2) of the CGC authorizes developers to establish a community facilities district (CFD) as a means of paying for the cost of new educational facilities. As specified therein: "If a person voluntarily elects to establish, or annex into, a community facilities district and levy a special tax approved by landowner vote to finance school facilities, the present value of the special tax specified in the resolution of formation shall be calculated as an amount per square foot of assessable space and that amount shall be a credit against any applicable fee, charge, dedication, or other requirement for the construction or reconstruction of school facilities." As defined in Section 65995(g)(3) therein, a "school facility" means "any school-related consideration relating to a school district's ability to accommodate enrollment."

Section 65995(h) of the CGC provides that "[t]he payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real

[20]/ California Senate Bill 50, passed in 1998, defined the needs analysis process in Sections 65995.5-65998 of the CGC. Under the provisions of SB 50, school districts may collect Level 2 and Level 3 fees to offset the costs associated with increasing school capacity in response to student enrollment increases associated with residential development. Level 2 fees (as outlined in Section 65995.5 of the CGC) require the developer to provide one-half of the costs of accommodating new students in news schools, while the State would provide the other half. Level 3 fees (as outlined in Section 65995.7 of the CGC) require the developer to pay the full cost of accommodating students in new schools and would be implemented at the time the funds available from Proposition 1A (approved by the voters in 1998) are expended. School districts must demonstrate to the State their long-term facilities needs and costs based on long-term population growth in order to qualify for this source of funding. Voter approval of Proposition 55 on March 2, 2004, however, precludes imposition of Level 3 fees for the foreseeable future.

property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities."

◊ **Bates Bill**. Under AB 337, passed in 1992, CALFIRE was required to identify and classify fire hazards in local responsibility areas (LRAs). The law mandated fire hazard assessments and zoning and included related minimum fire hazard standards to be adopted at the local level. As required under Sections 51175-51189 of the CGC, CALFIRE shall identify areas in the State as "very high fire hazard severity zones"[21] (VHFHSZs) based on consistent Statewide criteria addressing the severity of fire hazards expected to prevail in those areas (based on fuel loading, slope, fire weather, and other relevant factors).[22]

That portion of the CALFIRE's VHFHSZ zone map depicting the project site is presented in Figure 4.9-1 (Southwest San Bernardino County – Natural Hazard Disclosure: Fire [January 2006]). Pursuant to Section 51179 of the CGC, local agencies can accept or reject the CALFIRE assessment and delineation and can alter and update VHFHSZ boundaries, as deemed necessary.[23] Approximately 51 jurisdictions throughout the State with areas that otherwise would have been identified with a VHFHSZ claimed to meet or exceed AB 337 requirements and were not required to designate VHFHSZ. The RFD requested that the area designated by CALFIRE be reduced by approximately 50 percent. The final agreement between the RFD and CALFIRE included a 40 percent reduction.

In addition, CALFIRE has adopted fire hazard severity zones for lands where the State has fiscal responsibility for wildland fire protection, identified as State Responsibility Areas (SRAs), and has recommended VHFHSZ designations for LRAs. These mapping efforts incorporate improved wildland fire behavior science, data sets, and understanding of structure ignition mechanisms during conflagrations. With regards to the general project area, the adopted fire hazard severity zones within SRAs are presented in Figure 4.9-2 (Adopted Fire Hazard Severity Zones in State Responsibility Areas [November 2007]) and the recommended fire hazard severity zones within LRAs are presented in Figure

[21]/ "Fire hazard severity zones" (FHSZs) are geographic areas designed pursuant to Sections 4201-4204 of the PRC in State Responsibility Areas or as local agency "very high fire hazard severity zones" (VHFHSZs) designated pursuant to Sections 51175-51189 of the CGC.

[22]/ Sections 51175-51189 of the CGC, in combination with Sections 4201-4204 of the PRC, directs CALFIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones, define the application of various mitigation strategies to reduce risk associated with wildand fires. Specifically, the zones determine the requirements for building codes designed to reduce the ignition potential of structures. The purpose of these draft maps is to facilitate model review for both FHSZ and SRA and for review of recommendations for inclusion in equivalent hazard zoning in areas of LRA.

[23]/ Section 51179 of the CGC states, in pertinent part: "(b) A local agency may, at its discretion, exclude from the requirements of Section 51182 an area identified as a very high fire hazard severity zone by the director within the jurisdiction of the local agency, following a finding supported by substantial evidence in the record that the requirements of Section 51182 are not necessary for effective fire protection within the area. (c) A local agency may, at its discretion, include areas within the jurisdiction of the local agency, not identified as very high fire hazard severity zones by the director [Director of Forestry and Fire Protection], as very high fire hazard severity zones following a finding supported by substantial evidence in the record that the requirements of Section 51182 are necessary for the effective fire protection within the area." This means that the local agency can request reduction to the area identified by the director if "substantial evidence" indicates that the fire hazard is not severe enough to warrant the designation. Also, the local agency can increase or add area not included in the director's recommendation if the fire chief believes the area should be designated as a high hazard.

4.9-3 (Recommended Fire Hazard Severity Zones in Local Responsibility Areas [November 13, 2008]).

The California Building Commission adopted the Wildland-Urban Interface Codes in 2005 with an effective date of January 2008. These codes include provisions for ignition resistant construction standards in the wildland urban interface areas. If adopted, the updated fire hazard severity zones will be used by building officials to determine appropriate construction materials for new buildings in the wildland urban interface and will be used by property owners to comply with natural hazards disclosure requirements at the time of property sale.

◊ **California Emergency Service Act**. Section 8568 of the California Emergency Service Act (Chapter 7 of Division 1 of Part 2 of the CGC) states that "the State Emergency Plan shall be in effect in each political subdivision of the State, and the governing body of each political subdivision shall take such actions as may be necessary to carry out the provisions thereof."

Mutual aid is provided between and among local jurisdiction and the State under the terms of the California Disaster and Civil Defense Master Mutual Aid Agreement[24] (Sections 8555-8561, CGC). The State is divided into mutual aid regions. There area six mutual aid regions for fire and general mutual aid and seven mutual aid regions for law enforcement and coroners. The project site is located in the Administrative and Mutual Aid Southern Region I (Los Angeles, Orange, San Luis Obispo, Santa Barbara, and Ventura Counties) and Region VI (Imperial, Inyo, Mono, Riverside, San Bernardino, and San Diego Counties), in Fire and Rescue Mutual Aid Regions I and VI, and Law Enforcement and Coroner Mutual Aid Regions I and VI.

As stipulated in Section 53094(a) and (b) of the CGC, school districts are not required to comply with the zoning ordinances of a county or city unless the zoning ordinance makes provision for the location of public schools and unless the city or county has adopted a general plan. The governing board of a school district, that has complied with the requirements of Section 65352.2 of the CGC and Section 21151.2 of the PRC, by a vote of two-thirds of its members, may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district. The governing board of the school district may not take this action when the proposed use of the property by the school district is for non-classroom facilities.

- **Public Resources Code**. With regards to fire hazards, as specified under Section 4125(a) of the PRC: "The board [of Forestry] shall classify all lands within the State, without regard to any classification of lands made by or for any federal agency or purpose, for the purpose of determining areas in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of the State. The prevention and suppression of fires in all areas that are not so classified is primarily the responsibility of local or federal agencies, as the case may be." As further specified in Section 4128.5(a) therein: "It is the intent of the Legislature that decisions affecting the

[24]/ The mutual aid system allows local law enforcement agencies to mutually support adjacent or regional jurisdictions at any time a single agency's own resources are insufficient. The mutual aid plan outlines the procedures for alerting, coordinating, dispatching, and utilizing law enforcement personnel and equipment resources.

use of land in State Responsibility Areas result in land uses which protect life, property, and natural resources from unreasonable risks associated with wildland fires."

SRAs are lands that are classified by the Board of Forestry pursuant to Section 4125 of the PRC where the financial responsibility of preventing and suppressing forest fires is primarily the responsibility of the State. As indicated in Section 4126, SRA include: (a) lands covered wholly or in part by forests or by trees producing or capable of producing forest products; (b) lands covered wholly or in part by timber, brush undergrowth, or grass, whether of commercial value or not, which protect the soil from excessive erosion, retard runoff of water or accelerate water percolation, if such lands are sources of water which is available for irrigation or for domestic or industrial use; and (c) lands in areas which are principally used or useful for range or forage purposes, which are contiguous to the lands described in (a) and (b) above.

SRAs are determined by a combination of land ownership and fire protection criteria and are classified by severity of fire hazard. Severity codes include "moderate," "high," and "very high." Each area is relatively homogenous based on fuel loading, slope, fire weather, and other relevant factors that relate to potential fire behavior but not the risk of ignition. SRA occurs on non-federal lands for which fire protection is provided by the State or by the federal government. There are no SRAs within the general project area.

Pursuant to Section 4125 of the PRC, CALFIRE has mapped those "wildland areas that may contain substantial forest fire risks and hazards." That portion of the CALFIRE map depicting the general project area is presented in Figure 4.9-1 (Southwest San Bernardino County – Natural Hazard Disclosure: Fire [January 2006]).

Effective January 1, 2009, as required under Section 4291 of the PRC, any person that owns, leases, controls, or operates or maintains any building or structure in, upon, or adjoining any mountainous area or forest covered lands, brush covered lands, or grass covered lands, or any land which is covered with flammable materials shall, at all times, do the following: (a) Maintain a firebreak by clearing combustible and flammable vegetation a distance of 30 feet or to the property line around structures; (b) Extend the firebreak up to 100 feet around structures if it is determined by the authority having jurisdiction that a 30-foot firebreak is inadequate due to the extra hazardous conditions that may be present; (c) Maintain tree limbs such that they are greater than 10 feet from the outlet of any chimney; (d) Maintain any tree adjacent to a structure such that no dead limbs are overhanging the structure; (e) Maintain the roof of any structure such that it is free of leaves, needles, or other dead vegetation; and (f) Provide and maintain a screen (spark arrestor) over chimney outlets.

- **California Code of Regulations**. The California Emergency Services Act, codified in Section 8550 *et seq*. in Chapter 7 of Division 1 of Title 2 of the CCR, provides the basic legal authority for emergency planning in California. Under the provisions of the California Emergency Services Act, the California Office of Emergency Services (OES) serves as the lead State agency for emergency management in California.

  The OES mission is to ensure the State is ready and able to mitigate, prepare for, respond to, and recover from the effects of emergencies that threaten lives, property, and the environment. OES coordinates the activities of all State agencies relating to

preparation and implementation of the "State of California Emergency Plan."[25] OES coordinates the response effects of State and local agencies to ensure maximum effect with minimum overlap.

California's Standardized Emergency Management System (SEMS) is required under Section 8607 in Chapter 7 of Division 2 of the CGC. As stipulated in Section 2401 in Title 19 of the CCR, SEMS is intended to standardize response to emergencies involving multiple jurisdictions or multiple agencies. SEMS requires emergency response agencies (including special districts) to use basic principals and components of emergency management, including Incident Command System (ICS), multi-agency or inter-agency coordination, the operational area concept, and established mutual aid systems. By standardizing key elements of the emergency response system, SEMS is intended to facilitate the flow of information and resources within and between levels of the system, establish emergency communication systems and contacts, facilitate coordination among all responding agencies, improve mobilization and the use and tracking of resources, and manage priorities with limited resources.

As defined in Section 702A of the CCR, "fire hazard safety zones" are "geographical areas designated pursuant to California Public Resources Code Section 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code Sections 51175 through 51189. The California Code of Regulations, Title 14, Section 1280 entitles the maps of these geographical areas as 'Maps of the Fire Hazard Severity Zones in the State Responsibility Area of California.'"[26]

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending Part 2 of the twelve parts of the State's building regulations, codified in Title 24 of the CCR, known as the 2007 California Building Code. As specified in Section 701A.3.2 therein, new buildings located in any fire hazard severity zone within a State Responsibility Area (SRA), any local agency very-high fire hazard severity zone, or any wildland-urban interface fire area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter. New buildings located in any fire hazard severity zone shall comply with one of the following: (1) new buildings located in any fire hazard severity zone within SRAs shall comply with all sections of this chapter; (2) new buildings located in any local agency very high fire hazard severity zone shall comply with all sections of this chapter; and (3) new buildings located in any wildland-urban interface fire area designated by the enforcing agency shall comply with all sections of this chapter.

The California Fire Code (UFC) is codified in Title 24, Part 9 of the CCR, known as the California Building Standards Code. The specific sections relating to the urban-wildland interface (UWI) are contained in Article 86 and Appendix II-A.

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[25]/ State of California, Governor's Office of Emergency Services, State of California Emergency Plan, May 1998.

[26]/ A "local agency very high fire hazard severity zones" means "an area designated by a local agency upon the recommendation of the CDF Director [Director of Forestry and Fire Protection] pursuant to Government Code Sections 51177(c), 51178 and 5118 that is not a state responsibility area where a local agency, city, county, city and county, or district is responsible for fire protection."

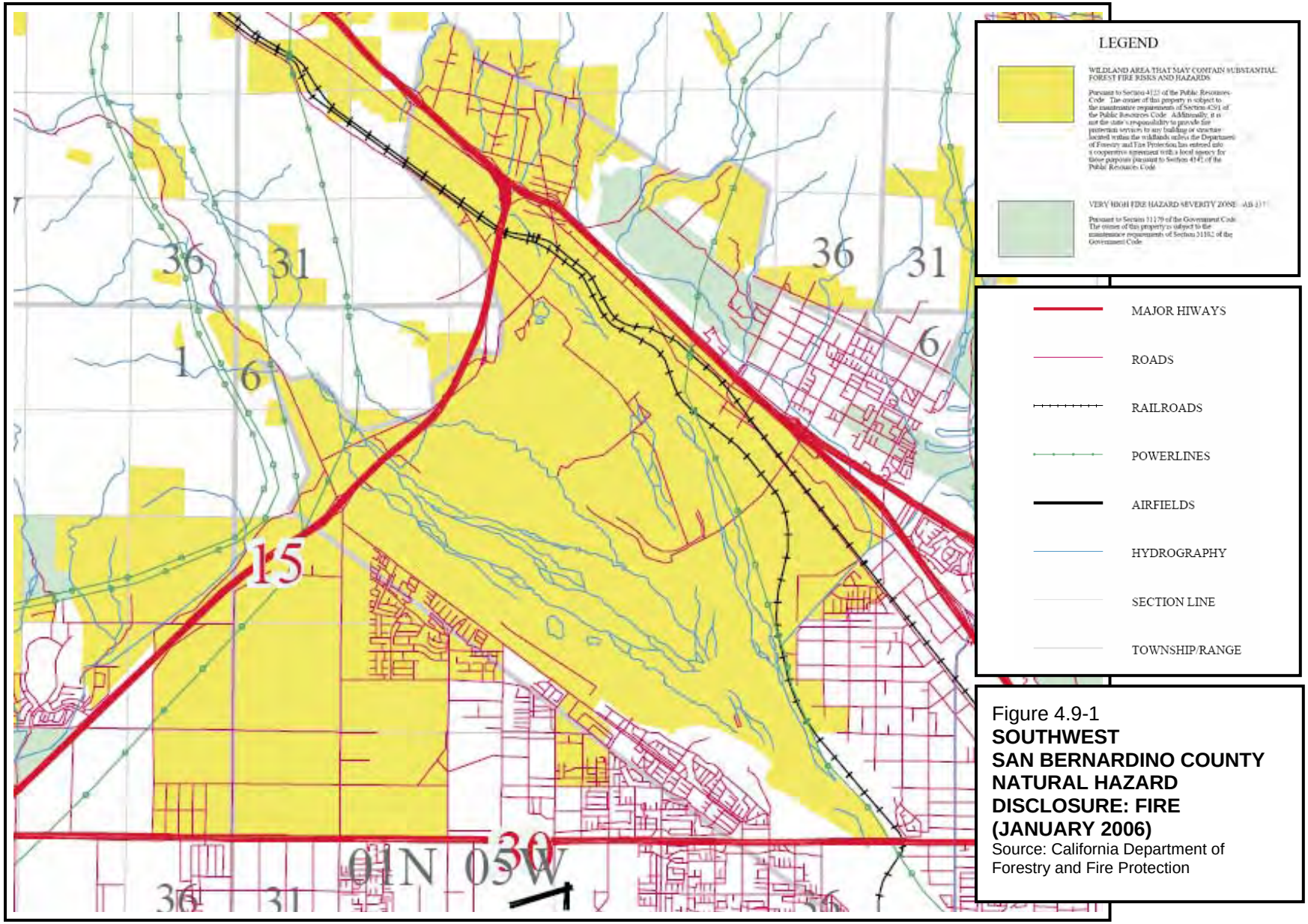

Figure 4.9-1
SOUTHWEST SAN BERNARDINO COUNTY NATURAL HAZARD DISCLOSURE: FIRE (JANUARY 2006)
Source: California Department of Forestry and Fire Protection

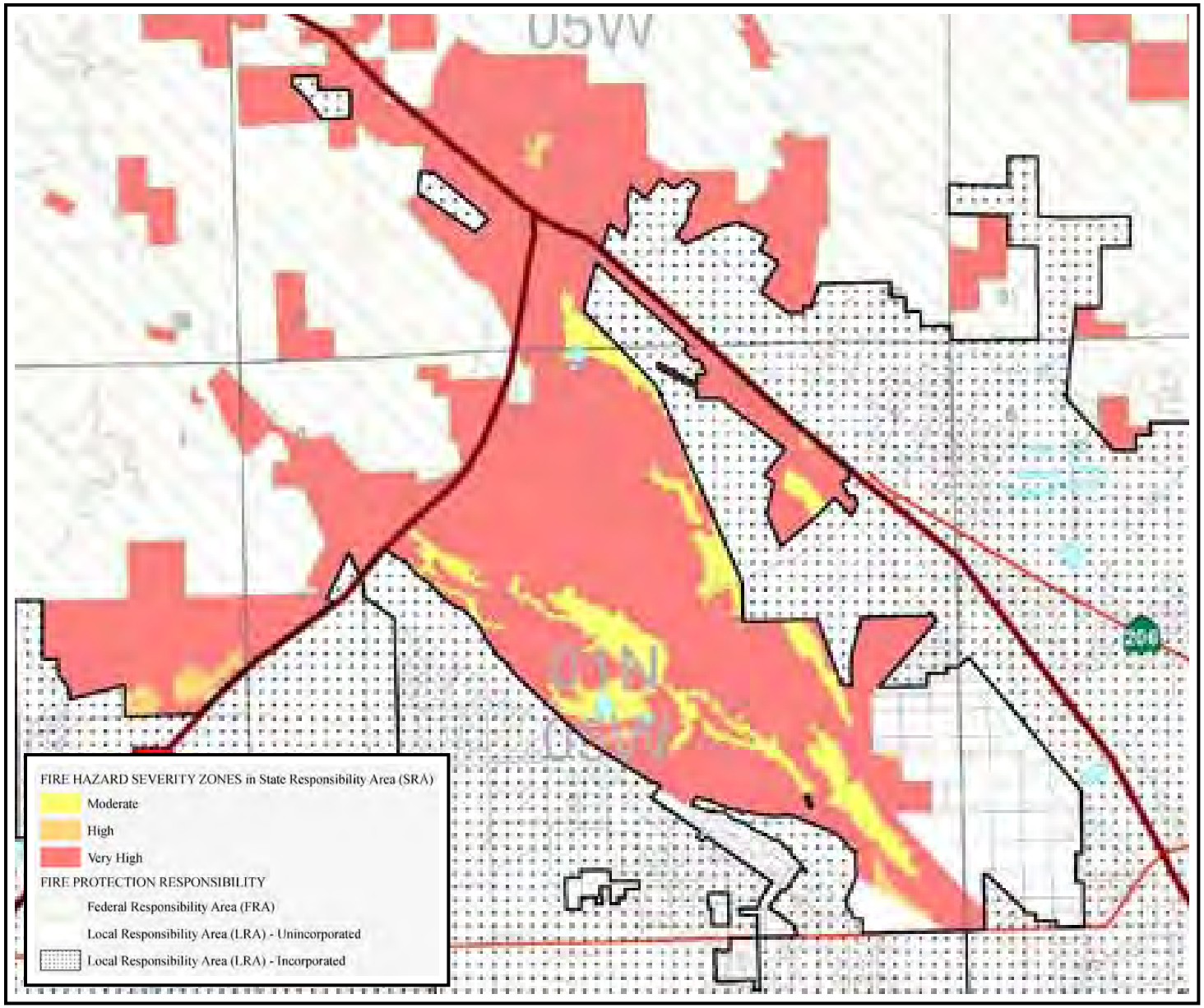

Figure 4.9-2
ADOPTED FIRE HAZARD SEVERITY ZONES IN STATE RESPONSIBILITY AREAS (NOVEMBER 2007)
Source: California Department of Forestry and Fire Prevention

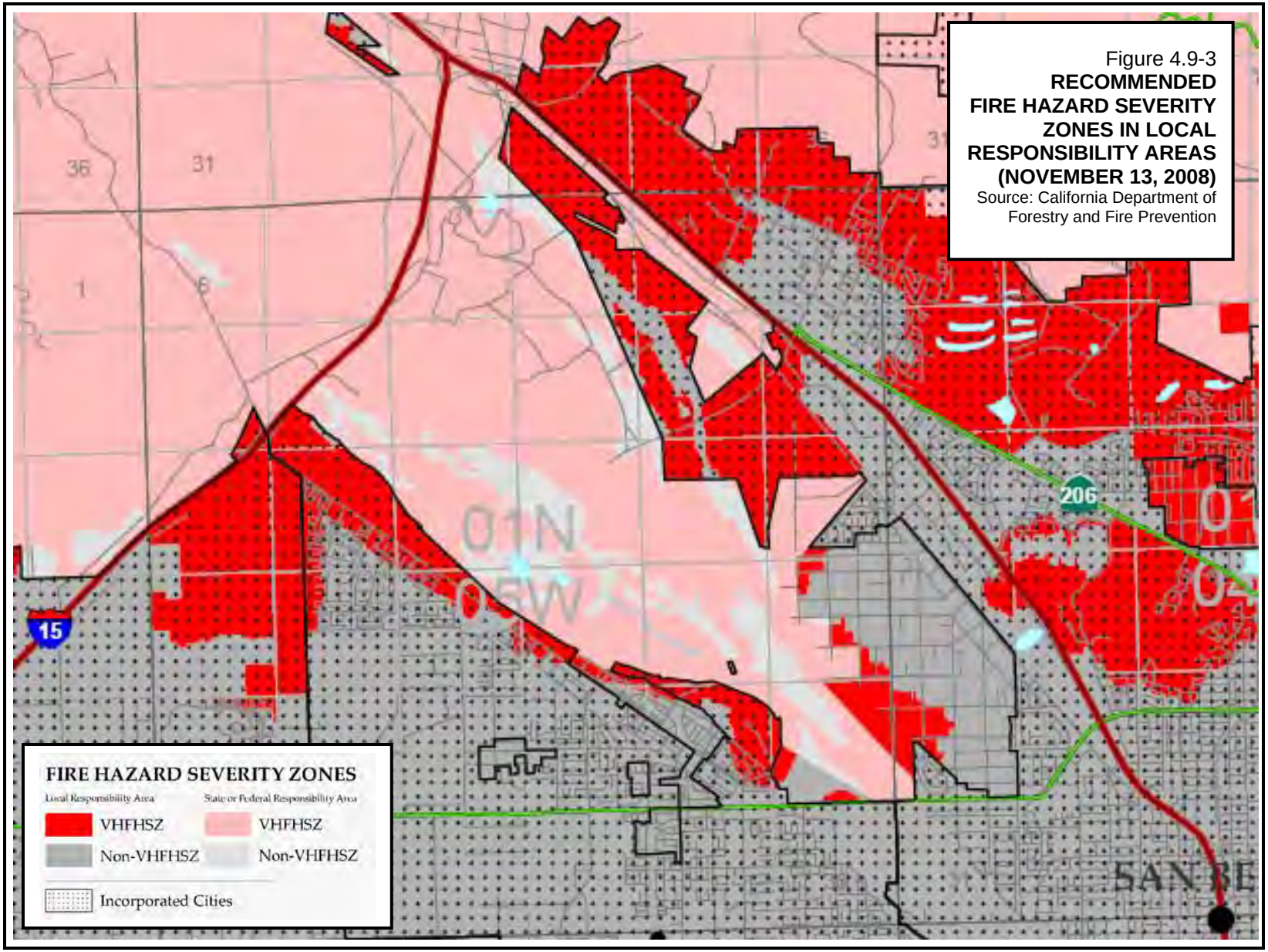

Figure 4.9-3
RECOMMENDED FIRE HAZARD SEVERITY ZONES IN LOCAL RESPONSIBILITY AREAS (NOVEMBER 13, 2008)
Source: California Department of Forestry and Fire Prevention

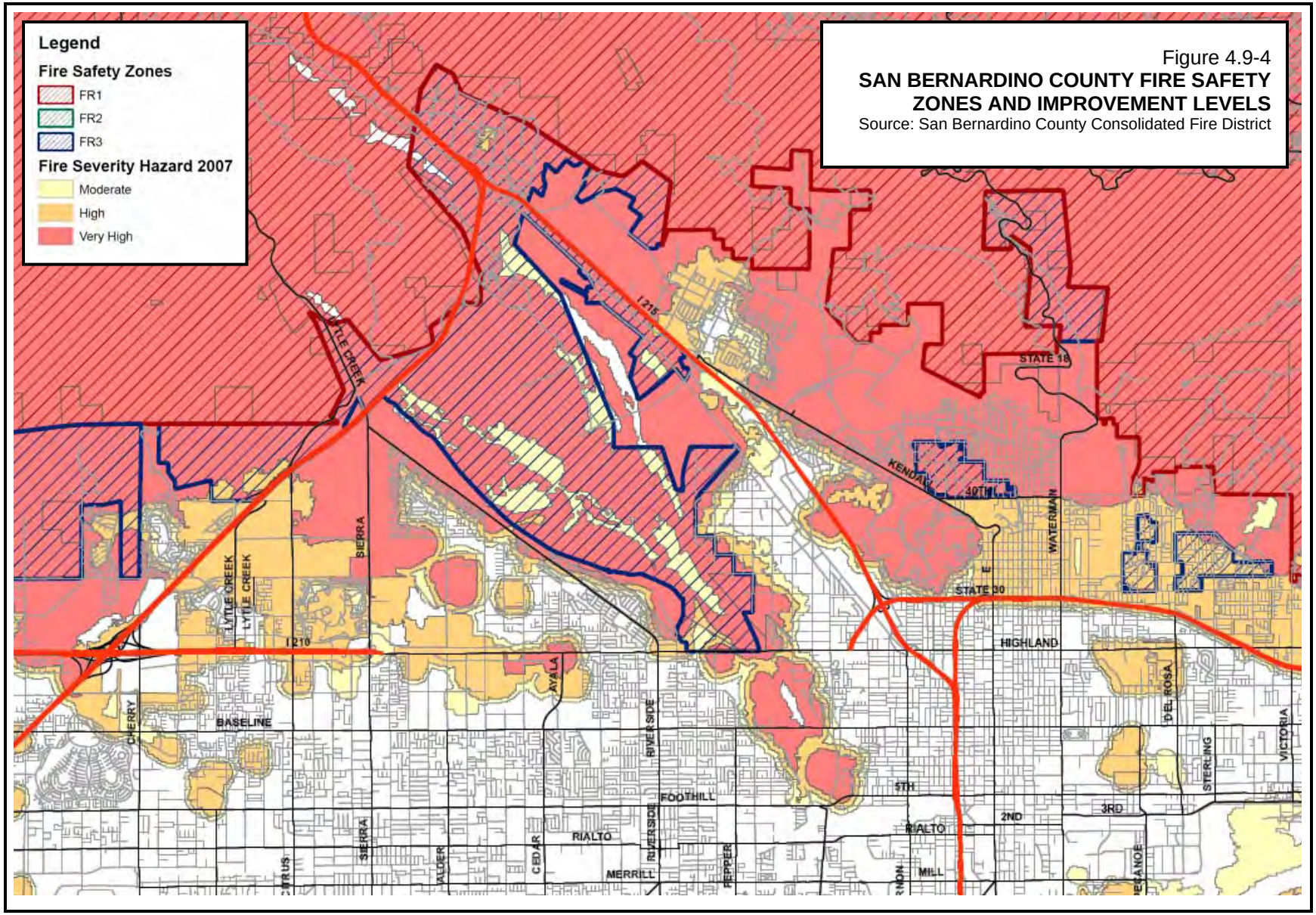

Figure 4.9-4
SAN BERNARDINO COUNTY FIRE SAFETY ZONES AND IMPROVEMENT LEVELS
Source: San Bernardino County Consolidated Fire District

Article 86 requires a "fire protection plan" be written for all new development within the declared UWI area, consistent with the International Urban-Wildland Interface Code (UWIC). Appendix II-A's requirements are similar to those contained in Section 4291 of the PRC. Section 16 of Appendix II-A states, in part, that, in addition to that portion of Section 4291 that states who is responsible for maintaining the required fire safety measures, persons owning, leasing, or controlling land adjacent to such buildings or structures are also responsible for maintaining such firebreaks. Since Appendix II-A has not been adopted by the State, its enforcement is subject to adoption in the local jurisdiction's fire code. Appendix II-A has not been adopted by the City and has not been included in the City Municipal Code.

With regards to standards for school site selection, Section 14010 in Title 5 (Division 1, Chapter 13, Subchapter 1) of the CEC stipulates that all districts shall select a school site that provides safety and that supports learning. The net usable acreage and enrollment for a new school site shall be consistent with the numbers of acres and enrollment established in Tables 1-6 of the 2000 Edition, "School Site Analysis and Development" published by the California Department of Education (CDE). Those standards include, in part, the following:

	Elementary School			Middle School			High School		
Enrollment (students)	450	750	1,200	600	900	1,200	1,200	1,800	2,400
School Size (acres)	9.6	13.8	17.6	17.4	20.9	23.1	33.5	544.5	52.7

As indicated in the CDE's "School Site Analysis and Development," although the Leroy F. Greene School Facilities Act of 1998 does not prescribe allowable building area, the CDE recommends that the size of schools be calculated at 59 square feet (the minimum) per pupil for kindergarten through grade six; at 80 square feet (the minimum) per pupil for grades seven and eight; and at an average of 92 square feet (the minimum) per pupil for grades nine through twelve,[27] based on the former lease-purchase program.[28]

Section 14010 includes additional school facility siting criteria relative to separation distances from the edge of respective power line easements and aboveground water or underground fuel storage tanks and pipelines. Specific criteria are also established with regards to facility siting adjacent to roads or freeways, sites containing an active earthquake fault or fault trace, sites containing areas of flood or dam flood inundation unless the cost of mitigating the flood or inundation impact is reasonable, and sites subject to moderate to high liquefaction or landslides.

- **California Health and Safety Code**. As specified in Assembly Bill 1144 (Harman), as signed by the Governor on September 26, 2006 and codified as Section 115755 of the Health and Safety Code, effective January 1, 2008, all new playgrounds open to the public and all playgrounds open to the public which were installed between January 1, 1994 and December 31, 1999 shall conform with national playground-related standards set by the American Society for Testing and Materials (ASTM) and the national playground-related guidelines set by the United States Consumer Product Safety

[27]/ Actual area allocation for grades nine through twelve varies from 91.5 square feet per pupil for an enrollment of 2,400 to 127 square feet per pupil for an enrollment of 400. The figure of 92 square feet per pupil applies to high schools with an enrollment of 1,600 to 2,400.

[28]/ California Department of Education, School Site Analysis and Development, 2000 Edition, Introduction.

Commission (CPSC), as specified.[29] All public agencies operating playgrounds and all other entities operating playgrounds open to the public shall have a playground safety inspector, certified by the National Playground Safety Institute, conduct an initial inspection for the purpose of aiding compliance with those standards.

- **California Education Code**. Sections 17210, 17210.1, 17213.1, and 17213.2 of the CEC specify the comprehensive environmental review process for proposed new or expanded schools and require that response actions are conducted in accordance with Health and Safety Code, Division 20, Chapter 6.8 (Section 25300 *et seq*., H&SC).

  As stipulated in Section 17213 of the CEC, the governing board of a school district may not approve a project involving the acquisition of a school site by a school district, unless all of the following occur: (a) the school district determines that the property is not any of the following: (1) the site of a current or former hazardous waste disposal site or solid waste disposal site, unless if the site was a former solid waste disposal site, the governing board of the school district concludes that the wastes have been removed; (2) a hazardous substance release site identified by the Department of Toxic Substances Control in a current list adopted pursuant to Section 25356 of the H&SC for removal or remedial action pursuant to Chapter 6.8 (commencing with Section 25300) of Division 20 of the H&SC; (3) a site that contains one or more pipelines, situated underground or aboveground, that carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line that is used only to supply natural gas to that school or neighborhood; (b) the school district has consulted with the administering agency in which the proposed school site is located and with any air pollution control district or air quality management district having jurisdiction in the area to identify both permitted and non-permitted facilities within that district's authority, including, but not limited to, freeways and other busy traffic corridors, within one-fourth of a mile of the proposed school site, that might reasonably be anticipated to emit hazardous air emissions or to handle hazardous or acutely hazardous materials, substances, or waste; and (c) the governing board of the school district makes one of the following written findings: (1) consultation identified none of the facilities or significant pollution sources specified in subdivision (b); or (2) the facilities or other pollution sources specified in subdivision (b) exist but one of the following conditions applies: (A) the health risks from the facilities or other pollution sources do not and will not constitute an actual or potential endangerment of public health to persons who would attend or be employed at the school; (B) the governing board finds that corrective measures required under an existing order by another governmental entity that has jurisdiction over the facilities or other pollution sources will, before the school is occupied, result in the mitigation of all chronic or accidental hazardous air emissions to levels that do not constitute an actual or potential endangerment of public health to persons who would attend or be employed at the proposed school (if the governing board makes this finding, the governing board shall also make a subsequent finding, prior to the occupancy of the school, that the emissions have been mitigated to these levels; (C) for a school site with a boundary that is within 500 feet of the edge of the closest traffic lane of a freeway or

[29]/ The act specifies that the standards shall be at least as protective as: (1) the guidelines in the "Handbook for Public Playground Safety, Publication No. 325" (United States Consumer Products Safety Commission, November 1997); (2) the "Standard Specification for Playground Equipment for Public Use" (ASTM F1487) (American Society for Testing and Materials, 2000); and (3) the "Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment" (ASTM F1951) (American Society for Testing and Materials, 1999).

other busy traffic corridor, the governing board of the school district determines, through analysis pursuant to Section 44360(b)(2) of the H&SC, based on appropriate air dispersion modeling and after considering any potential mitigation measures, that the air quality at the proposed site is such that neither short-term nor long-term exposure poses significant health risks to pupils; (D) the governing board finds that neither of the conditions set forth in subparagraph (B) or (C) can be met and the school district is unable to locate an alternative site that is suitable due to a severe shortage of sites that meet the requirements in subdivision (a) of Section 17213.

As defined therein, “hazardous air emissions" means emissions into the ambient air of air contaminants that have been identified as a TAC by the CARB or by the air pollution control officer for the jurisdiction in which the project is located. As determined by the air pollution control officer, hazardous air emissions also means emissions into the ambient air from any substance identified in subdivisions (a) to (f), inclusive, of Section 44321(a) to (f) of the H&SC. "Hazardous substance" means any substance defined in Section 25316 of the H&SC. "Acutely hazardous material" means any material defined pursuant to Section 25532(a) of the H&SC. "Freeway or other busy traffic corridors" means those roadways that, on an average day, have traffic in excess of 50,000 vehicles in a rural area, as defined in Section 50101 of the H&SC, and 100,000 vehicles in an urban area, as defined in Section 50104.7 of the H&SC.

As indicated in Table 4.6-6 (Regional Transportation System - Existing (2007) Freeway LOS Summary), traffic volumes along the I-15 Freeway, between Glen Helen Parkway and Sierra Avenue, are approximately 134,700 vehicles per day.

Under Section 35753(a) of the CEC and as further clarified by Section 18573 in Title 5 of the CCR, the State Board of Education may approve proposals for the reorganization of school district boundaries, if the board has determined, with respect to the proposal and the resulting districts, that all of the following conditions are substantially met: (a) The reorganized districts will be adequate in terms of number of pupils enrolled. (b) The districts are each organized on the basis of a substantial community identity. (c) The proposal will result in an equitable division of property and facilities of the original district or districts. (d) The reorganization of the districts will preserve each affected district's ability to educate students in an integrated environment and will not promote racial or ethnic discrimination or segregation. (e) Any increase in costs to the state as a result of the proposed reorganization will be insignificant and otherwise incidental to the reorganization. (f) The proposed reorganization will continue to promote sound education performance and will not significantly disrupt the educational programs in the districts affected by the proposed reorganization. (g) Any increase in school facilities costs as a result of the proposed reorganization will be insignificant and otherwise incidental to the reorganization. (h) The proposed reorganization is primarily designed for purposes other than to significantly increase property values. (i) The proposed reorganization will continue to promote sound fiscal management and not cause a substantial negative effect on the fiscal status of the proposed district or any existing district affected by the proposed reorganization. (j) Any other criteria as the board may, by regulation, prescribe.[30]

[30]/ California Department of Education, District Organization Handbook, August 2006, pp. 83-84.

- **California Streets and Highways Code**. The Landscaping and Lighting Act of 1972, codified in Section 22500 *et seq*. of the California Streets and Highways Code, allows cities and counties to impose assessments in order to finance: (1) acquisition of land for parks, recreation, and open space; (2) installation or construction of planting and landscaping, street lighting facilities, ornamental structures, and park and recreational improvements (including playground equipment, restrooms and lighting); and (3) maintenance and servicing of any of the above. The act, through the formation or expansion of an existing maintenance district, allows the public agency to place the cost of maintaining public improvements upon the property owners that directly benefit from those improvements.

- **California Civil Code**. As indicated in Section 346 of the California Civil Code: "An owner of any estate or any other interest in real property, whether possessory or nonpossessory, owes no duty of care to keep the premises safe for entry or use by others for any recreational purpose or to give any warning of hazardous conditions, uses of, structures, or activities on such premises to persons entering for such purpose, except as provided in this section. A 'recreational purpose,' as used in this section, includes such activities as fishing, hunting, camping, water sports, hiking, spelunking, sport parachuting, riding, including animal riding, snowmobiling, and all other types of vehicular riding, rock collecting, sightseeing, picnicking, nature study, nature contacting, recreational gardening, gleaning, hang gliding, winter sports, and viewing or enjoying historical, archaeological, scenic, natural, or scientific sites."

- **Emmerson Bill**. Section 5626(a) of the PRC requires that property acquired or developed with a grant from the Roberti-Z'berg-Harris Urban Open-Space and Recreation Program must be used for the purpose for which the grant was requested unless a conversion is specifically authorized by the State Legislature. In 1988, the Legislature authorized such a conversion in the County so that the County could grant an easement for the construction of a road through Glen Helen Regional Park in exchange for property of equal or greater recreational value. With this approval, the County granted an easement for 14.98 acres of land.

  The Public Park Preservation Act (Section 5400 *et seq*. PRC) requires that no public entity shall acquire any real property that is being used as a public park for non-park purposes unless the entity replaces the park land and facilities at another location that can serve the same persons as the existing park land. The substitute parkland must be of comparable characteristics and of substantially equal size. The transfer must only occur after public notification and a public hearing. Senate Bill 63, as approved by the Governor on October 7, 2007, authorized the County to transfer acreage in Glen Helen Regional Park, as an easement for road access and in fee interest, in exchange for property of equal or greater recreational value.

  In support, the Board of Supervisors stated that this bill will "conclude a transaction between the County and the Pharris Sycamore Flats/Lytle Development Company that has been several years in the making. In the end, the County will receive nearly 15 acres of quality parkland adjacent to its holdings in Sycamore Flats as well as road access to its holdings in exchange for granting Pharris Sycamore Flats/Lytle Development Company a public road easement and 6.21 acres adjacent to the road in fee." This real property exchange occurred on June 21, 2005.

4.9.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **County of San Bernardino General Plan**. As indicated in the County General Plan (Open Space Element), the San Bernardino National Forest "is one of the most urban-influenced National Forests in the system with over 400 miles of urban interface and 147,313 acres of in-holdings within its boundaries. Significant portions of National Forest System (NFS) lands surround, are interspersed, or are adjacent to parcels under County jurisdiction."[31] The County recognizes that "[t]here are a number of options available to local government to finance public facilities, such as streets, sewers, water, drainage, schools, parks, fire and police stations, and public utilities. Examples of these options currently used or contemplated by the County of San Bernardino include, but are not limited to, the following: Mello-Roos Community Facilities Districts, Landscaping and Lighting Districts, Capital Facilities Fee Programs, Assessment Districts, Area of Benefit procedures, and a Long-Range Financial Plan."[32]

  In the context of the proposed project, those public services and recreation goals, objectives, and programs presented in the County General Plan that appear most closely related to the unincorporated County portion of the project site are presented below.

  - Goal LU8. Beneficial facilities, such as schools, parks, medical facilities, sheriff and fire stations, libraries, and other public uses, as well as potentially hazardous sites, will be equitably distributed throughout the County.

    - ◊ Policy LU8.1. Potentially polluting, hazardous, and other health risk facilities should be located no closer than one-quarter mile to a sensitive receptor and vice verse.

    - ◊ Policy LU8.3. Locate fire department facilities in such a fashion as to maximize service delivery in an equitable fashion to all portions of the County.

      Programs. (1) Create a County Fire Master Plan that will identify the various areas of the County and provide standards of coverage commensurate with the various characteristics of the County but whose goal is to achieve the levels of service established by the National Fire Protection Association (NFPA) 1710 and 1720. (2) Require developments to prepare a fire plan that will describe the impacts on the County Fire Department and the measures necessary to mitigate the cumulative impacts of that development on the existing service delivery system. (3)

[31]/ *Op. Cit.*, County of San Bernardino 2007 General Plan, Open Space Element, p. VI-4.
[32]/ *Ibid.*, Implementation Program, p. X-7.

Apply the County Fire Master Plan standards to all developments and to areas that have a high potential for development such that the impacts of future developments are mitigated in advance by commensurate improvements to the fire service delivery system in the County.[33]

- Goal CI10. Ensure timely development of public facilities and the maintenance of adequate service levels for those facilities to meet the needs of current and future County residents.

  - ◊ Policy CI10.1. Ensure that adequate facility and service standards are achieved and maintained through the use of equitable funding methods.

  - ◊ Policy CI10.2. Equitably distribute throughout the County new public facilities and services that increase and enhance community quality of life.[34]

- Goal CI19. Prior to approving a [County] General Plan Amendment that increases residential densities, the County will ensure that impacts to schools, libraries, and day-care facilities are adequately mitigated.

  - ◊ Policy CI19.1. Actively work with private, non-profit and public community services organizations to organize educational and community services concurrent with development.[35]

- Goal OS1. The County will provide plentiful open spaces, local parks, and a wide variety of recreational amenities for all residents.

  - ◊ Policy OS1.2. Support retention of open space lands by requiring large lot sizes, high percentage of open space or agricultural uses, and clustering within the Agriculture (AG), Floodway (FW), Resource Conservation (RC), and Open Space (OS) Land Use Zoning Districts.

  - ◊ Policy OS1.5. Strive to achieve a standard of 14.5 acres of undeveloped lands and/or trails per 1,000 population and 2.5 acres of developed regional park land per 1,000 population. "Undeveloped lands" may include areas established to buffer regional parks from encroachment by incompatible uses (Footnote: This standard of 14.5 acres of "undeveloped land" does not establish an overall standard for provision of publicly owned open space lands. The need for lands in addition to those meeting the 14.5 acre standard is based on acreage required for resource protection, health and safety, and other concerns, and is not related to population).

  - ◊ Policy OS1.9. Ensure that open space and recreation areas are both preserved and provided to contribute to the overall balance of land uses and quality of life.

[33]/ *Ibid*., Land Use Element, p. II-36.
[34]/ *Ibid*., Circulation and Infrastructure Element, p. III-13.
[35]/ *Ibid*., p. III-28.

- Goal S3. The County will protect its residents and visitors form injury and loss of life and protect property from fires.

  ◊ Policies S3.1 and S3.2. No corresponding County General Plan policies are cited herein.

  Programs. [1] Require applicants for new land developments to prepare a site-specific fire protection plan, with special emphasis in areas of high and very high fire risk. [2] Require applicants to fund incremental improvements for the improvement of local fire protection services commensurate with the impacts of large development in excess of 50 units. [3] The following peakload water supply system guidelines (Figure II-5) shall be met for all new development or be adequately served by water supplies for domestic use and community fire protection in accordance with standards as determined by the County Fire Department. (a) Limit or prohibit development or activities in areas lacking water and fire fighting facilities. (b) Approve high intensity uses such as theaters, motels, restaurants and schools, and uses requiring the handling or storage of large amounts of highly flammable materials only in areas with year round fire protection and adequate water systems and hydrants.

  ◊ Policy S3.3. Minimize the fire hazard posed by expanding development in wildland/urban intermix areas.

  Programs. Apply the regulations of the Fire Safety Overlay Ordinance, as found in the Development Code, to all County areas subject to wildland/urban intermix fire hazards including all mountain and foothill areas.[36]

- Goal S9. The County's emergency evacuation routes[37] will quickly and efficiently evacuate all residents in the event of wildland fires and other natural disasters, and will ensure adequate access of emergency vehicles to all communities.

  ◊ Policy S9.2. Ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.

  Programs. (1) Require compliance with the provisions of the access standards of the Fire Safety Overlay, the Subdivision Design and Improvement Standards of the County Development Code and, where applicable, Planned Unit and Planned Residential Development standards. (2) Access for development projects will be considered in conjunction with the location of active faults through the development

[36]/ *Ibid*., Safety Element, pp. VIII-13 through VIII-15.

[37]/ As indicated in the County's "Circulation and Infrastructure Background Report," both the I-15 and I-215 Freeways are identified as "potential evacuation routes." As noted, "[s]pecific routes will be designated during an emergency by San Bernardino County Sheriff's Department, as and when the need arises, in accordance with the County Emergency Management Plan" (Source: County of San Bernardino, Circulation and Infrastructure Background Report, p. 2-91).

review process. Access across faults will be discouraged where point(s) of access can feasibly be located outside of fault areas. (3) Through the provisions of the Fire Safety Overlay and the development review process, require projects to provide immediate vehicular access to the perimeter of structural development within projects adjacent and exposed to wildlands.[38]

- **County of San Bernardino Development Code**. As illustrated in Figure 4.1-7 (San Bernardino County General Plan – Hazard Overlay Map) and Figure 4.9-4 (San Bernardino County – Fire Safety Zones and Improvement Levels), a substantial portion of the project site is located in Fire Safety Overlay District "Fire Safety Area 3" (FS3).As defined in Section 82.13.030 (Fire Safety Areas) in Chapter 82.13 (Fire Safety Overlay) of the County Development Code, FS3 includes lands which are "primarily within the wildland-urban interface of the Valley Region. A notice of each land-use application and/or development permit that would lead to the construction of one or more structures or the subdivision of land shall be filed with the responsible fire authority and the appropriate natural resource conservation service (Section 82.13.040[a] and [b]). For projects proposed within designated fire safety areas, each land-use application shall include a slope analysis (Section 82.12.040[f][1]), preliminary grading plan (Section 82.12.040[f][2]), and fuel modification plan (Section 82.12.040[f][3]).

  In order to reduce fire hazards, prevent erosion, and preserve existing vegetation and visual quality, the density of any residential development shall conform to the following criteria: (1) 1-4 dwelling units/gross acre on slopes of zero to less than 15 percent; (2) 2 dwelling units/gross acre on slopes of 15 to less than 30 percent; (3) 1 dwelling unit/gross acre on slopes of greater than 30 percent (Section 82.13.060[a]). Each development project and each development project phase shall have a minimum of two access points of vehicular ingress and egress, designed to County road standards (Section 82.13.060[b][1]).

  Each development project shall provide 6-inch or larger circulating (loop) water mains, as required by the Uniform Fire Code (Section 82.13.060[b][4]). A permanent fuel modification area shall be required around a development project, or portions thereof, adjacent or exposed to hazardous fire areas (Section 82.13.060[b][6]).

  Each structure located on a lot that was created after April 12, 2007 and abuts a boundary of the National Forest shall be set back at least 100 feet from the boundary (Section 82.13.060[b][7][C]). In FS3 areas, exterior walls shall be constructed of non-combustible materials or shall provide the equivalent of one-hour fire-resistance rated construction on the exterior site (Section 82.13.060[c][2]). Fire fighting vehicles shall have adequate access into areas situated between fire hazardous or fuel modification areas and the development perimeter so that a wildland fire can be contained at the development perimeter (Section 82.13.060[e]).

  Section 82.19.0109(c) in Chapter 82.19 (Open Space Overlay) states that, because they provide public access to open space lands and serve as an active recreational amenity, trails form an important part of the Open Space (OP) Overlay. Development standards

[38]/ *Op. Cit.,* County of San Bernardino 2007 General Plan, Safety Element., pp. VIII-29 through VIII-30.

for bicycle plus pedestrian, bicycle only, hiking only, and equestrian only trails are presented in Section 82.19.050.

As specified in Section 82.19.030 (Special Requirements for Natural Resources), with regards to "areas designated for Wildlife Corridors, Special Policy Areas or Buffer Zones," the County Development Code specifies that when a land use is proposed or an existing land use is increased by more than 25 percent of disturbed area within an OS Overlay designation as a wildlife corridor, special policy area, or buffer zone, the land use application shall include a biotic resources report or other special report, as applicable, for the subject area, except where the Director finds that prior County-approved environmental studies have determined that the site does not contain viable habitat. The report shall identify all biotic resources located on the site and those on adjacent parcels that could be impacted by the proposed development and the impacts on the area as a wildlife corridor. If another special report is required, that report shall identify all resources that are sensitive and need protection, as well as mitigation measures designed to reduce or eliminate impacts to the identified resources.

As indicated in Section 83.05.010 (Purpose) in Chapter 83.05 (Dedication and Installation of Streets and Trail Improvements) in the County Development Code, this chapter regulates and controls dedications and installation of street improvements and trails. With regards to the dedication of street and highway rights-of-way in the Valley Region, additional rights-of-way shall be required in compliance with road widths established by the County General Plan after review by the Director of Public Works (Section 83.06.030[b][3]). With regards to the dedication and installation of trails, where approved plans or ordinances do not exist, the required dedications may be required for specific plans and planned development projects and shall be as follows: (1) Proposed development adjacent to trail systems may be required to dedicate land for trail access points, as determined by the Director of Public Works; and (2) The dedication or offers of dedication of trail easements may be required for establishing a planned trails system alignment or where an established trial is jeopardized by impending development (Section 83.05.040[b]).[39]

Before final inspection of a structure or improvement resulting in an increase or change of vehicular traffic that necessitates the construction of street improvements for the purposes of protecting public health and safety, the installation of street improvements may, at the discretion of the Public Works Director, be required in compliance with the current adopted County standards (Section 83.05.050[a]). The right-of-way dedication and installation of street improvements shall be required before the occupancy of the premises or commencement of uses (Section 83.05.060[a]). Where it is impractical to install the required improvements at the time of the proposed development, a written agreement shall be entered into with the County Department of Public Works to make the improvements (Section 83.05.060[b]).

[39]/ As specified in Section 83.05.040(c) of the County Development Code: "To ensure application of uniform design standards and to promote the safety of trail users and their enjoyment of the trails system, the [Public Works] Director shall apply the 'County Trail Use and Design Guidelines.' These standards are intended to serve as a general guide, and may at times be superseded by standards of managing agencies other than San Bernardino County. Standards may vary depending on the proposed use and operation of the trail; more detailed standards for specific trails may be developed at the time specific siting and planning for a trail link is completed."

As further stipulated in Section 87.06.030(h) in Chapter 87.06 (Subdivision Design and Improvement Requirements), in compliance with the requirements of the Uniform Fire Code (UFC) and County's Fire Safety Overlay District, in hazardous fire areas, all flammable or combustible vegetation shall be removed from around all structures. As further stipulated in Section 87.06.030(f), depending on the circumstances surrounding a specific project, the County may require the subdivider to construct bicycle/walking paths and/or hiking/equestrian trails within an approved subdivision.

As specified in Section 23.0301 in Title 2 of the County Development Code, every owner or person in control of lands in unincorporated County shall abate all fire hazards and hazardous trees. To provide firefighters defensible space and to minimize the spread of fire within 100 feet of a building or structure (and pursuant to Section 4291 of the PRC), every owner or person in control of any buildings or structures in, upon, or adjoining any mountainous areas, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material within unincorporated County shall, at all times: (1) maintain a firebreak by removing and clearing away, for a distance of 30 feet on each side of the building, structure, or property line, all flammable vegetation or other combustible growth; (2) provide a fuel break with 30 to 100 feet of a building or structure by disrupting the vertical and/or horizontal continuity of flammable and combustible vegetation with the goal of reducing fire intensity, inhibiting fire in the crowns of trees, reducing the rate of fire spread, and providing structure protection in and around wildland urban interface communities; and (3) property owners who do fuel reduction activities should make every effort to properly reuse and/or recycle the resultant materials either on the site or at an appropriate off-site facility, without creating additional fire hazards.

- **Multi-Jurisdictional Hazard Mitigation Plan**. The "San Bernardino County Operational Area Multi-Jurisdictional Hazard Mitigation Plan" (County HMP) describes an array of hazards affecting the County and, among other things, identified and describes those "critical facilities" that exist within the County that may be directly or indirectly affected by those hazards. As illustrated and described therein, numerous "critical facilities" exist in proximity to the project site. Presented in Figure 4.9-5 (San Bernardino County Operational Area Multi-Jurisdictional Hazard Mitigation Plan – Environmental Hazards and Critical Facilities in the General Project Area)[40] are those environmental hazards and critical facilities identified by the County. As defined therein, "critical facilities" include public health facilities, fire stations, sheriff/police stations, radio/communication towers, schools, sewage treatment plans, and County buildings.[41]

  In the County, the siting of critical and essential public facilities are subject to the land-use compatibility provisions cited in the County Development Code with respect to identified hazard zones, as presented in Table 4.3-1 (Land-Use Compatibility Chart in Fault Hazard Zones), Table 4.3-2 (Land-Use Compatibility Chart in Liquefaction Potential Zones), Table 4.3-3 (Land-Use Compatibility Chart in Landslide Susceptibility Zones), and Table 4.4-4 (Land-Use Compatibility in 100-Year Floodplains) herein, and to the mitigation strategies presented in the County HMP.

[40]/ County of San Bernardino, Office of Emergency Services, San Bernardino County Operational Area Multi-Jurisdictional Hazard Mitigation Plan, adopted April 5, 2005, p. 146.
[41]/ *Ibid*., pp. 70 and 72.

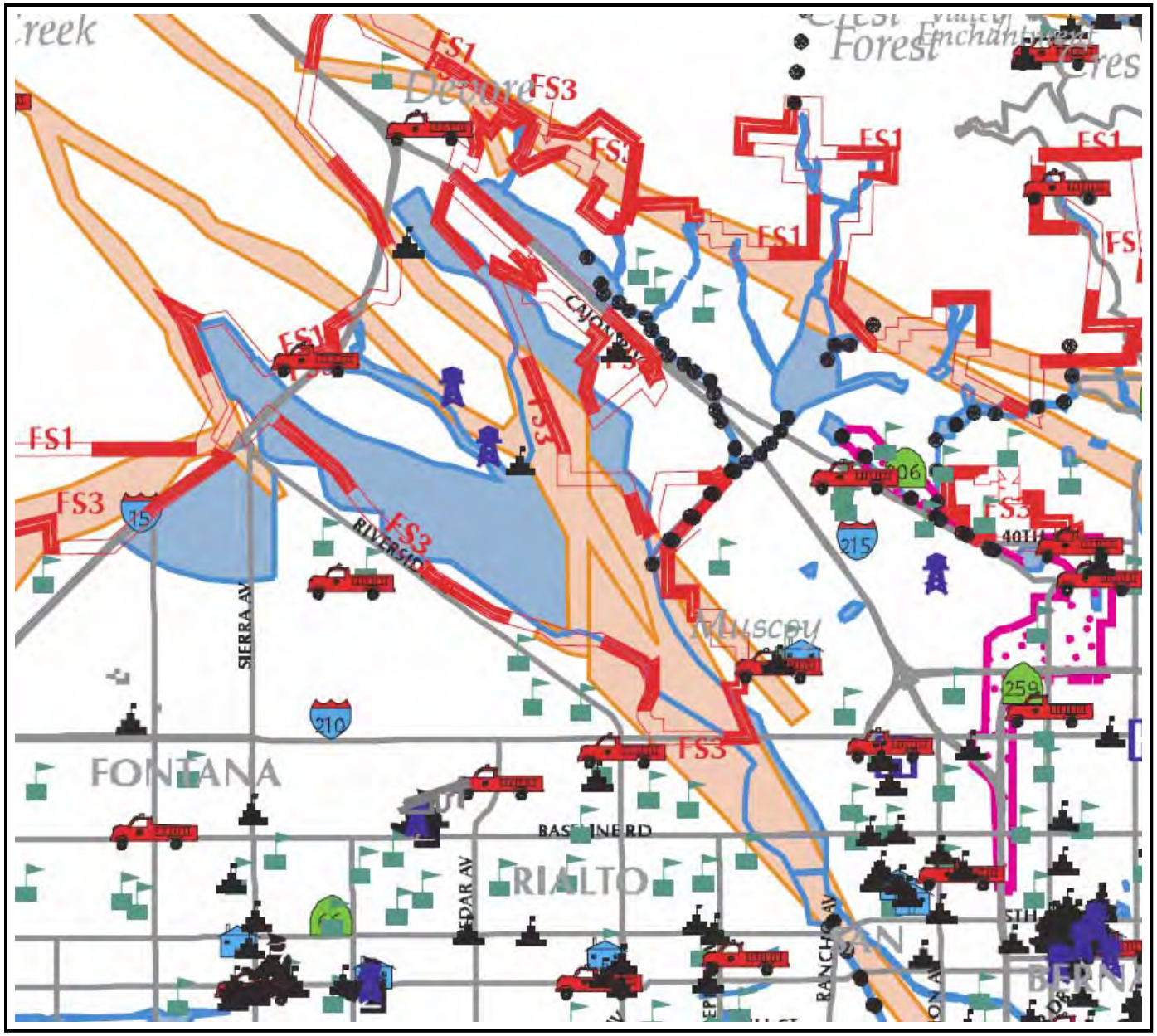

Figure 4.9-5
SAN BERNARDINO COUNTY OPERATIONAL AREA MULTI-JURISDICTIONAL HAZARD MITIGATION MAP - ENVIRONMENTAL HAZARDS AND CRITICAL FACILITIES LOCATED IN THE GENERAL PROJECT AREA
Source: County of San Bernardino

- FEMA 100 Year Floodplains
- Alquist-Priolo Seismic Safety Zones
- Dam Inundation Areas
- Fire Safety Review Areas Review Areas FS1, FS2 & FS3
- Aquaducts

- Hospitals
- Public Health Facilities
- Fire Stations
- Schools
- Sheriff & Police Stations

- County Buildings
- Radio/Communication Towers
- Sewage Treatment Plants

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4.9.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. As indicated in the City General Plan, "Rialto has adopted a standard of three acres of parkland for each one thousand residents."[42] The City General Plan further notes that there is "an insufficient supply of land designated for public parks and recreational areas within Rialto. Those recreational resources which are provided by the City are not optimally balanced according to types of recreation provided, types and size of parks or ease of access to parklands from all sectors of the City."[43]

  The City General Plan notes that the community has not yet been able to provide sufficient public space to meet its adopted standard of 3 acres of dedicated parklands and/or open space per 1,000 residents. As further indicated therein, historically, both walking and bicycling have been considered primarily as recreational modes of travel. More recently, "[n]eotraditional town planning standards require pedestrian accessibility for all types of community facilities linked to residences."[44]

  The City General Plan notes that fire prevention, fire protection, and emergency medical assistance (EMA) in the City is provided by the City of Rialto Fire Department (RFD). The RFD has formal mutual joint response agreements with the Cities of San Bernardino, Fontana, Colton, the San Bernardino County Fire Department (Central Valley Fire District), and the Forest Service.[45,46]

  In the context of the proposed project, those public services and recreation goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

  - Goal 4.1.1. Encourage annexations which will demonstrate net benefit to the City before being considered for approval.

    - ◊ Policy 4.1.1.6. Specific plans for large annexations shall set aside land for community parks and other public facilities as appropriate to maintain the City's quality of life.[47]

  - Goal 4.2.2. Meet adopted City standards for the provision of parklands and open space.

[42]/ *Op. Cit*., City of Rialto General Plan, Open Space and Recreation Element, p. VIII-6.
[43]/ *Ibid*., p. VII-8.
[44]/ *Ibid*., Circulation Element, p. V-20.
[45]/ *Ibid*., Safety Element, p. XII-7.
[46]/ Mutual and automatic aid agreements are not intended to replace or supplant the primary agency's responsibilities for fire and rescue services but rather these types of agreements are meant to augment or assist the responsible agency's capabilities.
[47]/ *Ibid.*, Land Use Element, pp. II-22 and II-24.

- ◊ Policy 4.2.2.3. The City shall acquire additional land for parks and open space.

- ◊ Policy 4.2.2.5. Require developers of the Lytle Creek Special Study Area to provide a community park within the project area.

- ◊ Policy 4.2.2.10. Encourage proponents of development projects to provide parklands for residents and visitors.[48]

- Goal 4.2.5. Ensure that all developed areas of the City are adequately served with essential public services and infrastructure, including, but not limited to, streets, water, surface drainage, sanitary sewers, law enforcement, fire protection and public schools.[49]

  - ◊ Policy 4.1.7.1. The City will coordinate all development proposals with other affected public entities to ensure the provision of adequate public facilities.

  - ◊ Policy 4.1.7.2. Proposals for new residential development will be referred to the affected school district(s) for advice and comment.

  - ◊ Policy 4.1.7.3. When reviewing proposals for residential development, the City will work closely with the affected school district(s) in order to plan coordinated mitigation of any negative impacts upon the schools.[50]

- Goal 7.1.1. Improve bicycle trail design and construction.

  - ◊ Policy 7.1.1.3. Improve existing and new Class I bicycle trails with landscaping, rest stops and other amenities to add to the aesthetic values of adjoining neighborhoods, as well as the comfort and pleasure of cyclists using the trails.

  - ◊ Policy 7.1.1.5. School facilities, parks and other activity nodes within residential districts shall be linked with Class II bicycle trails on neighborhood streets. Bicycle trails will be located on only one side of local streets, leaving the other side free for residential parking[51] (Policy 4.2.2.2, Land Use Element).

- Goal 7.1. Meet adopted City standards for the provision of parklands and open space.

  - ◊ Policy 7.1.2. The City shall investigate all means by which additional parklands can be funded or otherwise acquired.

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[48]/ *Ibid.*, pp. II-32 and II-33.

[49]/ *Ibid.*, p. II-34. Although this City General Plan goal and its associated objectives are specific to the "Northeast Sector" and are not included in the City General Plan under the statement of public policies applicable to the "Northern Sector," the referenced goal and the stated objectives are nonetheless included herein in order to foster informed decision making.

[50]/ *Ibid.*, p. II-38.

[51]/ *Ibid.*, Circulation Element, p. V-21.

- ◊ Policy 7.1.4. The City shall apply, by ordinance, the provisions of the Quimby Act to insure that adequate park and recreational facilities are available within or accessible to new residential developments.[52]

- Goal 8.1. Attract desirable commercial recreation enterprises to Rialto.

- Goal 9.1. Completion, maintenance and successful operation of a safe, attractive and effective network of recreational/circulation trails within the City.

  - ◊ Policy 9.1.7. Encourage the inclusion of internal walkways or greenways in residential subdivisions and PRD zones.[53]

- Goal 1.1. Minimize hazards to public health, safety, and welfare resulting from natural and manmade hazards.

- Goal 1.2. Improve the City's ability to respond to large scale emergencies.[54]

- Goal 4.1. Fire prevention regulations and standards to minimize potential fire hazards and fire losses.

  - ◊ Policy 4.1.2. The City shall ensure that development is phased in relation to the City's ability to provide an adequate level of fire protection.

  - ◊ Policy 4.1.3. Utilize development impact fees to ensure that development of fire station(s) and fire fighting equipment corresponds with development within the City.

  - ◊ Policy 4.1.4. Require that all site plans, subdivision plans, and building plans, and building plans be reviewed by the Fire Department to ensure compliance with appropriate fire regulations.

- Goal 4.2. Increase the City's fire protection capabilities.

- Goal 4.3. Provide emergency medical service to the citizens of Rialto.[55]

- Goal 7.1. To provide a safe and secure environment for the City's residents, workers and visitors.

  - ◊ Policy 7.1.1. The City shall require new development and improvements to employ defensible space concepts into site design and building specifications (i.e., appropriate setbacks, adequate lighting of sidewalks and parking areas, residential surveillance sight lines, and the use of burglary resistant hardware and fixtures in buildings).

- Goal 7.2. The City shall provide a minimum of one full-time police officer for every 650 to 750 residents.

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[52]/ *Ibid*., Open Space and Recreation Element, p. VIII-8.
[53]/ *Ibid*., pp. VII-12 and VII-13.
[54]/ *Ibid*., Safety, pp. XII-1 and XII-2.
[55]/ *Ibid*., pp. XII-7 through XII-9.

◊ Policy 7.2.1. Utilize development impact fees to ensure that development of police facilities corresponds with development within the City.

◊ Policy 7.2.3. Open the Police Departments northwest neighborhood police center. Increase the beat patrol in the northwest area to full time coverage.[56]

Applicable or potentially applicable public services and recreation policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. As specified in Section 17.23.020 (Requirements) in Chapter 17.23 (Park and Recreation Facilities Dedication) in the City Municipal Code: "Every developer of a residential project requiring a land division shall dedicate a portion of such land, pay a fee or a combination of both at the option of the City, for the purpose of providing park and recreational facilities at the time and according to the standards and criteria contained in this chapter." As further specified in Section 17.23.030 (General Standard), "3.0 acres of property for each one thousand persons residing within the City be devoted to neighborhood and community parks." The developer shall, without credit, provide full street and utility improvements including, but not limited to, curbs, gutters, sidewalks, street paving, sewer, water and drainage improvements. The land to be dedicated and improvements to be made pursuant to this section shall be approved by the City (Section 17.23.060[C]). In developments of over fifty parcels, the developer shall both dedicate land and pay a fee in lieu thereof, in accordance with the criteria presented in Section 17.23.090 (Criteria for Requiring Both Dedication and Fee).

The Rialto Fire Department operates in accordance with Chapter 2.34 (Fire Department) in Title 2 (Administration and Personnel) of the City Municipal Code. The City has adopted, with certain amendments, additions, deletions, and exceptions,[57] the 2007 California Fire Code and, with certain amendments, additions, deletions, and exceptions,[58] the 2006 Edition of the International Wildland-Urban Interface Code.[59] As

[56]/ *Ibid*., p. XII-18.

[57]/ Section 15.28.010 (Adoption and Findings of the Uniform Fire Code and the California Fire Code), Chapter 15.28 (Fire Code), City Municipal Code.

[58]/ Section 15.28.080 (Wildland-Urban Interface Code), Chapter 15.28 (Fire Code), City Municipal Code.

[59]/ Referencing Section 15.08.060 (Adoption by Reference) in Title 15 (Building and Construction) of the City Municipal Code: "Those certain rules and regulations which regulate the erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of buildings or structures and the installation and maintenance of electrical, plumbing, heating, ventilating, refrigeration and related systems in the city, and which provide for uniform building code standards for such buildings or structures and minimum housing requirements for the protection of life, limb, health and property and for the safety and welfare of the general public and the owners and occupants of these buildings in this city, all as set forth in those certain codes and specified appendices, entitled '2007 California Building Code' as adopted by the California Building Standards Commission in California Code of Regulations Title 24, Part 2, Volumes 1 and 2, and as amended and/or modified by the provisions of this chapter including Appendix C (Agricultural Buildings), F (Rodent Proofing), G (Flood Resistant Construction), H (Signs), I (Patio Covers) and J (Grading), (hereinafter the 'building code'), is adopted by reference; the '2007 California Electrical Code' as adopted by the California Building Standards Commission in California Code of Regulations Title 24, Part 3 (hereinafter the "electrical code"), the '2007 California Mechanical Code' as adopted by the California Building Standards Commission in California Code of Regulations Title 24, Part 4 (hereinafter the "mechanical code"), the '2007 California Plumbing Code' as adopted by the California Building Standards Commission in California Code of Regulations Title 24, Part 5, including Appendix Chapters A, B, C, D, E, F, G, I, K, and L as amended and/or modified by the provisions of this chapter (hereinafter the "plumbing

established under Section 3.60.050 (Fire Protection Services Development Fee) in Chapter 3.60 (Fire Protection Services Development Fee) of the City Municipal Code, there is imposed a fire protection services development fee on all new development and any substantial improvement in the City.

The Rialto Police Department operates in accordance with Chapter 2.40 (Police Department in Title 2 (Administration and Personnel) and in Title 9 (Public Peace, Safety, and Morals) of the City Municipal Code.

The City of Rialto Recreation and Community Services Department operates in accordance with Chapter 2.44 (Recreation and Community Services Department) and rules and regulations for use of park and recreation facilities in the City are outlined in Chapter 2.45 (Park and Recreation Facility Regulations) in Title 2 (Administration and Personnel) of the City Municipal Code.

Section 17.22.050 (General Plan) in Chapter 17.22 (School Facilities Fee) in the City Municipal Code states that the "City General Plan provides for the location of public schools. Where facilities are to be constructed from fees or land required to be dedicated under this chapter or both, they shall be consistent with the [City] General Plan." As established under Section 17.22.120 (Facilities Fee): "Every person carrying out a residential development in an area where school overcrowding has been determined to exist shall pay a facilities fee for each elementary, junior high, middle-school, and senior high school student generated by the development. The amount of the facilities fee per student shall be set by resolution of the City Council after consultation with the affected school districts, and shall bear a reasonable relationship and will be limited to the needs of the community for interim elementary, junior high, middle-school, and high school facilities and shall be reasonably related and limited to the need for schools caused by the residential development. However, fees shall not exceed the amount necessary to pay five annual lease payments for interim facilities prorated per student. The fee shall be paid at the time of the issuance of a building permit."

Section 17.22.140 (Dedication or Provision of Facilities in Lieu of Fees) indicates that, upon agreement between the developer, the City, and affected school district, a developer may dedicate land in lieu of paying the fees required by this chapter. In lieu of the dedication of land or the payment of fees, or both, the builder of a residential development may provide interim facilities owned or controlled by the builder at the place designated by the school district and at the conclusion of the fifth school year the builder shall, at the builder's expense, remove the interim facilities from that place.

- **Hazard Mitigation Plan**. As indicated in the City's "Hazard Mitigation Plan – Community of City of Rialto, CA" (City HMP), there are three different classes of wildland or wildfires. A surface fire is the most common type and burns along the floor of a forest. A ground fire is usually started by lightning and burns on or below the forest floor. Crown fires

code"); the '1997 Uniform Housing Code' is adopted by reference except Chapter 10; except the administrative chapters of the preceding codes; the '1997 Uniform Administrative Code' except Tables 3-A through 3-H as amended and/or modified by the provisions of this chapter; the "2006 International Property Maintenance Code" including the administration chapter as published by the International Code Council as amended and/or modified by the provisions of this chapter; the supplements to the California Building Codes, published by the International Code Council; the 2007 California Fire Code as amended and adopted elsewhere in this code; all of which are on file in the Building Division of the Department of Development Services, are referred to, adopted by reference, and made a part hereof as if fully set out in this title."

spread rapidly by wind and move quickly by jumping along the tops of trees. Exposure to undeveloped wildland areas creates concern for wildland fires in general and particular wind-driven fires that can threaten developed areas in the north region of the City. These fires occur primarily in the fall when hot and dry Santa Ana winds occur. Wildland fires under these conditions can rapidly spread to major conflagrations.

In recognition of the natural hazards confronting the City (i.e., earthquakes, flooding, wildfires), one of the mitigation goals of the City's HMP states, in part: "Integrate MMP into the General Plan. Promote mitigation concepts to the business community through the planning process and to the public through disaster preparedness and community education programs."[60]

4.9.3 Environmental Setting

4.9.3.1 Regional Setting

Police Protection

The California Department of Justice's "Crime in California, 2006, Advance Release," provides a summary of crimes and arrests reported by law enforcement agencies in the State and adult felony disposition reported by police, sheriffs, prosecutors, and courts.[61] The report is published annually by the Department of Justice to provide data submitted by criminal justice agencies. The report compares crime and arrest rates from 2005 to 2006 and from 1989 to 2006 (1989 marked a peak for the period analyzed). The report indicated that, when comparing 2005 and 2006, Statewide crime statistics showed an increase in total violent crime of 1.2 percent.[62] Homicides, forcible rapes, and aggravated assaults decreased 2.9, 2.8, and 3.6 percent, respectively; however, robberies increased by 10.6 percent. When comparing 1989 and 2006 crime statistics, total Statewide violent crimes decreased 47.5 percent. Homicides decreased 40.0 percent, forcible rapes decreased 40.9 percent, robberies decreased 43.4 percent, and aggravated assaults decreased 50.3 percent. The report further indicated that, when comparing 2005 and 2006, Statewide crime statistics showed an decrease in total property crime of 3.2 percent. Burglaries and motor vehicle thefts decreased by 2.4 and 6.7 percent, respectively. During that period, larceny-theft over $400 increased by 0.1 percent, however, larceny-theft under $400 decreased by 6.3 percent. Between 2005 and 2006, arson crimes increased by 2.1 percent. When comparing 1989 and 2006 crime statistics, total Statewide property crimes decreased 43.3 percent. Burglaries decreased 53.8 percent, motor vehicle thefts decreased 37.5 percent, larceny-theft over $400 decreased 32.9 percent, and larceny-theft under $400 decreased by 52.3 percent. Between 1989 and 2006, arson crimes decreased by 48.9 percent.

For the State as a whole, the following 2006 crime rates per 100,000 population were reported: (1) total violent crime – 518.4; (2) homicides – 6.6; (3) forcible rapes – 24.6; (4) robbery – 189.5; (5) aggravated assaults – 297.7; (6) total property crimes – 1,889.8; (7) burglaries – 658.2; (8) motor vehicle theft – 648.1; (9) larceny-theft over $400 – 583.4; (10) larceny-theft under $400 –

[60]/ *Op. Cit*., Hazard Mitigation Plan – Community of City of Rialto, CA, Sections 4.1.3 and 5.2.4.

[61]/ California Department of Justice, Division of California Justice Information Services, Crime in California, 2006, Advance Release, 2007.

[62]/ An area's crime rate is determined by dividing the number of crimes within an area by the area's population and multiplying by 10,000. Federal Bureau of Investigation (FBI) crime index data is presented in terms of reported crimes per 100,000 residents.

1,197.5; and (11) arson – 33.9. Since these are Statewide statistics, they may not necessarily be indicative of current crime rates in either the City or in the County.

Within the general project area, police protection services are provided at the State, County, and local levels by the California Highway Patrol, the San Bernardino County Sheriff's Department, and the City of Rialto Police Department, respectively. Each of those emergency service providers are separately discussed below.

- **California Highway Patrol**. In California, the Business, Transportation and Housing Agency is responsible for traffic safety and oversees the activities of the Office of Traffic Safety and Departments of Highway Patrol, Transportation, and Motor Vehicles. The California Highway Patrol (CHP) responds to traffic accidents on State highways, components of the interstate highway system, and traffic accidents on all streets located in unincorporated areas. The CHP also provides law enforcement assistance to the LACSD and to municipal law enforcement agencies through an informal mutual aid agreement. CHP General Order 0.1 specifies that one of the missions of the CHP, in its role as a major Statewide law enforcement agency, is that it "supports local law enforcement and stands ready to assist in emergencies exceeding local capabilities."

  The project site is located in the CHP's Inland Division (801). As the geographically largest division, the Inland Division faces the widest spectrum of traffic enforcement challenges of all the CHP's field divisions, patrolling an area larger than 12 individual states and includes Interstates 10, 15, 215 and State Highways 210, 91, 71 and 60. The Inland Division is comprised of 11 area offices, nine resident posts and one transportation management center. Current (2008) staffing includes 602 uniformed officers and 196 non-uniformed personnel. The project area is serviced by the CHP's San Bernardino Station (860) (211 Western Avenue, San Bernardino).

- **San Bernardino County Sheriff's Department**. Operating through 24 patrol stations and 13 specific divisions, including an Aviation Division headquartered at the Rialto Municipal Airport/Art Scholl Memorial Airport,[63] the San Bernardino County Sheriff's Department (SBCSD), in collaboration with various cities and other agencies, provide law enforcement services to the unincorporated communities in the County. Although the City is not among them, the SBCSD also contracts police protection services to a number of cities in the County.[64] The SBCSD maintains three correctional facilities, including the West Valley Detention Center in Rancho Cucamonga, the Central Rehabilitation Center (housing federal inmates for the United States Marshall Service) located in the City of San Bernardino, and the Glen Helen Rehabilitation Center (a two unit, male and female-inmate facility) located near Glen Helen Regional Park.

  Crime statistics assembled by the California Department of Justice, as indicated by reporting agencies for 2005 and 2006, are presented in Table 4.9-1 (Criminal Offenses by Reporting Agency [2005])[65] and Table 4.9-2 (Criminal Offenses by Reporting Agency

[63]/ County of San Bernardino (URS Corporation), Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038, certified March 13, 2007, p. IV-127.

[64]/ Contract cities include Adelanto, Apple Valley, Big Bear, Chino Hills, Grand Terrace, Hesperia, Highland, Loma Linda, Needles, Rancho Cucamonga, Twentynine Palms, Victorville, Yucaipa, and Yucca Valley.

[65]/ California Department of Justice, Division of California Justice Information Center, Criminal Justice Statistics Center (http://stats.doj.ca.gov/cjsc_stats/prof05/36/11.pdf).

[2006]),[66] respectively. For unincorporated County areas, the number and percentage change in crimes reported by the SBCSD for 2005 and 2006 are presented in Table 4.9-3 (San Bernardino County Sheriff's Department Reported Crimes).[67]

Operating from ten police stations located throughout the County, the SBCSD operates ten patrol divisions. The general project area falls within the service boundaries of the SBCSD's Central Valley (655 E. Third Street, San Bernardino) and the Fontana (17780 Arrow Boulevard, Fontana) Stations. Central Station is responsible for providing law enforcement in the unincorporated areas of the central valley, the Cities of Grand Terrace and Loma Linda, and GHRP. The Fontana Station service area encompasses about 90 square miles and includes the unincorporated County areas located near the Cities of Fontana and Rialto and the communities of Bloomington and Lytle Creek.

Referencing the County General Plan FPEIR: "Increase in population and human activity in the area will result in an increase in the need for law enforcement services. San Bernardino County has a higher crime rate than the State average and, therefore, crime is one of the main concerns among residents. Community Facilities Districts have been created in some areas of the County to help provide law enforcement services. Additional Community Facilities Districts will be created in the future in the County to assist in the provision of these services."[68]

With the exception of the areas now located within the corporate boundaries of the City, including the El Rancho Verde Royal Vista Golf Course and Monier Lifetime, except for back-up response which is provided under the terms of a mutual aid agreement with the SBCSD, the Rialto Police Department (RPD) is not the primary law enforcement agency presently serving the project site.

- **City of Rialto Police Department**. The RPD currently employs 150 total employees, including 115 sworn employees, 50 full-time civilian employees, and 15 part-time employees, and community volunteers (which include reserve police officers, police volunteers, and explorers). The RPD encompasses the following units: Patrol, Investigations, Traffic, Narcotics, Special Weapons and Tactics (SWAT), Street Crime Attack Team (SCAT), Canine (K-9), School Resource Officers (SRO), Backgrounds and Training, Internal Affairs, Dispatch, Records, Crime Analysis, Community Services, Logistics, and Animal Control. The RPD's annual operating budget has increased from about $20.8 million in Fiscal Year (FY) 2006/2007 to about $23.7 million in FY 2008/2009 and is projected at approximately $24.6 million in FY 2009/2010.[69]

  The department is divided into an Operations Bureau and a Support Bureau. The RPD has implemented an area command model of community-based policing, whereby the service area is divided into three area command areas or sectors. A specific lieutenant is assigned to each sector. The LCRSP project site is located in Area Command Area 1, generally defined as Baseline Boulevard north.

[66]/ California Department of Justice, Division of California Justice Information Services, Criminal Justice Statistical Center, California Crime Offenses, 2006, Offenses by Reporting Agency, San Bernardino County, Annual 2006, May 25, 2007, p. 38.

[67]/ California Department of Justice, Division of California Justice Information Center, Criminal Justice Statistics Center (http://ag.ca.gov/cjsc/publications/preliminarys/jd06/jd06net.pdf).

[68]/ *Op. Cit*., Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038, p. IV-130.

[69]/ City of Rialto, City of Rialto Two Year Budget, Fiscal Years 2008/2000 & 2009/2010, 2008, p. 55.

Table 4.9-1
CRIMINAL OFFENSES BY REPORTING AGENCY (2005)

Agency	Violent Crimes					Property Crimes					
	Total	Homicide	Forcible Rape	Robbery	Aggravated Assault	Total	Burglary	Motor Vehicle Theft	Larceny-Theft		Arson
									>$400	≤$400	
County	9,732	174	545	3,024	5,989	42,570	14,548	15,885	12,137	23,192	564
SBCSD	3,123	65	231	764	2,063	17,186	6,559	5,458	5,169	9,034	260
Unincorporated	1,057	27	71	177	782	5,081	2,063	1,714	1,304	1,693	124
Rialto	804	11	33	214	546	2,315	715	1,173	427	1,175	23
CHP	6	0	0	0	6	37	0	36	1	1	0

Source: California Department of Justice

Table 4.9-2
CRIMINAL OFFENSES BY REPORTING AGENCY (2006)

Agency	Violent Crimes					Property Crimes					
	Total	Homicide	Forcible Rape	Robbery	Aggravated Assault	Total	Burglary	Motor Vehicle Theft	Larceny-Theft		Arson
									>$400	≤$400	
County	9,912	161	528	3,528	5,695	40,381	14,410	14,552	11,419	21,033	557
SBCSD	1,076	36	89	181	770	4,717	1,950	1,554	1,213	1,683	108
Unincorporated	-	-	-	-	-	-	-	-	-	-	-
Rialto	708	12	22	114	240	1,964	501	426	570	1,040	31
CHP	8	0	0	0	8	39	5	34	0	10	0

Source: California Department of Justice

Table 4.9-3
SAN BERNARDINO COUNTY SHERIFF'S DEPARTMENT – REPORTED CRIMES (2005-2006)

Agency	Violent Crimes					Property Crimes					
	Total	Homicide	Forcible Rape	Robbery	Aggravated Assault	Total	Burglary	Motor Vehicle Theft	Larceny-Theft		Arson
									>$400	≤$400	
2005	1,057	27	71	177	782	5,081	2,063	1,714	1,304	1,693	124
2006	1,076	36	89	181	770	4,717	1,950	1,554	1,213	1,683	108
Change	1.8%	-	25.4%	2.3%	-1.5%	-7.2%	-5.5%	-9.3%	-7.0%	-0.6%	-12.9

Source: California Department of Justice

In 2007, the RPD established a Bike Patrol Team which currently (2008) consists of five trained officers.[70] Bicycle patrols enhance opportunities for community-based policing.

Executive Order S-3-05, signed by the Governor on June 1, 2005, called for the CalEPA to prepare biennial reports on the potential impact of continued global warming on certain sectors of the California economy. CalEPA entrusted the California Energy Commission's (CEC) Public Interest Energy Research (PIER) and its California Climate Change Center to lead this effort.

As indicated in PEIR's 2006 report: "In California and throughout western North America, signs of a changing climate are evident. . .The latest projections, based on state-of-the-art climate models, indicated that if global heat-trapping emissions proceed at a medium to high rate, temperatures in California are expected to rise 4.7 to 10.5°F by the end of the century. In contrast, a lower emission rate would keep the projected warming to 3 to 5.6°F. . .However, if temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. Because wildfire risk is determined by a combination of factors including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform through the State. . .For example, if precipitation increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are expected to increase by approximately 30 percent toward the end of the century."[71]

With regards to projected climate changes in North America associated with global warming, in April 2007, the United Nation Intergovernmental Panel on Climate Change[72] (IPCC) reported: "Warming in western mountains is projected to decrease snowpack, more winter flooding, and reduced summer flows, exacerbating competition for over-allocated water resources. Disturbances from pests, diseases, and fire are projected to have increasing impacts on forest, with an extended period of high fire risk and large increases in area burned."[73]

Fire Protection

The National Interagency Fire Center reports "[b]elow normal precipitation has occurred since October 2006 except for the extreme northwestern corner of California. The entire lower third of the State has received less than 50% of normal precipitation since October 2006, with some areas on tract for record setting dryness."[74]

Operating within those conditions, at the federal level, the Forest Service has jurisdictional authority over the San Bernardino National Forest (SBNF), including any wildland fires originating therein. The SBNF covers approximately 819,000 acres within both San Bernardino and Riverside Counties. The National Forest is administered under five ranger districts. The SBNR's Cajon Ranger District is located to the north of the project site. As indicated in the

[70]/ City of Rialto Police Department, Rialto Police Department Chief's Report, March 2008, p. 30.

[71]/ California Energy Commission, Our Changing Climate: Assessing the Risks to California – A Summary Report from the California Climate Change Center, CEC-500-2006-077, Public Interest Energy Research, July 2006, pp. 1 and 10-11.

[72]/ Recognizing the problem of potential global climate change, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988.

[73]/ United Nations Intergovernmental Panel on Climate Change, Climate Change 2007: Climate Change Impacts, Adaptation and Vulnerability, Summary for Policymakers, Fourth Assessment Report, April 6, 2007, p. 12.

[74]/ National Interagency Fire Center, National Wildland Fire Outlook, Wildland Fire Outlook – May through August, 2007, Predictive Services Group, May 1, 2007.

"Record of Decision" (ROD) accompanying Forest Plan: "Much of the urban interface and concentrated use areas within the National Forest boundary are included in the Developed Area Interface zone. Accordingly, most of our [USFS] community defense work and fuels management activities in response to the National Fire Plan will be focused within this zone. The Developed Area Interface (DAI) zone includes the Wildland/Urban Interface (WUI) zone described in the National Fire Plan. Within the WUI zone there are two sub-zones called the WUI Defense zone and the WUI Threat zone. Areas beyond these zones can, under the right conditions, be included in the WUI zone and therefore are described as the WUI influence zone. The DAI zone is especially compatible with community defense work and already includes a large number of the National Forest System roads that enable access for community defense work or fire suppression. The zone is also compatible with the location of sites needed for a variety of special-uses."[75]

As indicated in the Forest Plan: "There are extensive areas within and adjacent to the national forests of southern California meeting the definition of Wildland/Urban Interface as described in the Healthy Forests Restoration Act of 2003. WUI (as defined by the act) is a variable width up to 1.5 miles from communities at risk or as defined in individual community fire protection plans. This forest plan further identifies a direct protection zone (WUI Defense Zone) and an indirect protection zone (WUI Threat Zone) that fall within the broader definition of WUI. A WUI Defense Zone is the area directly adjoining structures and evacuation routes that is converted to a less-flammable state to increase defensible space and firefighter safety. The WUI Threat Zone is an additional strip of vegetation modified to reduce flame heights and radiant heat. The Threat Zone generally extends approximately 1¼ miles out from the Defense Zone boundary. Yet, actual extents of Threat Zones are based on fire history, local fuel conditions, weather, topography, existing and proposed fuel treatments, and natural barriers to fire and community protection plans, and therefore could extend well beyond the 1¼ mile. The two zones together are designated to make most structures more defensible."[76] Those zones are discussed below.

- **WUI Defense Zone**. The Forest Plan identifies minimum widths for the WUI Defense Zone by general vegetation type. As specified, with regards to grasslands, a width of 50-100 feet from the edge of the structure will be sufficient in some conditions to provide community safety objectives; however, on steep slopes, an expanded width may be necessary. With regards to chaparral, a width of 100-300 feet will be sufficient in some conditions to provide a community safety objective; however, on steep slopes or areas of significant mortality, a greater expanded width may be necessary. With regards to forest lands, a width of 300 feet will be sufficient in some conditions to provide community safety objectives; however, on steep slopes or in areas of significant tree mortality, a greater expanded width will be necessary.

- **WUI Threat Zone**. Activities within the WUI Threat Zone are less intensive than those implemented in the WUI Defense Zone. There is no need to maintain any area in a less-flammable state within the threat zone. The object is to complete enough tree thinning and surface fuel management over time to reduce the potential for stand replacing fires. Emphasis will usually be the reduction of ladder fuels and periodic reduction of surface fuels.

[75]/ United States Department of Agriculture, Forest Service, Record of Decision – San Bernardino Forest Land Management Plan, R5-MB-084, September 2005, p. 7.

[76]/ United States Department of Agriculture, Forest Service, Land Management Plan – Part 3 Design Criteria for Southern California National Forests: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-080, September 2005, Appendix K, p. 81.

In accordance with the Forest Plan, new developments on private lands adjacent to NFS lands "must meet community protection needs without the use of National Forest System lands."[77]

As indicated by the USFS: "Large fires can result in a series of disasters for individuals and communities in the wildland-urban interface. They create significant disruptions to ongoing social processes, result in large financial losses, and lead to expensive restoration activities. The effects of these disasters manifest in several ways. First and most obvious is the loss of life and property. Second, how people value their property and place within the community changes – some residents sell their properties, many are forced to rebuilt, others relocate. All are resigned to accept a highly disturbed landscape for years to come."[78]

Wildland fires within the WUI, including areas located in proximity to the project site, have and can be expected to continue to occur. For example, as illustrated in Figure 4.9-6 (Grand Prix and Old Fires Location Map [2003]), the project site was directly impacted by the October 2003 Grand Prix and Old Fires.[79] That fire encompassed the area now proposed as Neighborhoods I and crossed the I-15 Freeway and burned portions of proposed Neighborhoods III and IV. On October 27, 2003, as a result southern California wildfires, President Bush declared a major disaster for the State, triggering the release of federal funds to help the area's recovery.

As indicated by the National Academy of Public Administration: "The wildland-community interface is ever expanding. More and more people are moving to homes and communities that are in or near forests that present significant wildfire risks. It is not just the border of a city or suburban tract that is vulnerable, but also the municipal watersheds, the long-distance electric lines that transport vital power, and other scattered facilities and homes. The presence of this interface increases firefighting costs dramatically, and endangers residents, homes and other buildings, economic stability, and public safety. If state and local governments continue to permit such development, the way to avoid the added costs and dangers of catastrophic loss is to act before fire strikes to make these developments less hazardous and more defensible. At the community level, many mitigation tools are available and many stakeholders are involved. Counties and cities can employ land use plans, zoning and subdivision regulations, site-plan reviews, impact fees, building codes, and biomass recycling to lower community wildfire risks and help finance the effort. Community associations that govern many developments under contractual agreements with the homeowners can educate the homeowners, and incorporate covenants, conditions and restrictions in community by-laws to achieve these same goals."[80]

Within the general project area, fire protection services are provided at the federal, State, County, and local levels by the United States Forest Service (USFS), California Department of Forestry and Fire Protection (CALFIRE), San Bernardino County Consolidated Fire District (SBCFD), Fontana Fire Protection District (FFPD), and City of Rialto Fire Department (RFD). Each of those emergency service providers are separately discussed below.

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[77]/ *Ibid*., pp. 81-82.

[78]/ United States Department of Agriculture, Forest Service, Fuels Planning: Science Synthesis and Integration – Social Issues Fact Sheet 19: Impacts of Wildland Fire on Communities, Research Note RMRS-RN-21-19-WWW, September 2007, p. 1.

[79]/ The photograph shows the burned areas of the Grand Prix and Old Fires (shown in red) as captured on November 18, 2003 by ASTER (Advanced Spaceborne Thermal Emissions and Reflection Radiometer). ASTER flies aboard the Terra satellite as part of NASA's Earth Observing System (Source: United States Forest Service, California Fire Siege 2003 – The Story, October 21 – November 4, 2003, undated, p. 51.

[80]/ National Academy of Public Administrators, A Report by a Panel of the National Academy of Public Administrators for the United States Congress and the Departments of Agriculture and the Interior, Containing WIldland Fire Costs: Enhancing Hazard Mitigation Capacity, Background Report, Chapter 2, Reducing Risk in Communities, January 2004 (http://www.napawash.org/Pubs/WildfireJan04.htm).

- **United States Forest Service**. The USFS provides emergency medical response, fire prevention, fire suppression, and fire education services in Federal Responsibility Areas (FRA). In the project area, the FRA is the San Bernardino National Forest. In case of a major wildfire, the Forest Service is the primary federal agency that is tasked by FEMA through the Federal Response Plan umbrella. Their resources can be quickly mobilized to the disaster under the Incident Command System. Typical responding resources include Incident Management Teams, twenty person fire crews and possibly air support, as deemed appropriate by the Incident Commander.

  USFS Fire Station 32 (Sycamore), which operated only during the wildland fire season (typically May through November), is located within the SBNF immediately north of the project site and obtains access from Glen Helen Parkway via a recorded Fontana Union Water Company easement.

- **California Department of Forestry and Fire Protection**. The State, acting through CALFIRE, funds wildland fire protection for SRA. CALFIRE personnel serve 33-million wildland acres and an additional 11-million acres under contract agreements with local governments. Jurisdictions located in areas not considered wildlands are called local responsibility areas (LRA) and are served by local fire agencies.

  CALFIRE is the State's largest fire protection organization and, in combination with local and federal agencies, is part of the Statewide mutual aid system. The "California Fire Plan" is the State's road map for reducing the risk of wildfire.[81] The plan noted: "CDF commands a force of approximately 3,800 full-time fire professions, foresters, and administrative employees; 1,400 seasonal personnel; 5,500 local government volunteer firefighters; 2,600 Volunteers in Prevention; and 3,800 inmates and wards. . .CDF operates 1,027 fire engines (338 State-funded engines and 689 local government funded engines), 103 rescue squads, 12 aerial trucks, 58 bulldozer units, 5 mobile communication centers; and 11 mobile kitchen units. . .In addition to its ground attach capability, CDF maintains a significant fleet of aircraft that includes seventeen 800-gallon air tankers, one 3,000-gallon and two 2,000-gallon contract air tankers, 13 air attack planes, and 10 helicopters."[82]

  As indicated in CALFIRE's "San Bernardino 2005 Unit Fire Plan," the San Bernardino Unit "is currently experiencing the significant effects of six year of below normal rainfall. This shortage of moisture is contributing in no small way to the huge increase of conifer mortality in the San Bernardino Mountains."[83] As illustrated in Figure 4.9-7 (San Bernardino 2005 Fire Plan – San Bernardino Unit Fuel Rank), portions of the project site contain a "high" to "moderate" fuel ranking. As illustrated in Figure 4.9-8 (San Bernardino 2005 Fire Plan – San Bernardino Unit Structural Threat Risk), the project site's structural threat risk ranges from "low" to "high."

[81]/ The "California Fire Plan" is a cooperative effort between the State Board of Forestry and Fire Protection (BOF) and CALFIRE. The plan's five strategic objectives include: (1) to create willfire protection zones that reduce the risks to citizens and firefighters; (2) to assess all wildlands; (3) to identify and analyze key policy issues and develop recommendations for changes in public policy; (4) to have a strong fiscal policy focus and monitor the wildland fire protection system in fiscal terms; and (5) to translate the analysis into public policy (Source: State Board of Forestry and Fire Protection and California Department of Forestry and Fire Protection, California Fire Plan, March 1996, p. 1).

[82]/ State Board of Forestry and Fire Protection and California Department of Forestry and Fire Protection, California Fire Plan, March 1996, p. 46.

[83]/ California Department of Forestry and Fire Protection, San Bernardino 2005 Fire Plan, July 1, 2005, p. 13.

The SBNF "has experienced an extreme drought over the past five years that has made the trees more susceptible to mortality from air pollution and a complex of insects and disease. In response to the tree die-off, which one Fire Management Officer termed a 'slow-moving disaster,' the USFS initiated several fuel reduction projects. . .The geographic location of the San Bernardino Mountain communities made them a challenge for emergency planning."[84] Fire prevention and management activities within the National Forest are the responsibilities of the Forest Service.

Because of the urbanization in and adjacent to the national forests in southern California, most of these national forests are viewed as part of the WUI environment and fires continue to be aggressively suppressed. The majority of fires on NFS lands pose an imminent threat to the communities within and along the periphery of each national forest. This threat is magnified during periods of high winds, high temperatures combined with low humidity, and drought.[85] Within the adjoining portion of the National Forest, as depicted in the Forest Plan, the WUI area is illustrated in Figure 4.9-9 (San Bernardino National Forest Land Management Plan – Wildland Urban Interface).

- **San Bernardino County Consolidated Fire District**. The County Fire Agency has developed a plan for service which identifies the continuing need for maintenance and upgrade to fire facilities and has developed a "deployment goals" document which identifies the desired direction for increasing levels of service. The development of the "fire master plan" (as indicated in Policy LU 8.3 of the County General Plan) will respond to the increasing calls due to population growth and growth along the major transportation corridors within the County. The fire master plan is currently a requirement of the County General Plan and Development Code and was anticipated by the County in defining the current and recommended staffing based upon the designations of Urban, Suburban, Rural, and Wilderness response levels for its deployment goals document.[86]

  The County has adopted a "Fire Safety Overlay Ordinance" (Chapter 82.13, County Development Code), establishing three fire safety (FS) areas or zones corresponding with distinct areas and wildland fire hazards. As illustrated in Figure 4.9-4 (San Bernardino County – Fire Safety Zones and Improvement Levels), the project site is located in "Fire Safety Area 1 (FS1)" and "Fire Safety Area 3 (FS3)." As defined therein, FS1 includes areas within the mountain and valley foothills, all lands generally within the SBNF boundary, and is characterized by areas with moderate and steep terrain and moderate to heavy fuel loading. FS3 areas include lands to the south of FS1 areas which are primarily within the wildland-urban interface of the Valley Region and which consist of varying terrain. These areas are subject to Santa Ana wind conditions that have the potential of dramatically spreading wildland fires during extreme fire behavior conditions (Section 82.12.030).

[84]/ Taylor, Jonathan G. and Gillette, Shana C., Communicating with Wildland Interface Communities during Wildfire, Open-File Report 2005-1061, United States Geological Survey and United States Department of the Interior, 2003, p. 4.

[85]/ United States Department of Agriculture, Forest Service, Final Environmental Impact Statement, Volume 1: Land Management Plans, Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-074-A, September 2005, pp. 307-308.

[86]/ Memorandum from Kathleen Rollings-McDonald, Executive Officer, Local Agency Formation Commission to Local Agency Formation Commission (Subject: Agenda Item #9b – LAFCO 3001, Municipal Service Review for Board-Governed Fire Districts and Sphere of Influence Expansion for the Yucca Valley Fire Protection District and Reduction of the Sphere of Influence for the Central Valley Fire Protection District, Lake Arrowhead Fire Protection District, Forest Falls Fire Protection District and County Service Area 38), September 10, 2007, p. 15.

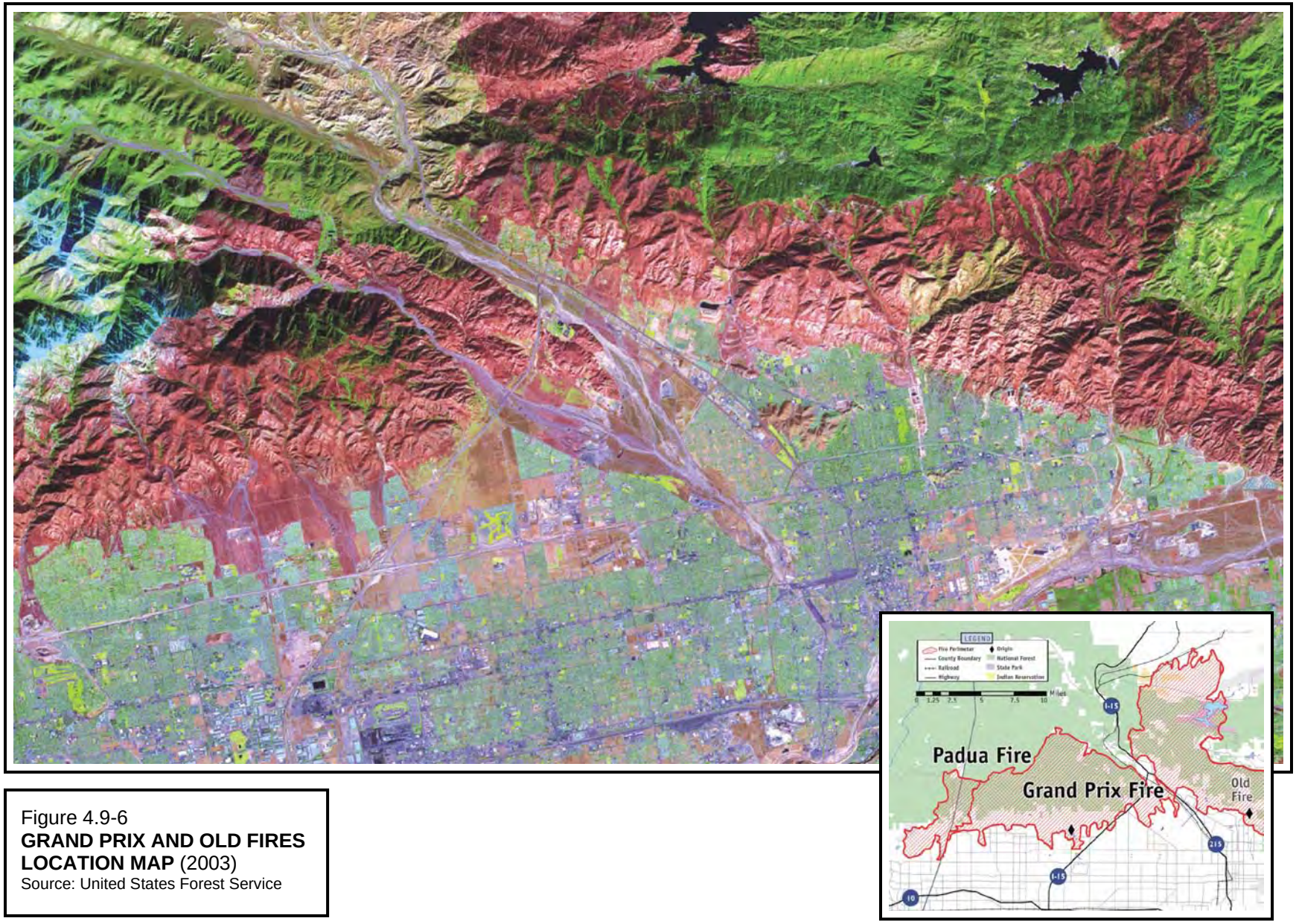

Figure 4.9-6
GRAND PRIX AND OLD FIRES LOCATION MAP (2003)
Source: United States Forest Service

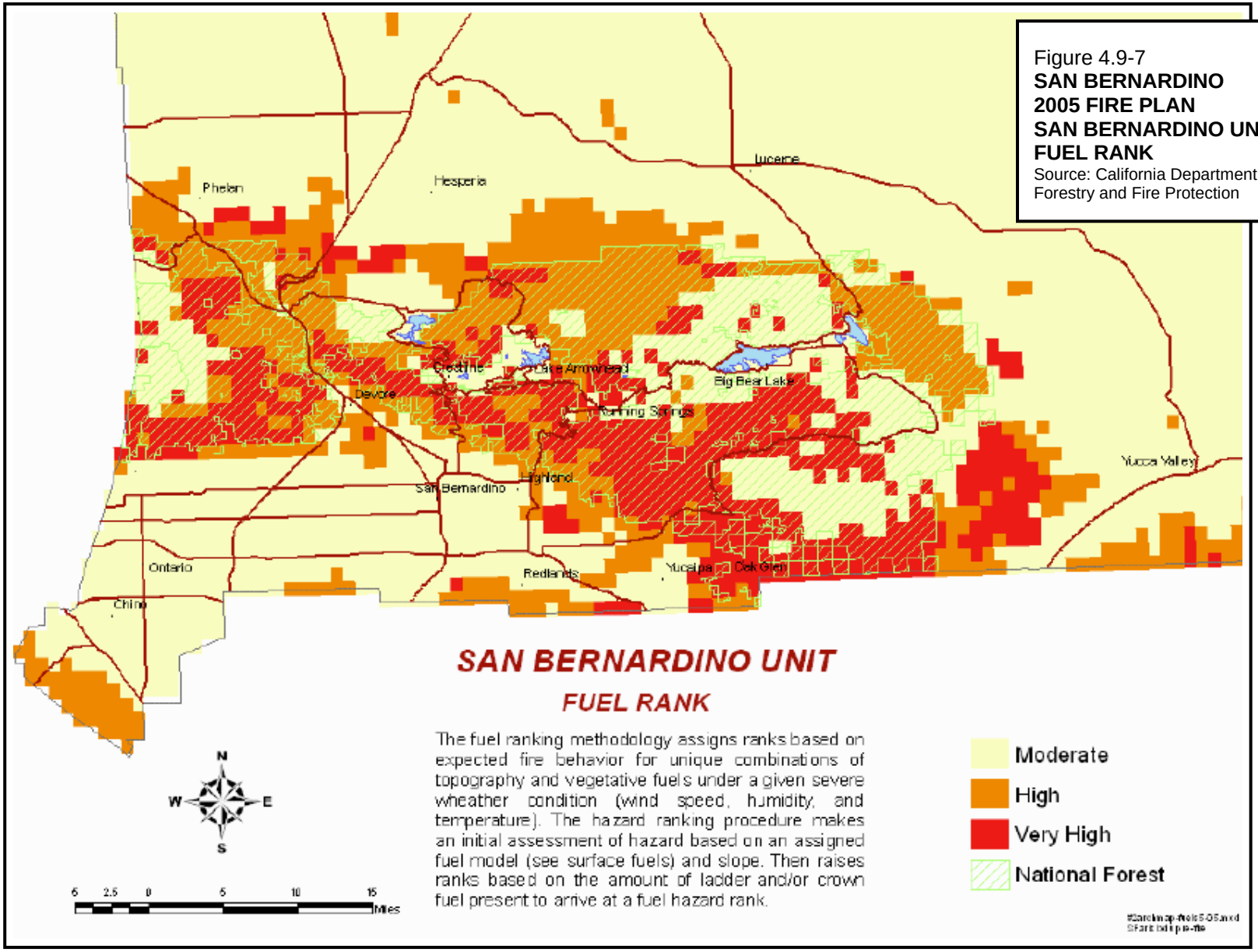

Figure 4.9-7
SAN BERNARDINO
2005 FIRE PLAN
SAN BERNARDINO UNIT
FUEL RANK
Source: California Department of Forestry and Fire Protection

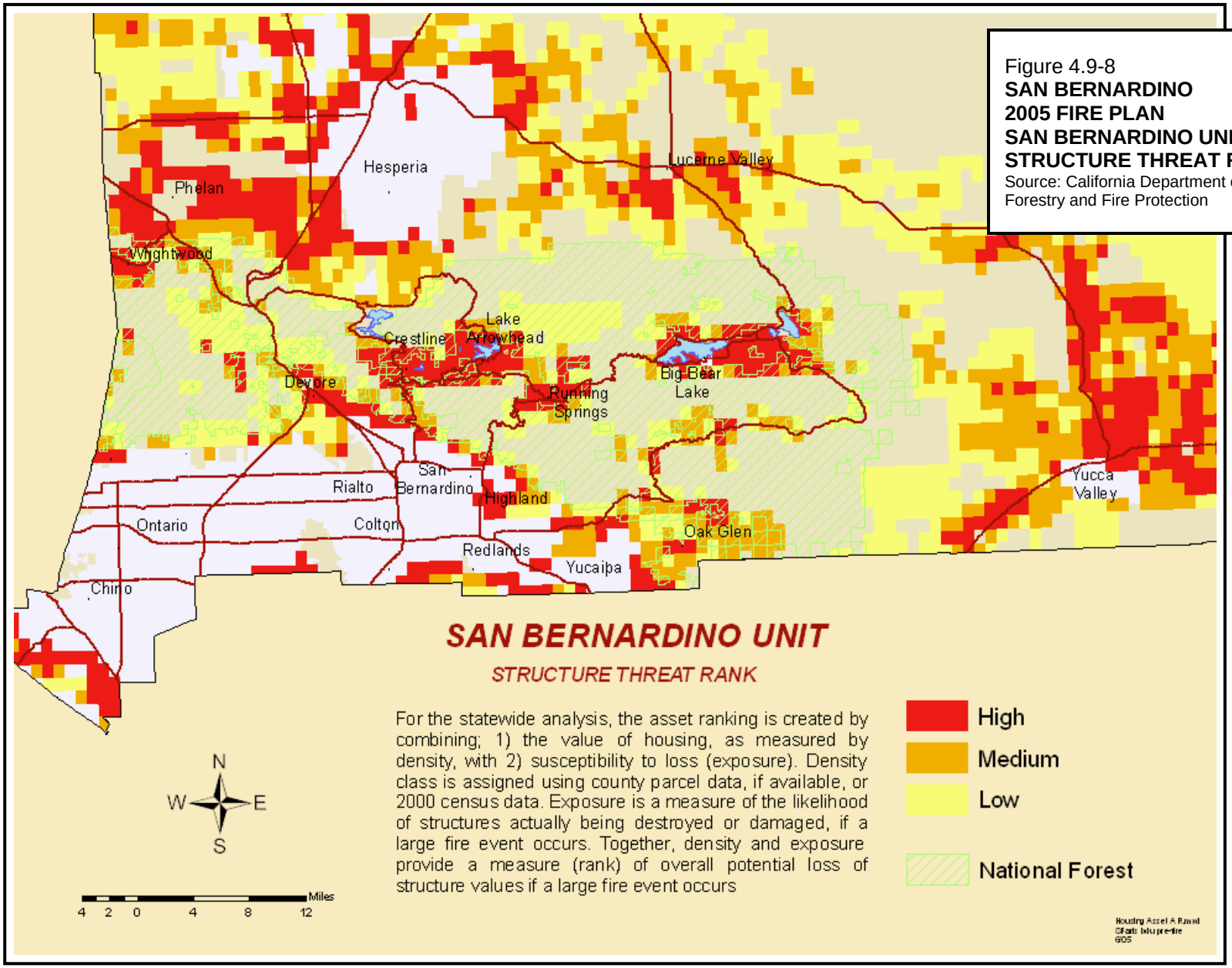

Figure 4.9-8
SAN BERNARDINO
2005 FIRE PLAN
SAN BERNARDINO UNIT
STRUCTURE THREAT RISK
Source: California Department of Forestry and Fire Protection

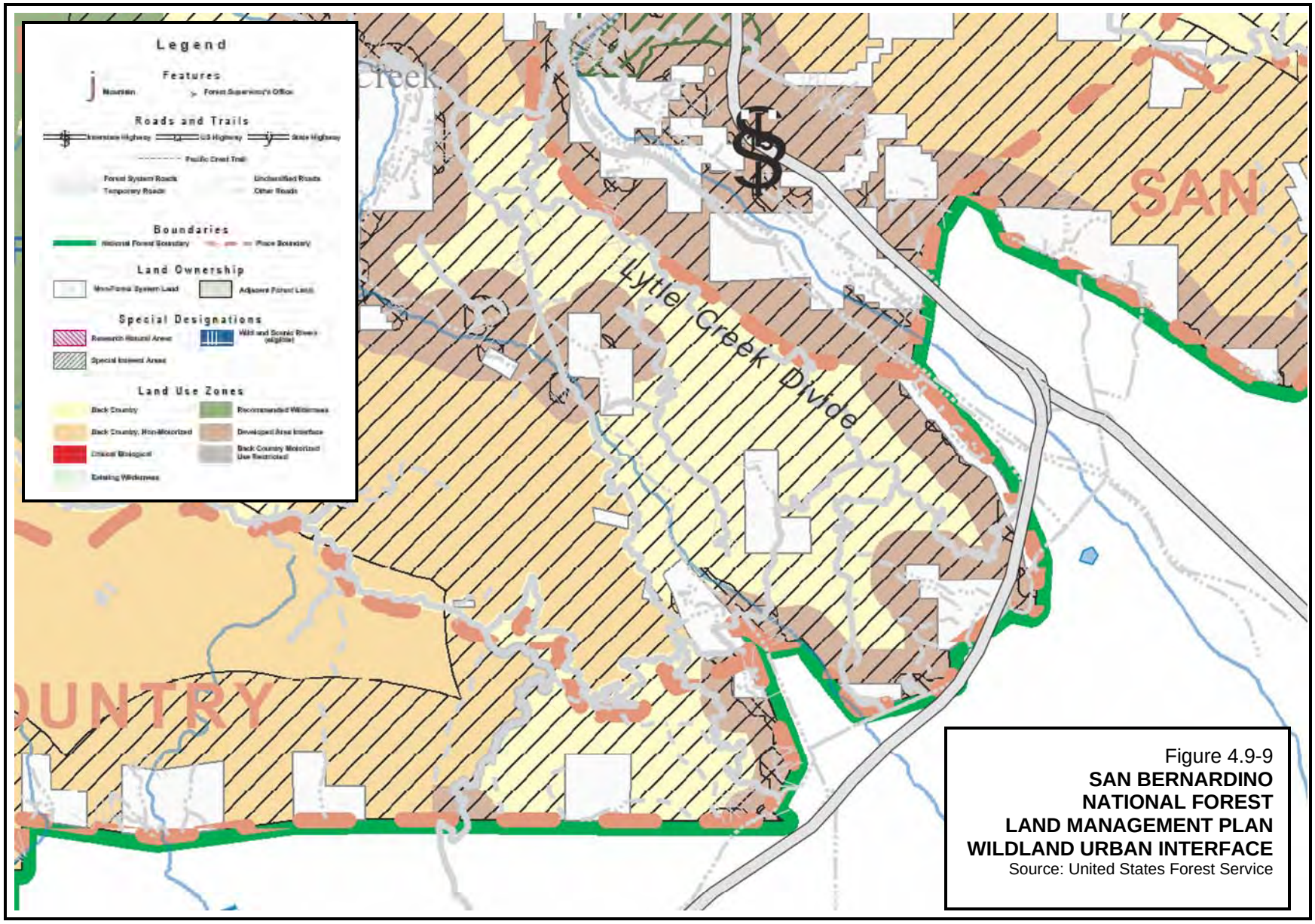

Figure 4.9-9
SAN BERNARDINO NATIONAL FOREST LAND MANAGEMENT PLAN WILDLAND URBAN INTERFACE
Source: United States Forest Service

Specific design, development, and procedural standards apply to projects proposed within designed fire safety zones, including, but not limited to, standards and provisions contained in California Building Code, Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) (Section 82.13.050).

Fire protection and paramedic services in unincorporated County areas are provided, in large part, by the SBCFD. The SBCFD is a full-service fire department serving the County and protecting an area covering over 16,000 square miles. The SBCFD provides both emergency and non-emergency[87] response, including fire suppression, emergency medical services (paramedic and non-paramedic), ambulance services, technical rescue (including water-borne, flooding, mudslide, and winter rescue operations).

In addition, the department provides responses to hazardous materials incidents with the technical expertise and specialized equipment to mitigate the effects of toxic incident and is the lead agency in the event of a terrorist or weapons of mass destruction incident for rescue and medical services. The department also provides community safety services for fire prevention, plan review, community development support, household hazardous waste, and fire investigation. Field functions are supported by a Countywide management effort, including business practices, human resources, financial services, vehicle services and support, and equipment warehousing and distribution.

The SBCFD provides services through 68 fire stations located throughout the SBCFD's Valley, Mountain, and Desert Divisions. The department currently manages and directs the activities of 27 district operations and five ambulance enterprise operations. These districts serve 64 unincorporated communities.[88]

The 244-square mile Valley Division consists of two battalions (North and South Valley) with 160 fire suppression personnel (1 division chief, 6 battalion chiefs, 33 captains, 27 engineers, 41 firefighters/paramedics, 10 firefighters, 9 limited-term staff, 48 paid-call firefighters, and 4 civilians) assigned to 13 fire stations. The division has contiguous boundaries with the communities of San Bernardino, Colton, Rialto, Rancho Cucamonga and Ontario and shares its southern boundary with Riverside County.[89] The Valley Division supports a population of 155,850 individuals (2005)[90] Apparatus includes 24 fire engines, 3 ladder trucks, 7 brush engines, 4 brush patrols, 5 squads, 4 water tenders, 10 utility vehicles, 21 support trailers, 7 hazardous material vehicles, 2 rescues, 1 airport rescue vehicle, and 19 miscellaneous vehicles.[91] A summary of emergency calls for 2005 and 2006 is presented in Table 4.9-4 (San Bernardino County Consolidated Fire District - Valley Division Emergency Calls [2005-2006]).

Existing County fire stations serving the general project area are identified in Table 4.9-5 (Existing Fire Department Facilities within the General Project Area). In addition, the SBCFD currently has eight fire stations funded and under construction or pending funding and approval, as well as two new fire stations in the development stage (Hunters

[87]/ "Emergency" situations are defined as those in which there is an imminent threat to life and property; "non-emergency" situations include public assistance calls where no injury is reported.
[88]/ County of San Bernardino, San Bernardino County Annual Report – 2008-2009 Business Plan, 2008, p. 214.
[89]/ San Bernardino County Fire Department (http://www.sbcfire.org/fire_rescue/valley1.asp).
[90]/ County of San Bernardino. Safety Background Report, June 15, 2005, p. 7-152.
[91]/ San Bernardino County Fire Department (http://www.sbcfire.org/fire_rescue/valley3.asp).

Ridge Station 80 and Central Valley Station 81).[92] Central Valley Station 81 is planned as part of the adjacent LCNPD (Rosena Ranch), must be constructed prior to occupancy of the 1,000th dwelling unit in Rosena Ranch, and will be operated by the SBCFD.

Table 4.9-4
SAN BERNARDINO COUNTY CONSOLIDATED FIRE DISTRICT VALLEY DIVISION EMERGENCY CALLS (2005-2006)

Year	Structural Fires	Brush/Veg Fires	Other Fires	Rescues	Medical Calls	Traffic Accidents	Other Incidents	Total Calls
2005	200	188	699	62	11,590	1,812	5,601	20,152
2006	139	179	671	65	10,999	1,726	5,672	19,442
Change	-30.5%	-4.8%	-4.0%	4.8%	5.1%	-4.7%	1.3%	-3.5%

Source: San Bernardino County Consolidated Fire District

As proposed, future SBCFD Station 81 will be built on Glen Helen Parkway, adjacent to USFS Station 32.[93] Station 81 will include a Type I engine and is described as follows: "The Fire Station will be constructed with a two bay wide drive-through design, intended to house a Paramedic Engine, and co-locating two 10'x10' offices for the San Bernardino County Sheriff's Department. The site will be approximately 1½ acres. The structure will be approximately 6,000 square feet, include the equipment noted below, and be capable of housing a maximum six personnel. The Fire Station will include an approved helipad of concrete capable of receiving air rescue, air ambulance, and fire fighting helicopters with the ability to fill incoming fire fighting helicopters with water."[94]

Future SBCFD Station 81 will be located in "Lot 2" of the LCNPD (Tract 15900), as illustrated in Figure 4.1-13 (Lytle Creek North Planned Development Master Plan). The obligation for the construction of SBCFD Station 81 resides with the subsequent holder of real property interests to the LCNPD (Rosena Ranch) and not the Applicant. Figure 2-6 (Lytle Creek Ranch Specific Plan – Land-Use Plan) does not include reference to a "future fire station" site (assumed to be located about 650 feet east of Lower Lytle Creek Ridge Road[95]). The LCRSP does, however, include "fire stations" and "police stations and substation" as permitted uses in all land-use districts except "Open Space (OS)."

The standard that is used by the SBCFD to assess the adequacy of response times to an emergency service call requires that, for 90 percent of all incidents, the first-response unit (defined as one engine and three personnel) arrive at the scene within four minutes of the initial call. In "moderate to high risk areas," an initial effective response force shall arrive within ten minutes, 90 percent of the time, and be able to provide a minimum of 1,500 gallons per minute (gpm) of water for firefighting or be able to handle a five-patient emergency incident. In order to deliver 1,500 gpm, a two-alarm response would be needed for six or more engine companies. All engine companies would be required to

[92]/ County of San Bernardino, Circulation and Infrastructure Background Report, February 2006. p. 2-301.
[93]/ County of San Bernardino, Lytle Creek Community Plan, adopted March 13, 2007, p. 49.
[94]/ County of San Bernardino, Special Districts Department, Report/Recommendation to the Board of Supervisors of San Bernardino County, California and Record of Action, Subject: Approve Fair-Share Contribution Agreement(s) between Lytle Development Company and County Service Area 70, Improvement Zone GH (Glen Helen) and the San Bernardino County Consolidated Fie District for the Lytle Creek North Planned Development Project, April 19, 2005, Appendix D.
[95]/ *Op. Cit*., Fire Agencies Emergency Response Study for the Lytle Creek Ranch Development, Rialto, California, p. 6.

arrive on the scene within ten minutes. This equates to 18 firefighters and six engine companies and one incident commander.[96]

- **Fontana Fire Protection District**. On July 26, 2005, the San Bernardino County Board of Supervisors (Board) submitted an application (LAFCO 3000[97]) to the San Bernardino Local Agency Formation Commission (LAFCO) to reorganize the existing Board-governed fire districts and agencies into a single management entity (San Bernardino County Fire Protection District).

  This reorganization proposal encompassed the annexation of approximately 18,361 square miles of land not a part of an independent fire entity, consisting of unincorporated areas throughout the County and the Cities of Fontana and Grand Terrace which where then overlain by Board-governed fire agencies. The proposal also encompassed the dissolution of the Central Valley Fire Protection District (CVFPD), Forest Falls Fire Protection District, Lake Arrowhead Fire Protection District, CSA-38, and CSA-70 Improvement Zones FP-1, FP-5, and PM-1 (not including CSA-70 GH). LAFCO 3000 further involved the removal of fire protection, ambulance, and disaster preparedness powers from County service areas and their improvement zones and transfer of that authority to the new fire district.[98]

  On January 16, 2008, LAFCO adopted Resolution No. 2989[99] modifying the County's proposal to include an alternative application (LAFCO 3000A) submitted by the City of Fontana. That action included, in part, the detachment of ten separate areas from the CVFPD and the annexation of the detached areas to the Yucca Valley Fire Protection District, renaming the remaining area of the CVFPD the FFPD and establishing that district as a subsidiary district of the City of Fontana. Fire stations located in the general project area that became a part of the FFPD included, but were not limited to, Stations 78 and 79. Station 78 (7110 Citrus Avenue, Fontana) houses an engine company and is staffed by three captains, three engineers, three firefighters, and three firefighter/ paramedics all of whom are full-time professional firefighters. Station 79 (5075 Coyote Canyon Road, Fontana) houses a medic engine, which can respond to both medical and fire emergencies, and is staffed by three captains, three engineers, three firefighters, and three firefighter/paramedics all of whom are full-time professional firefighters. A captain, an engineer, a firefighter and a firefighter/paramedic are on duty at all times.

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[96]/ Steve Anderson, Senior Fire Protection Planner, San Bernardino County Fire Department, letter dated May 23, 1999.

[97]/ A companion reorganization proposal (LAFCO 3001) was submitted to expand the existing sphere of the Yucca Valley Fire Protection District by about 18,353 square miles to encompass the whole of the County, excluding existing independent (cities and districts) fire providers. The City of Fontana also submitted an alternative reorganization proposal (LAFCO 3000A) to detach a portion of the Central Valley Fire Protection District and establish a residual district totaling about 52.4 square miles as a Subsidiary District of the City of Fontana (Fontana Fire Protection District).

[98]/ Local Agency Formation Commission (Tom Dodson & Associates), Initial Study for LAFCO 3000 – County Fire Reorganization; LAFCO 3001 – Sphere of Influence Review for Yucca Valley Fire Protection District Et Al.; and LAFCO 3000A – Reorganization to Include Detachment from the Central Valley Fire Protection District, Establishment of the Central Valley Fire Protection District as a Subsidiary District of the City of Fontana and Renamed the Fontana Fire Protection District (City of Fontana Alternative), July 2007.

[99]/ A Resolution of the Local Agency Formation Commission of the County of San Bernardino Making Determination on LAFCO 3000; Approving the "County Fire Reorganization," as Modified.

Table 4.9-5
EXISTING FIRE DEPARTMENT FACILITIES WITHIN THE GENERAL PROJECT AREA

Existing Fire Station	Assigned Equipment[2]	Assigned Personnel[2,3]	Estimated Response Time[1]							
			Neighborhood I		Neighborhood II		Neighborhood III		Neighborhood IV	
			Distance (miles)	Response Time (minutes)	Distance (miles)	Response Time (minutes)	Distance (miles)	Response Time (minutes)	Distance (miles)	Response Time (minutes)
City of Rialto										
Fire Station 201 (Headquarters) 131 South Willow Avenue Rialto, California	Type 1 Engines – 1 Ambulance – 3 (1 in reserve) Specialized Units - 1	10 full time	9.8	17.31	4.13	7.67	7.6	13.57	8.9	15.78
Fire Station 202 1550 North Riverside Avenue Rialto, California	Type 1 Engines – 1 Ambulance – 2 (1 in reserve)	5 full time	7.5	13.40	1.81	3.73	5.3	9.61	6.6	11.87
Fire Station 203 1550 West Ayala Rialto, California	Type 1 Engine – 1 Water Tender – 1 Specialized Units – 2 Battalion Command Vehicle	4 full time	7.0	12.55	2.12	4.25	4.7	8.64	6.0	10.85
Fire Station 204 3288 North Alder Avenue Rialto, California	Type 1 Engines – 1 (1 in reserve) Water Tender -1 Specialized Units - 2	3 full time	4.2	7.79	3.3	6.26	1.9	3.88	3.2	6.09

Table 4.9-5 (Continued)
EXISTING FIRE DEPARTMENT FACILITIES WITHIN THE GENERAL PROJECT AREA

Existing Fire Station	Assigned Equipment[2]	Assigned Personnel[2,3]	Estimated Response Time[4]
San Bernardino County			
Devore Fire Station No. 2 1511 Devore Avenue Devore, California	Type 1 Engine – 1 Type 3 Brush Engine – 1 Type 4 Brush Patrol - 1	3 full time	4 minutes
Muscoy Fire Station No. 75 2156 Darby Street Muscoy, California	Type 1 Engine – 1	3 full time	10 minutes
Fontana Fire Protection District			
Citrus Fire Station No. 78 7110 Citrus Avenue Fontana, California	Type 1 Engine – 1	4 full time	10 minutes
Station No. 79 5075 Coyote Canyon Road Fontana, California	Type 3 Brush Engine – 1 Water Tender – 1	3 full time	10 minutes
CALFIRE			
Devore Station[5] 18365 Cajon Boulevard Devore, California	Type 1 Engine – 1 Rescue Squad - 1	3 full time	8 minutes
United States Forest Service			
Sycamore Station No. 32[6] 17280 Glen Helen Parkway San Bernardino, California	Type 1 Engine - 1	5 full time	5 minutes

Notes:
1. Taking into account the average speed and the time required for an apparatus to accelerate from a stop to the travel speed, the RAND Corporation developed the following equate for calculating the travel time: $T = 0.65 + 1.7D$, where T = time in minutes to the nearest 1/10 of a minute, 0.65 = a vehicle-acceleration constant for the first 0.5 miles traveled, 1.7 = a vehicle-speed constant for response distances ranging from 0.5 miles to 0.8 miles, and D = distance.
2. Fire apparatus and personnel subject to change.
3. Denotes the number of persons on-duty in each shift.
4. Because of the size of the proposed project, estimated distances and response times will vary based on the specific location of the incident. Approximate distances and response times presented herein are to the furthest portion of the project site.
5. Seasonal fire station, operated during the months of June through November only.
6. Minimally staffed by the Forest Service year-round, with higher level of staffing only during fire season.

Source: City of Rialto Fire Department, San Bernardino County Consolidated Fire District, California Department of Forestry and Fire Protection, and United States Forest Service

- **City of Rialto Fire Department**. Within incorporated City areas, fire protection and emergency response services are provided by the RFD and operating in accordance with Chapter 2.34 (Fire Department) in Title 2 (Administration and Personnel) of the City Municipal Code. The RFD is a full-service urban fire department providing first-responder emergency services to manage threats to the public's safety related to fires, medical emergencies, rescues, hazardous materials, natural disasters, and civil disorders. The RFD provides fire prevention, fire cause and origin fire investigation, public education, public relations, and other emergency management consultation services, including paramedic ambulance transport.[100]

  As indicated in Table 4.9-5 (Existing Fire Department Facilities within the General Project Area), the RFD currently operates four fire stations (Stations 201, 202, 203, and 204). Station 202 (1925 S. Riverside Avenue, Rialto), the most proximal station to Neighborhoods II and III, has one engine and two paramedic ambulances (one is reserve).[101] Only the fire engine and one of the ambulances are staffed. The fire station provides wildland and structural fire protection and responds to 911 medical aid calls, traffic accidents, and hazardous materials. Station 204 (3288 N. Alder, Rialto) would provide protection to Neighborhoods I and IV. Station 204 has two fire engines (one is reserve), one water tender, and two specialized units. Only the fire engine is staffed.

  The RFD's annual operating budget has stayed relatively consistent. During FY 2006/ 2007, the RFD's annual budget was about $14.6 million, during FY 2008/2009 its budget was about $14.5 million, and in FY 2009/2010 its projected budget is $14.4 million.[102]

Public Schools

As illustrated in Figure 4.9-10 (Existing School District Boundaries),[103] the project site is located within the jurisdiction of three different school districts. The southern portion of the project site is located within the Rialto Unified School District (RUSD). The northwestern portion of the project site is located within the Fontana Unified School District (FUSD). The north and northeastern portions of the project site is located within the San Bernardino City Unified School District (SBCUSD).[104] Each of those school districts is separately discussed below.

- **Rialto Unified School District**. As illustrated in Figure 4.9-11 (Rialto Unified School District Facilities), the RUSD currently (2008) operates 17 elementary schools (Grades K-6), 5 middle schools (Grades 7-8), and five high schools (Grades 9-12). Since 2000, the average annual increase in student enrollment has been 0.4 percent.[105] Within the

[100]/ *Op. Cit*., City of Rialto Fiscal Year 2007/2008 – 2nd Year of Two Year Budget, p. 42.

[101]/ The City has allocated $5 million from the 2008 Tax Allocation Bond issue to replace Fire Station 202. The new station will be constructed to the west of its existing location. The existing fire station is obsolete and does not meet current facility standards (Source: Rialto Redevelopment Agency, Economic Development, Rialto, California, January 2008, p. 3).

[102]/ *Op. Cit*., City of Rialto Two Year Budget, Fiscal Years 2008/2000 & 2009/2010, 2008, p. 51.

[103]/ Rialto Unified School District, Annex - San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan, undated, p. 9.

[104]/ A student is required to attend classes at schools located within the boundaries of the school district in which the pupil's parent or legal guardian resides, unless otherwise exempted (Section 48200 *et seq*., CEC). However, Section 35160.5 (c) of the CEC requires the school board of each district to establish a policy that allows parents or guardians to choose the schools their children will attend, regardless of whether the parent or guardian resides in that district.

[105]/ School Planning Services, Inc., School Facilities Needs Analysis - Rialto Unified School District, April 2007.

RUSD, there are currently an estimated 29,259 students enrolled in Grades K-12, including 15,967 students in Grades K-6, 4,637 students in Grades 7-8, and 8,666 students in Grades 9-12. When enrollment is compared to the design capacity for all RUSD-operated schools, aggregated by grade level, an estimated capacity shortfall of about 6,132 seats has been identified for all levels. Each of these capacity estimates are summarized in Table 4.9-6 (Rialto Unified School District Capacities and Enrollment).

Table 4.9-6
RIALTO UNIFIED SCHOOL DISTRICT - CAPACITIES AND ENROLLMENT

School (Grade Level)	**Permanent Facility Capacities** (2006-2007)	**Enrollment** (2006-2007)	**Remaining Capacity or Shortfall** (2006-2007)
Elementary (K-6)	11,312	15,967	-4,644
Middle School (7-8)	3,632	4,637	-1,005
High School (9-12)	8,183	8,666	-483
Total	23,127	29,259	-6,132

Source: Rialto Unified School District

Based on RUSD standards and DOE guidelines for school size, the existing enrollment in excess of permanent facility capacity can be converted into a specified number of "equivalent schools." In the absence of other strategies, a need for approximately 6.20 new elementary schools, 0.80 middle schools, and 0.20 high schools can be calculated.

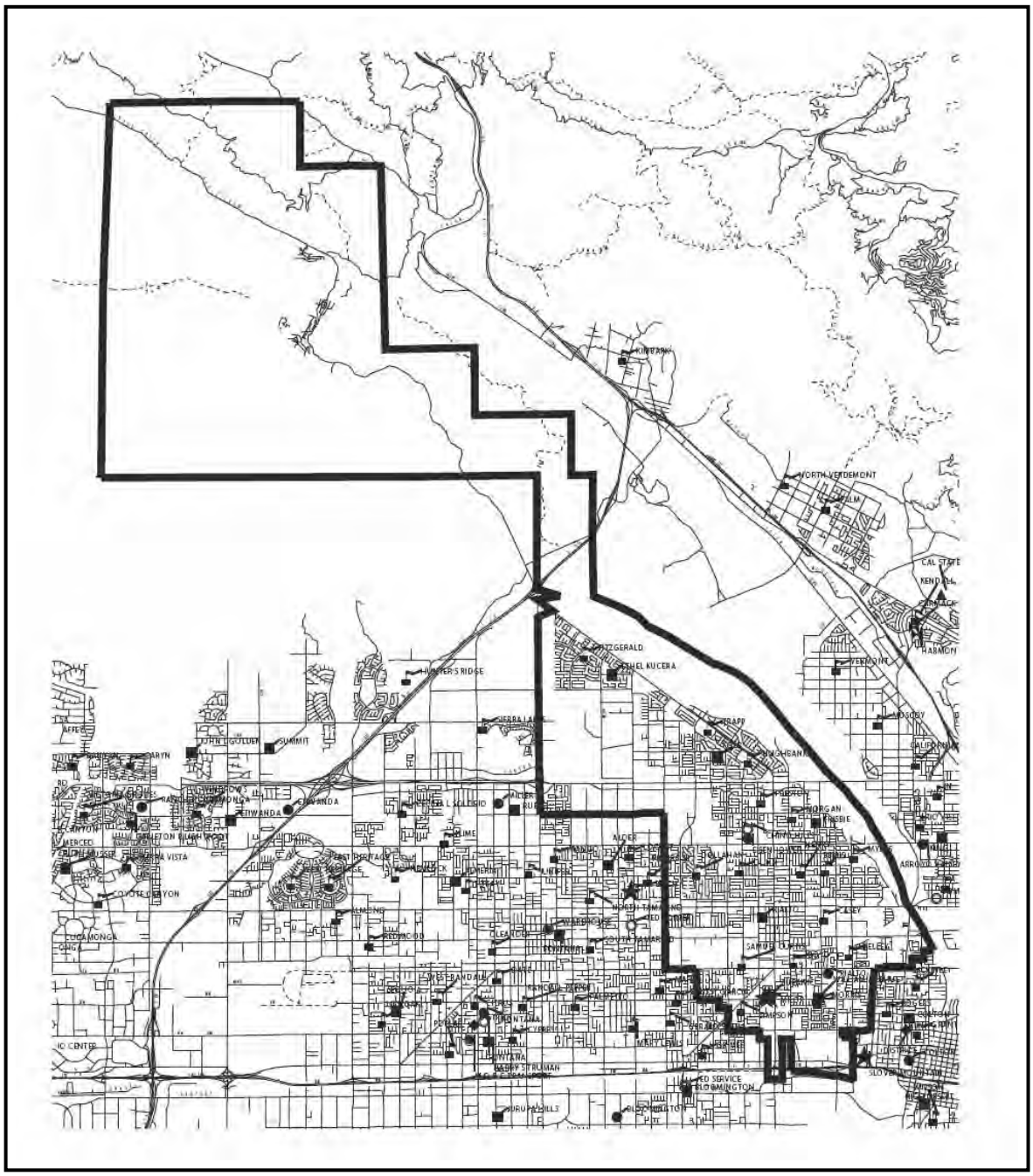
- **Fontana Unified School District**. The FUSD currently (2008) operates 29 elementary schools (Grades K-6), 8 middle schools (Grades 7-8), 4 high schools (Grades 9-12), and 4 alternative schools. Since 2000, the average annual increase in student enrollment within this district has been 2.7 percent.[106] Within the FUSD, there are currently an estimated 42,099 students enrolled in Grades K-12, including 22,930 students in Grades K-6, 6,659 students in Grades 7-8, and 12,510 students enrolled in Grades 9-12. When enrollment is compared to the design capacity for all schools, aggregated by grade level, an estimated capacity shortfall of approximately 8,467 seats has been identified for all levels combined. Each of these capacity estimates are summarized in Table 4.9-7 (Fontana Unified School District Capacities and Enrollment).

Table 4.9-7
FONTANA UNIFIED SCHOOL DISTRICT CAPACITIES AND ENROLLMENT

School (Grade Level)	**Permanent Facility Capacities** (2006-2007)	**Enrollment** (2006-2007)	**Remaining Capacity or Shortfall** (2006-2007)
Elementary (K-6)	18,564	22,930	-4,366
Middle School (7-8)	6,167	6,659	-492
High School (9-12)	8,901	12,510	-3,609
Total	33,632	42,099	-8,467

Source: Fontana Unified School District

[106]/ School Planning Services, Inc., School Facilities Needs Analysis - Fontana Unified School District, March 2007.



San Bernardino County Superintendent of Schools

Rialto Unified

School District

Updated: June 2002
2000 Population = 110883
Square Miles = 57

- Elementary Schools
- Junior High/Middle Schools
- Senior High Schools
- Colleges
- Continuation High Schools
- Specialized Learning Schools
- District Offices
- District Facilities
- Other Facilities

Figure 4.9-10 (1 of 3)
EXISTING SCHOOL DISTRICT BOUNDARIES – RIALTO UNIFIED SCHOOL DISTRICT
Source: San Bernardino County Superintendant of Schools

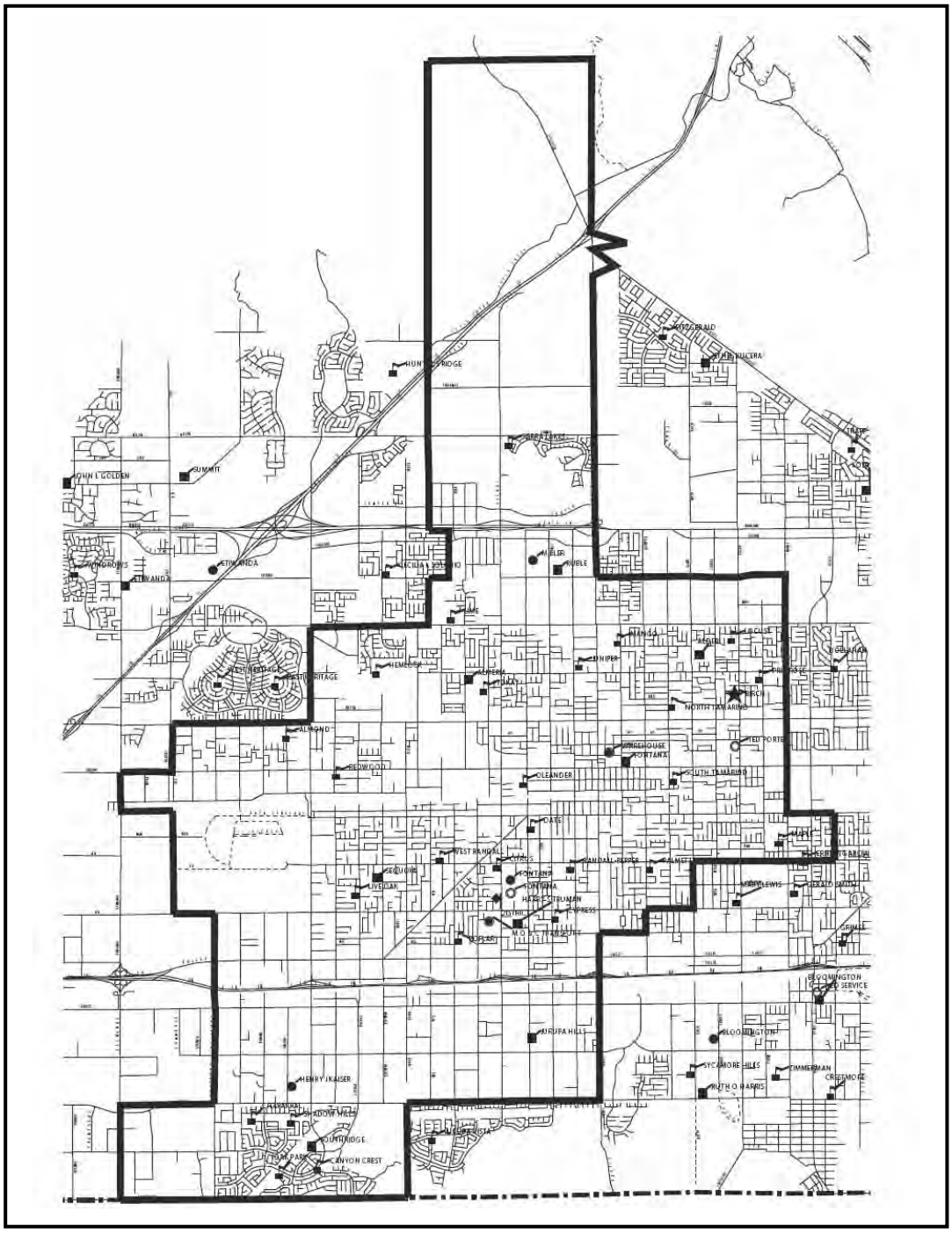
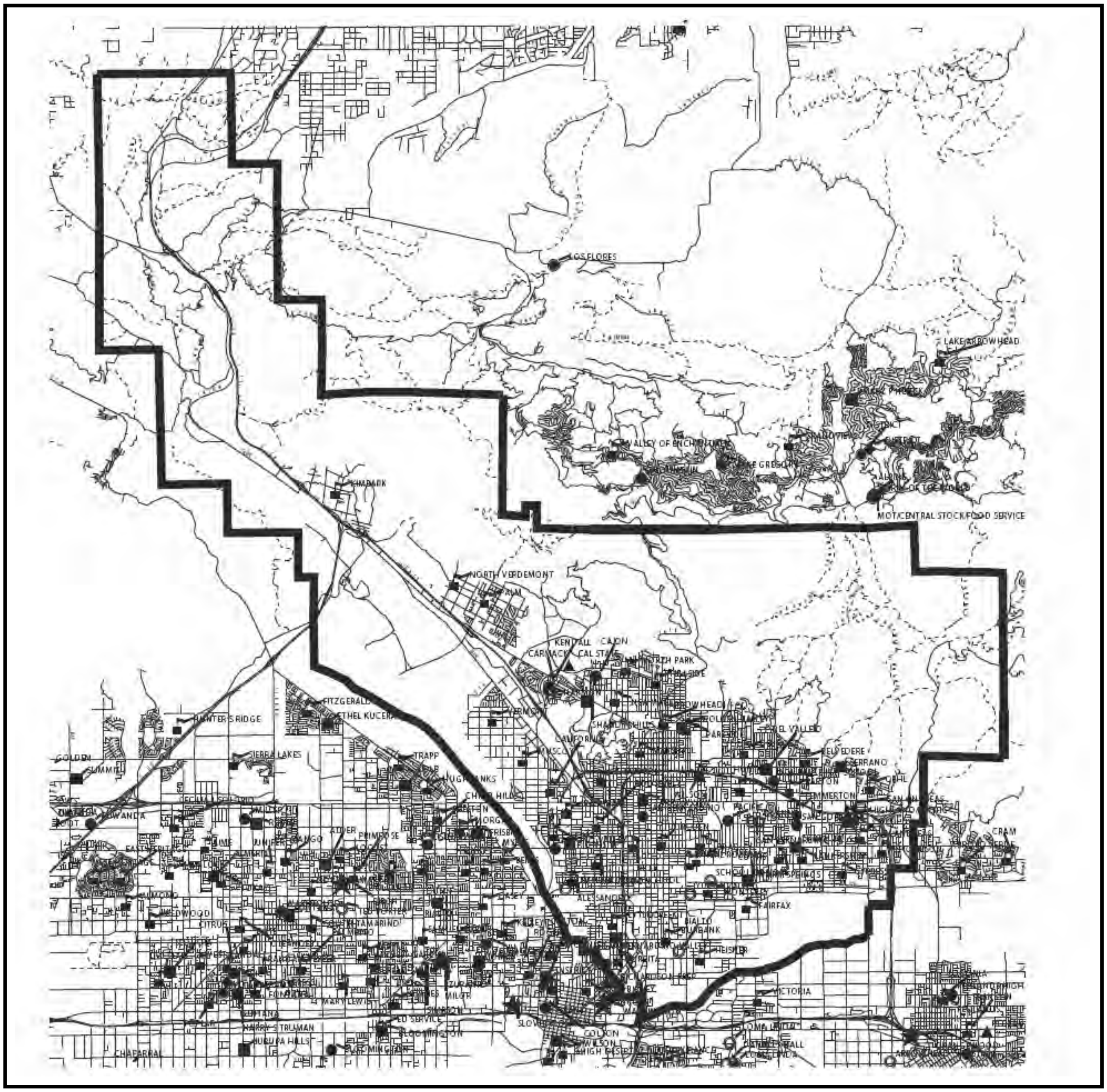


Figure 4.9-10 (2 of 3)
EXISTING SCHOOL DISTRICT BOUNDARIES – FONTANA UNIFIED SCHOOL DISTRICT
Source: San Bernardino County Superintendant of Schools



San Bernardino County Superintendent of Schools

San Bernardino City Unified

School District

Updated: June 2002
2000 Population = 223843
Square Miles = 160

- Elementary Schools
- Junior High/Middle Schools
- Senior High Schools
- Colleges
- Continuation High Schools
- Specialized Learning Schools
- District Offices
- District Facilities
- Other Facilities

Figure 4.9-10 (3 of 3)
EXISTING SCHOOL DISTRICT BOUNDARIES – SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT
Source: San Bernardino County Superintendant of Schools

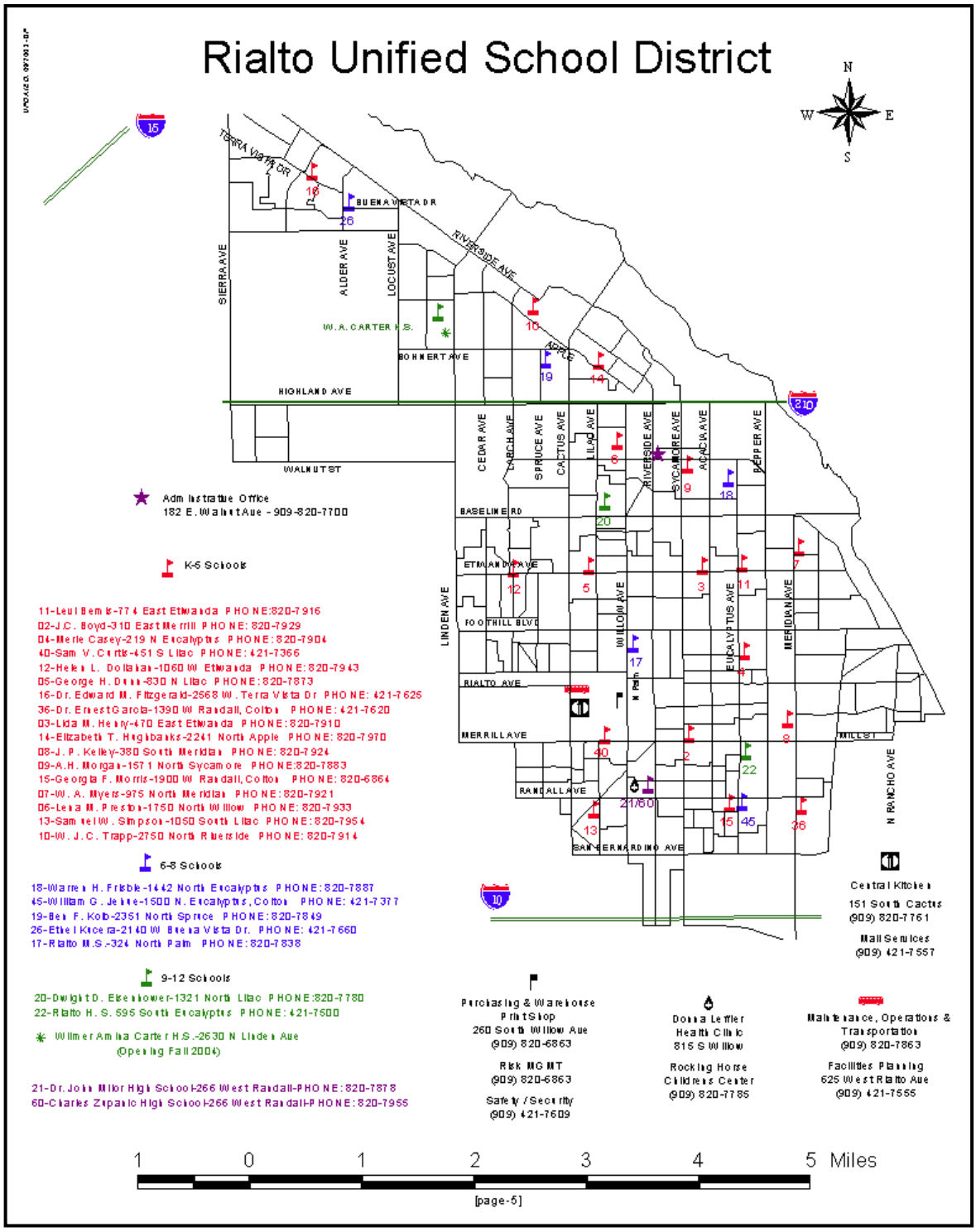


Figure 4.9-11
RIALTO UNIFIED SCHOOL DISTRICT FACILITIES
Source: Rialto Unified School District

Based on FUSD standards and DOE guidelines for school size, the existing enrollment in excess of permanent facility capacity can be converted into a specified number of "equivalent schools." In the absence of other strategies, a need for approximately 5.82 new elementary schools, 0.41 middle schools, and 1.20 high schools can be calculated.

- **San Bernardino City Unified School District**. The SCCUSD currently (2008) operates 46 elementary, 10 middle, and 9 high schools. Total student enrollment is 56,634 students, including 32,112 students in Grades K-6, 9,115 students in Grades 7-8, and 15,407 students in Grades 9-12. Of these, the SBCUSD has identified 31,993 students (56.49 percent of all students) in grades K-12 on multi-track year-round education.[107] As depicted in Table 4.9-8 (San Bernardino City Unified School District Capacities and Enrollment), total enrollment generally equates with total facility capacity. As shown, the student enrollment of the School District exceeds facilities capacity in school year 2006-07 at all school levels. As indicated therein, the number of students attending SBCUSD facilities exceeds the permanent capacity of those facilities, suggesting either the need for new schools or other strategies to increase facility capacity.

Table 4.9-8
SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT CAPACITIES AND ENROLLMENT

School (Grade Level)	**Permanent Facility Capacities** (2006-2007)	**Enrollment** (2006-2007)	**Remaining Capacity or Shortfall** (2006-2007)
Elementary (K-6)	31,758	32,112	-354
Middle School (7-8)	7,642	9,115	-1,473
High School (9-12)	13,117	15,407	-2,294
Total	52,513	56,634	-4,121

Source: San Bernardino City Unified School District

Based on SBCUSD standards and California Department of Education (DOE) guidelines for school size, the existing enrollment in excess of permanent facility capacity can be converted into a specified number of "equivalent schools." In the absence of other strategies, a need for approximately 0.47 new elementary schools, 1.22 middle schools, and 0.76 high schools can be calculated.[108]

Public Libraries

County libraries are organized under the County Free Library Law (Section 19100 *et seq*., CEC). The County Service Area Law allows for the creation of a separate legal entity for library services. Under the Municipal Library Law (Section 18900 *et seq*., CEC), a city council can create a city library system by adopting an ordinance. If 25 percent of the city's voters petition to create a city library, council members must establish a library system.[109]

[107]/ San Bernardino City Unified School District, School Facilities Needs Analysis, February 2007.
[108]/ School standard size is set at 750 pupils for Grades K-6, 1,200 pupils for Grades 7-8, and 3,000 pupils for Grades 9-12.
[109]/ A city cannot withdraw from a county library system to form its own municipal library before giving notice to the county board of supervisors, negotiating a division of property tax revenues, and publishing notice of its intent to withdraw.

County library systems are divided into two separate categories for purposes of local operating funds: county general fund libraries (rely primarily on allocations from the county general fund) and county dedicated property tax libraries (impose a separate property tax). Because a substantial portion of their revenues are guaranteed, county dedicated property tax libraries enjoy a greater degree of financial independence and certainty.[110]

The City is served by the San Bernardino County Public Library (SBCPL), created by the County Board of Supervisors on July 14, 1913, is a county dedicated property tax library. A tax rate of $0.015 per $100 of assessed valuation was established at that time. The County Library receives 85 percent of its funding from property taxes. [111] The SBCPL system currently serves approximately 1.1 million people in 18 cities and County's unincorporated areas through the 29 facilities and two bookmobiles, including 28 branch libraries. These branch facilities have a combined 177,925 square feet of library space, providing one library for every 714 square miles and 0.21 square feet per person residing in a library's service area.[112]

The "San Bernardino County Library Facility Master Plan" presents the library's need for new facilities over the next 20 years. The master plan establishes three levels of facilities priorities, encompassing renovation, expansion, and replacement of the County's 29 permanent facilities. The master plan serves as an analytical tool for the library's applications for funding from the Library Bond Act of 2000 (Proposition 14). As proposed, the plan will result in a total of 666,556 square feet of space (0.36 square feet per capita) for an approximate service area population of 1,866,146 individuals.[113] A new 93,000 square foot County library in the City of Fontana (Lewis Library and Technology Center) is under construction and expected to open in 2008.[114]

Public Recreational Facilities

With regards to recreational opportunities within the SBNF, that portion of the National Forest located in proximity to the project site is illustrated in Figure 4.9-12 (Recreational Facilities in a Portion of the San Bernardino National Forest). The SBNF offers forest users a diversity of recreational opportunities, including camping, picnicking, hiking, backpacking, mountain biking, wildlife observation, and off-highway vehicle (OHV) use. One popular hiking destination is the Cucamonga Wilderness. The main trail in the Cucamonga Wilderness is the Middle Fork of Lytle Creek Trail, which is accessed from the I-15 Freeway, via Sierra Avenue.

During FY 2003, about 1.95 million recreational visits to the SBNF occurred. With regards to visitors that live within one hour or less from the National Forest, visits are often spontaneous and short term. Visits by visitors that live within three hours of the SBNF are sometimes spontaneous but more often occur for a specific planned event or activity (including hiking, camping, or automobile touring) and are day-long and/or weekend. A forest community is often the focus of the visit.[115] As noted by the Forest Service: "High use areas are in close proximity to the urban communities but provide a convenient setting for recreation to many people. The variety and quality of diverse recreation in undeveloped recreation areas are the main qualities.

[110]/ California State Library, California Public Library Organization, September 2007.
[111]/ San Bernardino County Library (Providence Associates, Inc.), San Bernardino County Library Facility Master Plan, December 2001, p. 16.
[112]/ *Op. Cit*., Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038, p. IV-129.
[113]/ *Op. Cit*, Circulation and Infrastructure Background Report. February 2006.
[114]/ San Bernardino County Library (http://www.sbcounty.gov/library/home).
[115]/ United States Forest Service, San Bernardino National Forest, Recreation Facility Analysis, 5-Year Proposed Program for Work and Programmatic Effects of Implementation, September 2007, p. 4.

Lytle Creek, the water body, is the main backbone of Lytle Creek Place. The creek is the setting for high intensive family water based usage while the steeply sloping sides of the surrounding canyon walls are the setting for forested wilderness. The native surface roads to the chaparral covered hillsides provide opportunities for natural resource activities and for exploring on rugged roads with licensed rough terrain capable vehicles."[116]

Management of recreation activities in the SBNF is achieved by the incorporation of "Recreation Opportunity Spectrum" (ROS) into the Forest Plan.[117] Table 4.9-9 (Description of Recreational Opportunity Spectrum Classes) describes the two ROS classes that occur within the SBNF in direct proximity to the project, as illustrated in Figure 4.9-13 (San Bernardino National Forest Recreational Opportunity Spectrum).[118]

Table 4.9-9
DESCRIPTION OF RECREATIONAL OPPORTUNITY SPECTRUM CLASSES

ROS Class	Development Scale	Level of Site Modifications
Roaded Natural (RN)	3	Site modification moderate. Facilities about equal for protection of natural site and comfort of users. Contemporary/rustic design of improvements is usually based on use of native materials. Inconspicuous vehicular traffic controls usually provided. Roads may be hard surfaced and trails formalized. Development density about 3 family units per acre. Primary access may be over high standard roads. Interpretive services informal, but generally direct.
Rural (R)	4	Site heavily modified. Some facilities designed strictly for comfort and convenience of users. Luxury facilities not provided. Facility design may incorporate synthetic materials. Extensive use of artificial surfacing of roads and trails. Vehicular traffic control usually obvious. Primary access usually over paved roads. Development density 3-5 family units per acre. Plant materials usually native. Interpretive services often formal or structured.

Source: United States Forest Service

With regards to recreational opportunities within the County, the project site is located in the County's Central Valley Park Planning District (District 2), encompassing that portion of the County south of the National Forest boundaries, north of Riverside County, and including the Cities of Colton, Grand Terrace, Fontana, Rialto, and San Bernardino and the community of Bloomington. As indicated in the County's "Regional Parks Department Strategic Master Plan, 2010: Our Parks Future," the following "perceived needs" were identified with regards to District 2: (1) trails for equestrian, hiking, and cycling with connections to National Forest land and south to the Santa Ana River; (2) an interpretive center at Glen Helen Regional Park; (3) volunteer ranger housing sites at Glen Helen Regional Park; (4) equestrian staging area at Glen Helen Regional Park to allow access to existing and future trails; and (5) a part on County Colton Landfill at Agua Mansa. The strategic master plan, however, "contains no specific projects."[119]

[116]/ San Bernardino National Forest, Recreation Facility Analysis: 5-Year Proposed Program of Work and Programmatic Effects of Implementation, September 2007, p. 4.

[117]/ The ROS is a framework for defining classes of outdoor recreation environments, activities, and experience opportunities within the National Forest. The opportunities are arranged along a continuum or spectrum divided into classes which define recreation opportunities within various areas of the forest.

[118]/ United States Department of Agriculture, Forest Service, Forest Service Manual 2300 (Recreation, Wilderness, and Related Resource Management), Chapter 2330 (Publicly Managed Recreation Opportunities), May 22, 2006, Exhibit 01.

[119]/ San Bernardino County Parks Department, Regional Parks Department Strategic Master Plan, 2010: Our Parks Future, adopted October 31, 1988, pp. 50 and 53 and Appendix 5, Negative Declaration, p. 5-4..

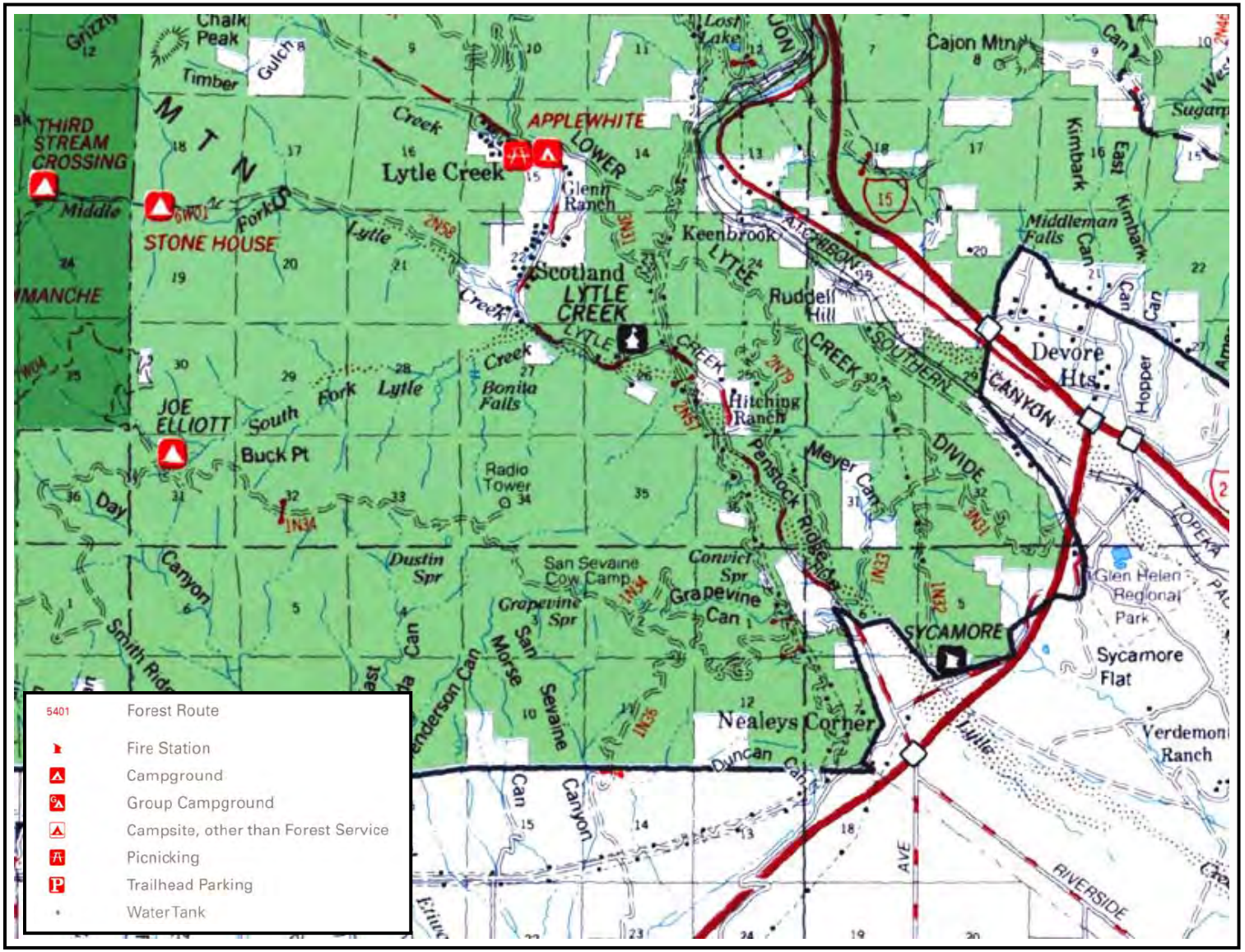
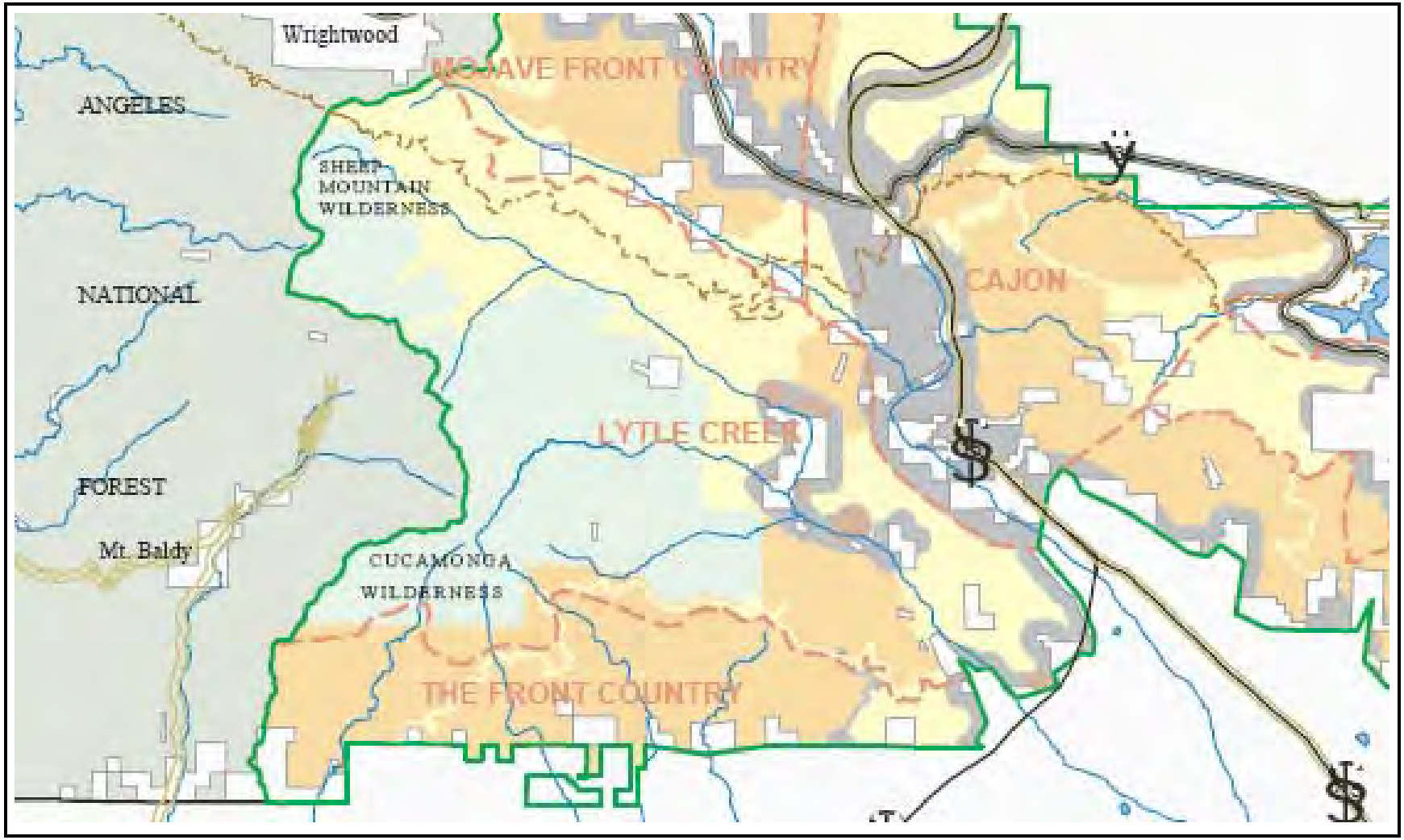


Figure 4.9-12
RECREATIONAL FACILTIES IN A PORTION OF THE SAN BERNARDINO NATIONAL FOREST
Source: United States Forest Service



Recreation Opportunity Spectrum

- Primitive
- Semi-Primitive, Non-Motorized
- Semi-Primitve Motorized
- Roaded Natural
- Rural

Figure 4.9-13
SAN BERNARDINO NATIONAL FOREST RECREATIONAL OPPORTUNITY SPECTRUM
Source: United States Forest Service

Within unincorporated County areas, the County Special District Department provides local park and recreation facilities through Community Service Districts (CSDs) and County Service Areas (CSAs). The Office of Special Districts manages the CSAs that are governed by the County Board of Supervisors. The CSDs are self-governed districts which receive funding from the County Board of Supervisors.[120]

Within the general area, the County-operated Glen Helen Regional Park, Glen Helen Off-Highway Vehicle Park, and the Hyundai Pavilion at Glen Helen are located to the south, east, and west of the project site. The GHRP encompasses about 13,040 acres and includes lands earmarked for other institutional uses; however, a significant portion of that property is available for public use. Available recreational uses include, but are not limited to, fishing, a water park, off-road vehicle use areas, as well as active playing fields and picnic areas. Hyundai Pavilion at Glen Helen is an outdoor amphitheater providing a venue for entertainment and entertainers.

As indicated in Figure 4.1-10 (San Bernardino County General Plan – Open Space Element/ Resources Overlay), the County General Plan has imposed an OS Overlay over the project site and designates not only the entire LCRSP site but a larger geographic area as "Policy Area 52" (Cajon Pass). As specified therein: "This is the area generally within the Cajon Pass area, north of Devore to approximately Mormon Rocks. The Cajon Pass area separates the Angeles and San Bernardino National Forests, and is an area which animals must cross to travel between the forests. This area also contains important riparian habitat and natural areas. Wildlife dispersion and habitat values in this area should be maintained, potentially by consolidating public/private ownership to prevent damage to important dispersion areas and habitat."

To the north of the I-15 Freeway, the County's "Open Space – A Plan for Open Space and Trails for the County of San Bernardino" identifies both a wildlife corridor (Wildlife Corridor 3) and a regional trail (Lytle Creek Trail). South of and generally paralleling the I-15 Freeway, the plan identifies a number of additional regional trails (Greenbelt Trail, Frontline Trail, and Frontline Trail Connection). The following descriptions of those facilities are presented therein:

- **Greenbelt Trail** (Primary Trail). This trail generally follows the base of the mountains and foothills east of the Cajon Pass, from Cajon Creek to the Santa Ana River Trail. A detailed routing plan for this trail has been developed by the City of San Bernardino in coordination with civilian volunteers. Multiple uses can occur on this trail, including hiking, horseback riding, and bicycling. This trail passes through undeveloped areas, and may require installation of comfort stations, rest/water stops, and similar amenities.

- **Lytle Creek Trail** (Secondary Trail). This trail follows the route of Lytle Creek from the Pacific Crest Trail to a connection with the Frontline Connector and Devils Canyon Connector trails north of Fontana. Multiple uses, including hiking, horseback riding, and bicycling or mountain bicycling are proposed for this trail, as terrain allows. Opportunities for wildlife viewing will exist along many portions of this trail which passes through undeveloped areas; installation of comfort stations, rest/water stops, and similar amenities may be necessary.[121]

- **Frontline Trail** (Primary Trail). This trail generally follows the base of the mountains north of the communities of Upland, Rancho Cucamonga, and Fontana. This trail

[120]/ *Op. Cit.,* County of San Bernardino 2007 General Plan, Open Space Element, p. VI-6.
[121]/ County of San Bernardino, Open Space: A Plan of Open Space and Trials for the County of San Bernardino, 1991.

provides an east-west connection between the San Antonio Creek Trail and the Frontline Connector Trail. Multiple uses are proposed for this trail, including hiking, horseback riding, and mountain biking.

- **Frontline Connector** (Secondary Trail). This trail connects to the eastern terminus of the Frontline Trail with the Lytle Creek Trail and western terminus of the Greenbelt Trail. The alignment of this trail follows Sierra Avenue and Devore Road. Multiple uses area proposed for this trail, including hiking, horseback riding, and mountain biking.

- **Wildlife Corridor 3**. This wildlife corridor follows the alignment of Lytle Creek from the boundary of the national forest to approximately Miller Narrows, and contains riparian habitat for several sensitive species, including wild rainbow trout. This section should be maintained both for its habitat value and as a dispersion corridor for wildlife to and from the national forest and other open space areas outside.[122]

The Trust for Public Lands states that neighborhood-serving parks provide the following benefits: (1) individuals living closer to parks are more likely to exercise regularly, leading to weight loss, increased energy, and better overall health; (2) parks increase residential and commercial property values; (3) urban parks deliver significant environmental benefits, filtering pollutants from the air and helping to control storm water runoff during rainy seasons; (4) parks enhance education by serving as destinations for local field trips and outdoor classrooms that illustrate natural and life science lessons; (5) police departments document sharp declines in juvenile arrests after recreational facilities open in low-income neighborhoods; and (6) well-maintained parks improve communities by increasing neighborhood cohesion. After parks open, neighbors are more likely to interact, take pride in their communities, and form neighborhood watch and other local improvement groups.[123]

The Urban Land Trust Task Force notes: "Smiling children, family *pachangas*, and improved aesthetics are a few of the obvious benefits created by parks. More complex psychological and economic benefits have been documented by numerous studies conducted over the past hundred years, which have quantified the positive correlation between green spaces and increased property values, attraction of new businesses, improved mental health, lower crime rates, and stronger communities. Furthermore, parks provide a vehicle to steer at-risk youth into positive activities and an opportunity to connect community park advocates and public agencies in new ways."[124]

4.9.3.2 Local Setting

Police Protection

Police services in the City of Rialto are provided by the RPD, operating under a mutual aid agreement with the SBCSD. Local crime statistics, as reported by the RPD for the period 2003-2005, are presented in Table 4.9-10 (City of Rialto Part 1 Crime Statistics [2003-2005]).[125]

[122]/ County of San Bernardino, Open Space: A Plan of Open Space and Trails for the County of San Bernardino (http://www.sbcounty.gov/landuseservices/General%20Plan%20Update/Mapping/5b-Open%20Space%20Overlay%20Maps/OpenSpace%20Text.pdf).

[123]/ *Ibid*., p. 9.

[124]/ Urban Land Trust Task Force, Walking to the Park – Recommendations for the Formation of an Urban Land Trust to Serve the City of Los Angeles, August 13, 2002, p. 3.

[125]/ "Part I" offenses are used by law enforcement agencies throughout the United States to reveal the extent and trend in criminal activity. Part I offenses include criminal homicide, forcible rape, robbery, aggravated

Table 4.9-10
CITY OF RIALTO PART 1 CRIME STATISTICS (2003-2005)

Crimes	Year		
	2003	2004	2005
Violent Crimes			
Homicides	11	13	12
Rape	43	30	33
Robbery	268	312	214
Aggravated Assault	651	639	546
Violent Crime Total	973	994	805
Violent Crime per 1,000 Residents	9.96	10.02	8.11
Violent Crime per 100,000 Residents	996.62	1,001.78	811.15
Property Crimes			
Burglary	603	665	715
Larceny Theft	1,318	1,633	1,602
Motor Vehicle Theft	993	1,182	1,173
Arson	28	27	23
Property Crimes Total	2,942	3,507	3,513
Property Crimes per 1,000 Residents	30.13	35.34	39.40
Property Crimes per 100,000 Residents	3,013.42	3,534.46	3,539.83
Annual Total (Violent and Property Crimes)	3,915	4,501	4,318
Annual Populations	97,630	99,223	99,242
Annual Crimes per 1,000 Residents	40.10	45.36	43.51
Annual Crimes per 100,000 Residents	4,010.04	4,536.25	4,350.98

Crime Trends	2003 vs. 2004	2004 vs. 2005
Raw Part 1 Total Change	+14.97%	-4.07%
Part 1 Total Change per 100,000 Population	+13.12%	-4.08%
Raw Violent Crime Change	+2.16	-19.01%
Violent Crime Change per 100,000 Population	+0.52%	-19.03%
Raw Property Crime Change	+19.20%	+0.17%
Property Crime Change per 100,000 Population	+17.29%	+0.15%

Source: City of Rialto Police Department (http://www.rialtopd.com/more.html)

Fire Protection

The nearest existing fire stations to the project site are RFD Stations 202 and 204. Fire Station 202 (1925 S. Riverside Avenue, Rialto) is a 10-person engine company. Station 204 (3288 N. Alder Avenue, Rialto) is a 3-person engine company. The apparatus is a Type 1 engine. Other apparatus at Station 204 include a water tender. The annual call volume at Station 204 is about 541 calls (1.4 calls/day).

assault, burglary, larceny theft, grant theft auto, and arson. "Part II" crimes include forgery, fraud and not-sufficient-funds checks, sex offenses, non-aggravated assaults, weapon laws, offenses against family, narcotics, liquor laws, drunk/alcohol/drugs, disorderly conduct, vagrancy, gambling, drunk driving, vehicle laws, vandalism, receiving stolen property, federal offenses without money, federal offenses with money, miscellaneous felonies and misdemeanors. Other non-criminal incidents include missing persons, non-criminal juvenile, non-criminal miscellaneous, suicides and attempts, mentally ill, traffic accidents, miscellaneous accidents, deaths.

The RFD states that they use NFPA 1710 as their response standards. Review of response data received from the RFD, however, indicates that the average driving time to an emergency from Stations 202 and 204 is 5.39 minutes. As a result, neither station currently conforms to NFPA 1710 recommended standards.[126]

With regards to natural hazards, the City's "Hazard Mitigation Plan" identifies and analyzes a "comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard with particular emphasis on new and existing buildings and infrastructure. As indicated therein, Fire "Station 202 is over forty years [old] and does not meet current seismic standards. A new fire station with an emergency generator will improve the public safety delivery system for the City of Rialto"[127] and, in the event that it should occur, the "destruction of the fire station would greatly impact the City's ability to provide public safety services."[128]

The Insurance Service Offices (ISO) is an independent private insurance research group that rates fire departments on their ability to provide protection. The ISO has developed a Fire Suppression Rating Schedule (FSRS) which measures the major elements of a community's fire suppression abilities in order to determine that community's Public Protection Classification (PPC™). A classification number from 1 (best public protection) to 10 (no recognized protection) is derived which indicates the community's relative fire insurance rating. To determine a community's PPC™, the ISO conducts a field survey. Expert ISO staff visit the community to observe and evaluate features of the fire-protection system. Using the FSRS), the ISO objectively evaluates the following three major areas:

- **Fire alarm and communications systems**. A review of the fire alarm system accounts for 10 percent of the total classification. The review focuses on the community's facilities and support for handling and dispatching fire alarms.

- **Fire department**. A review of the fire department accounts for 50 percent of the total classification. The ISO focuses on a fire department's first-alarm response and initial attack to minimize potential loss. Here, the ISO reviews such items as engine companies, ladder or service companies, distribution of fire stations and fire companies, equipment carried on apparatus, pumping capacity, reserve apparatus, department personnel, and training.

- **Water supply**. A review of the water-supply system accounts for 40 percent of the total classification. The ISO reviews the water supply a community uses to determine the adequacy for fire-suppression purposes. The ISO also considers hydrant size, type, and installation, as well as the inspection frequency and condition of fire hydrants.

To reduce property damage from a fire, firefighters need to get to the scene quickly. The ISO, therefore, evaluates the distribution of fire stations in each community. Item 560 (Distribution of Companies) of the FSRS provides the following criteria: "The built-upon area of the city should have a first-due engine company within 1½ miles and a ladder-service company within 2½

[126]/ *Op. Cit.*, Fire Agencies Emergency Response Study for the Lytle Creek Ranch Development, Rialto, California, pp. 2-3.
[127]/ *Op. Cit.*, Hazard Mitigation Plan – Community of City of Rialto, CA, Section 5.3.
[128]/ *Ibid.*, Section 4.3.2.1.

miles."[129] The ISO's fire station siting criteria is not a requirement but only a recommendation for local agencies and serves as a component in establishing each community's PPC™.

Although ratings vary according to element, the City generally has a Class 3 ISO rating,[130] which translates to a score of 70-79.99 and is considered good for an urban area. The City has a 9 rating for areas south of Valley Boulevard due to extended response times.[131]

Public Schools

Subject to each school district's separate assessment, those existing public schools which are either located closest to the project site or which are most likely to be directly impacted by additional student admissions resulting from the development of the project site are listed, by district, in Table 4.9-11 (Existing Public Schools in the General Project Area [2008]). No public or private educational facilities now exist on the project site and no school district owns any real property thereupon. Since the subject property does not presently contain any residential dwellings, there currently (2008) exists no children on the project site which are asserting any demands on any areawide school districts and/or facilities.

Public Libraries

The closest SBCPL facility is the Rialto Branch Library (251 West First Street, Rialto 92376). The Rialto Branch Library totals approximately 10,000 square foot and currently serves a population of approximately 91,873 people. With regards to that branch library, the existing square foot per capita ratio is 0.11 (as compared to a County average of 0.19 square feet of library space per capita). The Rialto Branch Library has a collection of 65,799 items, representing an average of about 0.72 items per capita (as compared to a County average of 1.20 items per capita). Library circulation averages about 1.96 items per capita (as compared to a County average of 2.72 items per capita).[132] In a County where existing library facilities and resources routinely rank near the bottom of the nine library systems examined in the "San Bernardino County Library Master Plan," the Rialto Branch Library falls below County averages.

As projected by the County, by 2021, the Rialto service area population will grow to 98,234 individuals. Because the current facility is already too small and there is insufficient space to expand, a new library facility is recommended. Based on those population projections, assuming a one-story building with a net-to-gross efficiency factor of 75 percent, a 43,971 square foot building, requiring 146 parking spaces, is recommended. It is further recommended that the new library facility include a collection of 147,300 items, contain 214 reader spaces, include a meeting area to accommodate 344 persons (including a 140-seat multi-purpose meeting room, conference facilities for 40 individuals, and a children's service program room

[129]/ Those benchmark criteria produce an expected response time of 3.2 minutes for an engine company and 4.9 minutes for a ladder-service company, based on a formula developed by the RAND Corporation. The RAND Corporation conducted extensive studies of fire department response times, concluding that the average speed for a fire apparatus responding with emergency lights and siren is 35 mph. That speed considers average terrain, average traffic, weather, and slowing down for intersections. Taking into account the average speed and the time required for an apparatus to accelerate from a stop to the travel speed, the RAND Corporation developed the following equation for calculating the travel time: T=0.65+1.7D, where T = time in minutes to the nearest 1/10 of a minute; 0.65 = a vehicle-acceleration constant for the first 0.5 mile traveled; 1.7 = a vehicle-speed constant validated for response distances ranging from 0.5 miles to 8.0 miles; and D = distance.

[130]/ *Op. Cit*., Hazard Mitigation Plan – Community of City of Rialto, CA, Section 5.1.

[131]/ The City has purchased property at the corner of Santa Ana and Lilac Avenues for a future fire station (Station 205). The City is looking for funding sources for the construction of Station 205.

[132]/ *Op. Cit*., San Bernardino County Library Facility Master Plan, December 2001, pp. 23, 24, 28, and 157.

with seating for 50), and a full-time equivalent (FTE) staff of 17.5 employees. If population projections prove accurate, this facility would result in a square foot per capita ratio of 0.45.[133]

Public Recreational Facilities

With regards to recreational opportunities in the City of Rialto, as illustrated in Figure 4.9-14 (Recreational and Other Public Facilities Located in the City of Rialto), a number of City-operated parks are located in proximity to the project site, including Birdsall, Alec Fergusson, and Frisbie Parks. Each of those community/neighborhood parks are briefly described below.

- **Birdsall Park**. Birdsall Park (2611 N. Linden Avenue, Rialto) includes two Little League and one T-ball field, restrooms and public picnicking facilities, and children's playground.

- **Alec Fergusson Park**. Alec Fergusson Park (2395 W. Sunrise, Rialto) has a roller hockey rink, a ¼-mile walking track, a picnic area, horseshoe pits, a Little League field, a basketball court, and a tot lot. Restrooms are available.

- **Frisbee Park**. Frisbee Park (1901 N. Acacia Avenue, Rialto) has three Little League and three girls' softball fields, restrooms and public picnic areas, children's playground and basketball courts.

No County-established trails and/or wildlife corridors presently exist on or directly adjacent to the project site. An extensive trail system exists within the San Bernardino National Forest. An existing trailhead is located in the vicinity of the Sycamore Station.

4.9.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant public services and/or recreation impact if the project or if project-related activities were to:

- Expose people or structures to a significant[134] risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.[135]
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, and/or other public facilities.[136]

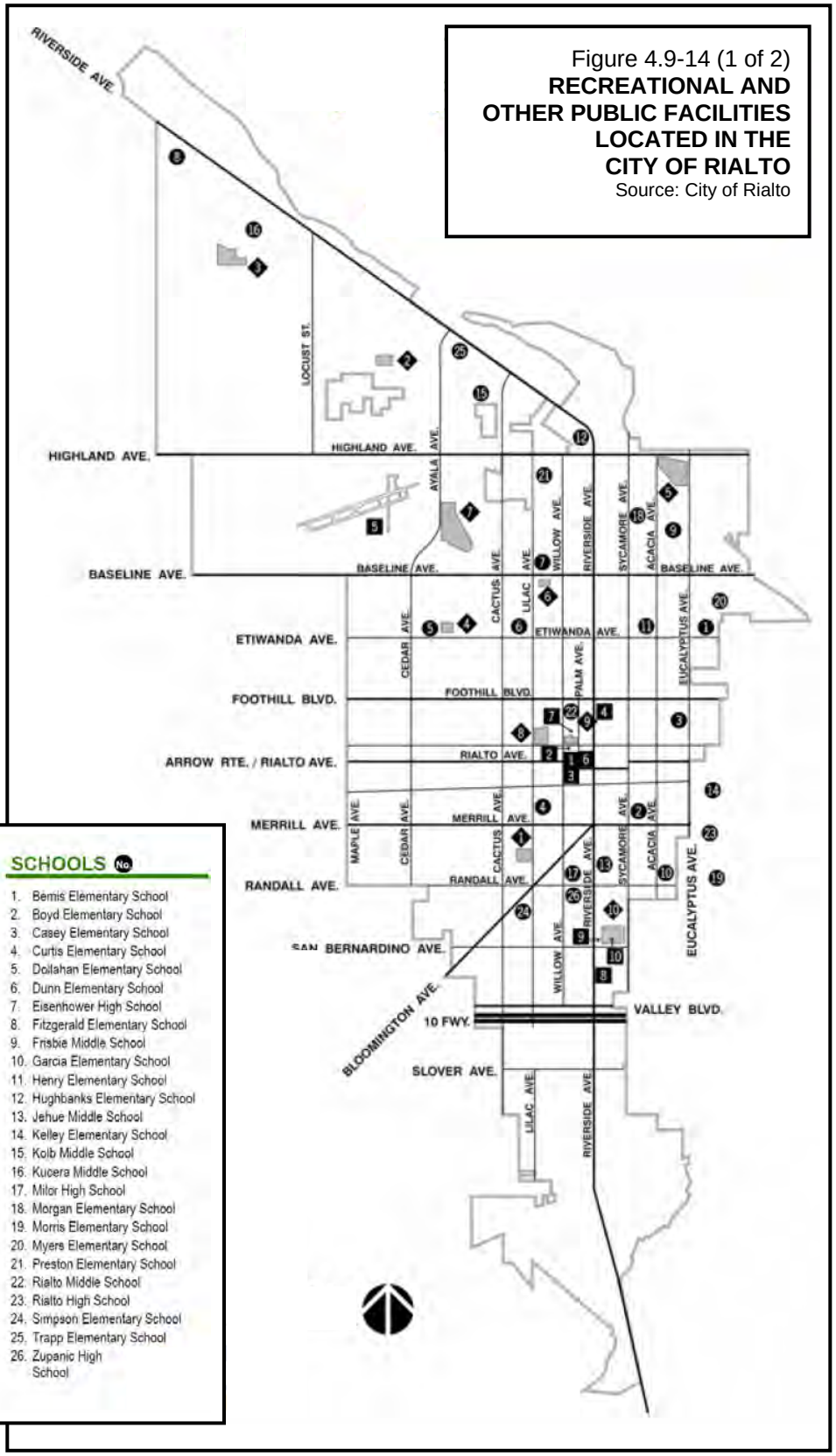
[133]/ *Ibid*., pp. 157-158.
[134]/ Certain terms, such as "significant" and "substantial adverse effect" and "substantial," are neither defined in CEQA nor in the State CEQA Guidelines and require a local determination whether a proposed action would meet or exceed the stated standard.
[135]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section VII (Hazards and Hazardous Materials).
[136]/ *Ibid*., Section XIII (Public Services).

Table 4.9-11
EXISTING PUBLIC SCHOOLS IN THE GENERAL PROJECT AREA (2008)

District/School	Opened	Approximate Size	Grades	Track	Design Capacity (students)	Number of Portables	2007-2008 Attendance (students)	Remaining Capacity (students)
Fontana Unified								
Sierra Lakes Elementary 5740 Avenal Place Fontana, CA 92336	2002	7 Acres 54,641 SF	K-5	Single Track (Year Round)	625	4	676	50
(Wayne) Ruble Middle 6762 Juniper Avenue Fontana, CA 92337	2004	20 Acres 129,280 SF	6-8	Single Track (Year Round)	1,350	0	1,339	0
Summit High 15551 Summit Avenue Fontana, CA 92336	2006	44.5 Acres	9-12	Traditional	2,500	0	2,554	0
Rialto Unified								
Dr. Edward Fitzgerald Elementary 2568 W. Terra Vista Drive Rialto, CA 92377	1994	52,908 SF	K-5	Multi-Track (Year Round)	525	4	772	0
(Ethel) Kucera Middle 2401 W. Buena Vista Drive Rialto, CA 92377	1995	116,570 SF	6-8	Traditional	1,420	4	1,358	0
Ben F. Kolb Middle 2351 N. Spruce Street Rialto, CA 92377	1997	198,776 SF	6-8	Traditional	1,080	12	1,235	0
Wilmer Amina Carter High 2630 N. Linden Avenue Rialto, CA 92377	2004	314,869 SF	9-12	Traditional	3,000	0	2,873	127
San Bernardino City Unified								
Vermont Elementary 3695 Vermont Street San Bernardino, CA 92407	1949 Modern. 1994	7.00 Acres 35,696 SF	K-5	Year Round	650	12	716	0
Shandin Hills Middle 4301 Little Mountain Drive San Bernardino, CA 92407	1968	18.67 acres 92,872 SF	6-8	Single Track (Year Round)	1,480	6	1,578	100
Cajon High 1200 Hill Drive San Bernardino, CA 92407	1967	53.59 acres 216,252 SF	9-12	Traditional	2,820	19	2,774	46

Source: Environmental Impact Sciences

Figure 4.9-14 (1 of 2)
RECREATIONAL AND OTHER PUBLIC FACILITIES LOCATED IN THE CITY OF RIALTO
Source: City of Rialto



PARKS

1. Andreson Park
2. Birdsall Park
3. Alec Fergusson Park
4. Flores Park
5. Frisbie Park
6. Jackson Street Park
7. Jerry Eaves Park
8. Bud Bender Park
9. Margaret Todd Park
10. Rialto City Park

FACILITIES

1. Civic Center
2. Rialto Public Library
3. Metrolink Station
4. Kristina Dana Hendrickson Cultural Center/Rialto Historical Museum
5. Rialto Municipal Airport
6. Rialto Chamber of Commerce
7. Rialto Community Center/Carl Johnson Center Gym
8. Rialto Senior Center
9. Rialto Racquet & Fitness Center/Tom Sawyer Swimming Pool/Community Playhouse
10. Rialto Activity Center (RAC)

SCHOOLS

1. Bemis Elementary School
2. Boyd Elementary School
3. Casey Elementary School
4. Curtis Elementary School
5. Dollahan Elementary School
6. Dunn Elementary School
7. Eisenhower High School
8. Fitzgerald Elementary School
9. Frisbie Middle School
10. Garcia Elementary School
11. Henry Elementary School
12. Hughbanks Elementary School
13. Jehue Middle School
14. Kelley Elementary School
15. Kolb Middle School
16. Kucera Middle School
17. Milor High School
18. Morgan Elementary School
19. Morris Elementary School
20. Myers Elementary School
21. Preston Elementary School
22. Rialto Middle School
23. Rialto High School
24. Simpson Elementary School
25. Trapp Elementary School
26. Zupanic High School

Park/Facility	Acres	Little League Ball Field	Softball Field	Football Field	Soccer Field	Basketball Court	Gymnasium	Classroom	Kitchen	Snack Bar	Skatepark	Roller Hockey Rink	Swimming Pool	Racquetball Court	Tennis Court	Weight Room	Playground Equipment	Picnic Facility	Open Turf Area	Shade Structure w/ Picnic Facilities	Horseshoe Pits	Jogging Trail	Fitness Course	Shade Structure w/ Elevated Bandstand Platform	Restrooms	Spa	Sauna
Andreson Park 726 S. Lilac Avenue	5					X											X	X	X	X	X	X	X	X	X		
Birdsall Park 2611 N. Linden Avenue	7.5	X				X				X							X	X	X	X					X		
Bud Bender Park 300 N. Lilac Avenue	10	X								X							X	X	X						X		
Flores Park 1020 W. Etiwanda Avenue	3.5																X	X	X	X					X		
Fergusson Park 2395 W. Sunrise	8	X										X			X		X		X						X		
Frisbie Park 1901 N. Acacia Avenue	20	X	X			X				X							X	X	X	X					X		
Jerry Eaves Park 1485 N. Ayala	22		X		X					X							X	X	X	X					X		
Margaret Todd Park 201 N. Willow Avenue	5					X					X						X	X	X								
Rialto City Park 130 E. San Bernardino Avenue	20	X		X						X								X	X	X	X				X		
Rialto Community Center 214 N. Palm Avenue							X	X																	X		
Rialto Racquet & Fitness Ctr 1243 S. Riverside Avenue								X	X					X	X	X									X	X	X
Tom Sawyer Swimming Pool 152 E. San Bernardino Avenue													X												X		
Community Playhouse 150 E. San Bernardino Avenue																									X		
Rialto Activities Center (RAC) 250 E. San Bernardino Avenue								X																	X		
Rialto Senior Center 1411 S. Riverside Avenue								X	X																X		

Figure 4.9-14 (2 of 2)
RECREATIONAL AND OTHER PUBLIC FACILITIES LOCATED IN THE CITY OF RIALTO
Source: City of Rialto

- Increase the use of existing neighborhood parks, regional parks, or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.[137]

Recommended fire response standards have been formulated by other agencies, published in source documents, or reflect widely acceptable industry standards.[138] For example, the County General Plan states that the County will prepare a "Fire Master Plan" that will provide standards of coverage and "whose goal is to achieve the levels of service established by the National Fire Protection Association (NFPA) 1710 and 1720."[139,140] In accordance therewith, the project would normally be deemed to produce a significant or potentially significant public services impact if the project or if project activities were to:

[137]/ *Ibid*., Section XIV (Recreation).

[138]/ Although recommended as a threshold of significance criteria under CEQA, unless independently established by the jurisdictional fire agency, it is not the intent of the EIR to impose NFPA 1710 or any other specific response time standard(s) as the appropriate and applicable performance standard for the first response and full alarm response for the proposed project or for any other project within the jurisdictional fire agency's jurisdiction.

[139]/ *Op. Cit.*, County of San Bernardino 2007 General Plan, Land Use Element, p. II-36.

[140]/ NFPA 1720 (Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments, 2004 Edition) contains recommended standards for volunteer fire departments and is not further addressed herein.

- In compliance with NFPA 1710, be unable to provide an emergency medical service or initial company response within a 4-minute travel time and a full-alarm response within an 8-minute travel time.[141]

As indicated in the City General Plan (Safety Element), it is the goal of the City to "provide a minimum of one full-time police officer for every 650 to 750 residents" (Goal 7.2). The staffing of public position is not typically the function of individual property owners but the responsibility of the City Council through the adoption of annual budgets. As such, although the City General Plan establishes a quantifiable staffing objective for the RPD, since that objective is not directly applicable to specific project-level analyses, the Lead Agency has not elected to impose that standard as a separate threshold of significance criteria for the purpose of impact assessment.

In addition, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative utilities and service systems impacts.

One new elementary school site and one new combined elementary and middle school site have been included in the proposed LCRSP. Certain State standards for new school sites have been established and could be adapted for use herein.

As specified in Title 5 of the CCR, "[t]he property line of the [proposed school] site even if it is a joint use agreement as described in subsection (o) of this section shall be at least the following distance from the edge of respective power line easements: (1) 100 feet for 50-133 kV line. (2) 150 feet for 220-230 kV line. (3) 350 feet for 500-550 kV line" (5 CCR 14010[c]). With regards to those standards, the California Department of Health Services (DHS) acknowledges that those setbacks are not based on specific biological evidence but on the rationale that the electromagnetic field (EMF) drops to background levels at the specified distances.[142] As specified, a new school site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard (5 CCR 14010[h]). If the proposed site is on or within 2,000 feet of a significant disposal of hazardous waste, the school district shall contact the Department of Toxic Substances Control for a determination of whether the property should be considered a Hazardous Waste Property or Border Zone Property (5 CCR 14010[t]). In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant land-use and/or planning impact if the project or if project-related activities were to:

- Locate a new public school within the following separation distances from an existing or proposed above-ground electrical transmission or distribution line: (1) 100 feet for 50-133 kV power lines; (2) 150 feet for 220-230 kV power lines; and (3) 350 feet for 500-550 kV power lines.
- Locate a new public school within 1,500 feet from an existing or proposed above-ground or underground pipeline that would, as a result of the contents, design, or characteristics

[141]/ *Op. Cit*., NFPA 1710 - Standards for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, 2001 Edition, Section 5.2.3.1.1.

[142]/ California Department of Health Services, Electric and Magnetic Fields Measurements and Possible Effects on Human Health – What We Know and What We Don't Know in 2000, California Electric and Magnetic Fields Program, December 2000, p. 7; California Department of Health Services, Electric and Magnetic Fields in California Public Schools, California Electric and Magnetic Fields Program, April 2001, p. 4.

of that pipeline, pose a substantial safety hazard to the school or its occupants thereupon.

- Locate a new public school near an existing or proposed above-ground water or fuel storage tank that would, as a result of the contents, design, or characteristics of that storage tank, pose a substantial safety hazard to the school or its occupants thereupon.
- Locate a new public school within 2,000 feet of a site containing a significant disposal of hazardous wastes that would, as a result of the nature of that disposal site, pose a substantial safety hazard to the school or its occupants thereupon.

Senate Bill (SB) 352, Chapter 668, Statutes of 2003, amended Section 17213 of the CEC and Section 21151.8 of the PRC and established certain procedures that school districts must follow, including additional determinations and findings that school districts must make, prior to approving the acquisition of a new school site or when approving a CEQA document for a school site acquisition or new school construction project. SB 352 expanded the requirements school districts must follow in identifying and reviewing the impacts of hazardous air emitters and hazardous material handlers within 0.25 miles of a new school site and created new requirements if the site is within 500 feet of a busy freeway or traffic corridor. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant land-use and/or planning impact if the project or if project-related activities were to:

- Result in short-term and/or long-term exposure to air emissions at a proposed school site which poses significant health risks to pupils.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative public services and/or recreation impacts.

4.9.5 Impact Analysis

4.9.5.1 Construction Impacts

Police Protection

Environmental Impact 9-1*. Police Protection. During construction, heavy equipment, construction materials, and other items of value will be brought to the project site. As buildings are erected, prior to site occupancy, structures may remain unsecured and susceptible to unauthorized entry. The presence of an unsecured site and items of value could result in incidents of theft and vandalism that could increase demands upon the Rialto Police Department and other law enforcement agencies.*

Preliminary Determination 9-1*. Less-than-significant impact.*

Annexation of the project site will increase the service patrol area of the RPD and require the provision of police services into an area presently served by the SBCSD.

With the exception of Monier Lifetile (3511 North Riverside Avenue, Rialto), the project site is now generally vacant. Since no public uses are presently authorized thereupon, the property

presently places only minimal demand upon existing police protection services. An increased demand for police service will, however, occur during the project's extended construction phase. Such services include consultation during plan check, routine surveillance of construction sites by regular patrol units, potential criminal investigations resulting from the theft or vandalism of construction equipment and materials, and enforcement of local speed limits and haul vehicle coverage requirements. Provision of such services would not require construction of any new RPD or CHP facilities or necessitate the physical alteration of any existing facilities.

Procedurally, to ensure that police protection considerations are incorporated in project-level plans, prior to the issuance of building permits for new major development projects, the RPD is routinely provided the opportunity to review and comment upon building plans in order to: (1) facilitate opportunities for improved emergency access and response; (2) ensure the consideration of design strategies that facilitate public safety and police surveillance; and (3) offer specific design recommendations to enhance public safety and reduce potential demands upon police protection services.

Since none of the threshold criteria would be exceeded, the identified construction-term impact on police protection services would be less than significant and no mitigation is recommended or required.

Fire Protection

Environmental Impact 9-2*. Fire Protection. Project implementation will result in the introduction of equipment, materials, and manpower into a designated fire hazard area prior to the provision of water system improvements designated to respond to on-site and near-site fire hazards.*

Preliminary Determination 9-2*. Less-than-significant impact.*

As indicated in Figure 4.9-1 (Southwest San Bernardino County – Natural Hazard Disclosure: Fire [January 2006]) and Figure 4.9-2 (Adopted Fire Hazard Severity Zones in State Responsibility Areas [November 2007]), the project site or portions thereof contain CALFIRE-designed "wildland areas that may contain substantial forest fire risks and hazards" and "high fire hazard zones." As such, those properties are subject to the maintenance requirements contained in Section 4291 of the PRC.

Pending the development of a new fire station within the LCNPD, neither RFP nor SDCFD response times to the totality of the project site fully conforms to the recommended NFPA 1710 response time standards. Additional information concerning fire agency emergency response is presented in Appendix III-I (Fire Agency Emergency Response Study).

Grubbing, grading, and construction activities would introduce a number of elements and activities that represent potential fire hazards and that could increase the likelihood of wildland fires affecting on-site and other near-site areas. Sparks from vehicle and equipment exhausts and welding torches could ignite vegetation or flammable construction materials located in proximity to on-site construction activities. Fuels, paints, lubricants, sealants, and other flammable, ignitable, and/or hazardous materials would be stored, in limited quantities, on the project site (in compliance with regulatory federal, State, and local standards). Similarly, vehicle parking, equipment staging, and equipment service areas could contribute to existing fire hazards due to potential ignition from equipment and vehicle exhausts, the potential leakage or

accidental spillage of oil, gasoline, or other petroleum products during fueling and maintenance operations, and the impedance to emergency access. Smoking by workers could also result in the accidental ignition of brush.

During certain stages of project development, fire suppression infrastructure (e.g., fire mains and hydrants) and RFD and SBCFD emergency response capabilities will remain at pre-project levels during the initial construction period. During that time period, available water resources could be limited to those that are brought to the project site by the Applicant (e.g., water tenders), brought to the project site by RFD and/or SBCFD (e.g., engine company), or obtained from off-site fire hydrants.

Certain State and federal workplace safety standards apply to construction activities. As required, in part, by the United States Department of Labor Occupational Safety and Health Administration's (OSHA) "Safety and Health Regulations for Construction" (29 CFR 1926.150[a]), the employer is responsible for the development of a fire protection program to be followed throughout all phases of the construction and demolition work and shall provide for the firefighting equipment as specified in that subpart. As required therein, as fire hazards occur, there shall be no delay in providing the necessary equipment. Access to all available firefighting equipment shall be maintained at all times and shall be conspicuously located. As further specified therein, a temporary or permanent water supply, of sufficient volume, duration, and pressure, required to properly operate the firefighting equipment shall be made available as soon as combustible materials accumulate on the project site. Where underground water mains are to be provided, those water mains shall be installed, completed, and made available for use as soon as practicable (29 CFR 150[b]). Internal combustion engine powered equipment shall be so located so that the exhausts are well away from combustible materials. Smoking is prohibited at or in the vicinity of operations that constitute a fire hazard and prohibitions shall be conspicuously posted (29 CFR 1926.151[a]).

The California Department of Industrial Relations, Division of Industrial Safety (Cal/OSHA) has established specific workplace standards for fire safety similar to those imposed by OSHA. As required (Title 8, Article 36, Section 1920, CCR), each employer shall be responsible for the development of a fire protection program to be followed throughout all phases of the construction work and shall provide for the fire fighting equipment as specified in under Article 36 in Title 8. As fire hazards occur, there shall be no delay in providing the necessary fire protection and/or prevention equipment.

Individual development projects must fully comply with all applicable provisions of the Uniform Building Code, Uniform Fire Code, and other applicable provisions of the City Municipal Code and/or the County Development Code which have been established to address fire protection and public safety. In accordance with existing code requirements, the RFD would typically specify that

- All required fire hydrants be installed, tested, and accepted by the RFD prior to the commencement of building construction activities;
- Adequate fire flow capacity be available to all properties, at a volume and duration consistent with the type, scale, and use of the facility being served;
- Fire hydrants be installed and charged prior to the delivery of any substantial quantity of flammable materials onto the site; and
- Vehicular access be provided and maintained serviceable throughout the construction period to all required fire hydrants.
- All requirements of fire apparatus access are provided for during construction.

- An automatic fire sprinkler system for dwellings due to insufficient driveway access, lack of fire hydrant access, or inadequate fire flow.
- Provide a fire protection plan that addresses, but is not limited to, the following:
  - ◊ Ensure a defensible space is maintained for structures in areas of development.
  - ◊ Provide a fuel modification area plan for new roadways.
  - ◊ Include other requirements of the International Wildland Urban Interface Code with the amendments to Section 15.28.080 of the City Municipal Code related to design and pre-development.

In addition, project-related conditions will be required to comply with all applicable codes and ordinances for construction, access, water mains, fire flows, and fire hydrants. Those requirements likely include the incorporate of multiple points of ingress and egress to each development.

RFD requirements for access, fire flow, and hydrants will be addressed during the subdivision tentative map stage for individual development projects. Specific fire and life safety requirements for the construction phase of each project will be addressed during the building fire plan check. Unless more stringent standards are imposed, plan check requirements shall stipulate that every building which is constructed shall be accessible to RFD apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width. Access roads and driveways shall be extended to within 150 feet of all portions of exterior walls when measured by an unobstructed route around the exterior of the building. Access roads and driveways shall be maintained with a minimum of ten feet of brush clearance on each side and have unobstructed clear-to-sky vertical clearance with the exception of protected tree species.

Fire sprinkler systems are required in some residential and most commercial occupancies and are recommended for those occupancies where fire sprinkler systems are not required. For commercial development, fire flows up to 5,000 gpm at 20 psi residual pressure for up to a 5-hour duration may be required. Final fire flows will be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used.

Unless alternative standards are approved or imposed by the RFD,[143] fire hydrant spacing shall be 300 feet[144] and shall meet the following requirements: (1) no portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant; (2) no portion of a building shall exceed 400 feet via vehicular access from a properly spaced fire hydrant; (3) when cul-de-sac depth exceeds 200 feet, hydrants will be required at the corner and mid block; and (4) additional hydrants will be required if the hydrant spacing exceeds specified distances.

Unless alternative standards are approved or imposed by the RFD, turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A RFD-approved turning area shall be provided for all driveways exceeding 150 feet in length and at

[143]/ The following general standards have been established by other fire protection agencies and are presented herein for informational purposes only and may, therefore, not be directly applicable to the proposed project. There inclusion herein is intended to represent the types of general standards that the Applicant may anticipate during the subsequent design and development phase of the proposed project. Nothing herein is intended to modify RFP requirements, limit the ability of the RFD to condition the proposed project, and/or to suggest or impose an alternative set of standards beyond those which might be established by the RFD.

[144]/ Referencing Section 508.5.1(FF) of the City Municipal Code: "Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 150 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrant and mains shall be provided where required by the fire code official."

the end of all cul-de-sacs. All on-site driveways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The 28-foot minimum width does not allow for parking and shall be designated as a "fire lane" and have appropriate signage. The 28-foot width shall be increased to: (1) 34 feet in width when parallel parking is allowed on one side of the access way; and (2) 36 feet in width when parallel parking is allowed on both sides of the access way. Any access way less than 34 feet in width shall be labeled "fire lane" on the final recording map and final building plans. For streets or driveways with parking restrictions, the entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with RFD-approved signs stating "no parking – fire lane" in three-inch high letters. When serving land zoned for residential use having a density of more than four units per net acre: (1) a cul-de-sac shall be a minimum of 34 feet in width and shall not be more than 700 feet in length; (2) the length of the cul-de-sac may be increased to 1,000 feet if a minimum of 36 feet in width is provided; and (3) a RFD-approved turning area shall be provided at the end of a cul-de-sac.

Unless alternative standards are approved or imposed by the RFD, all access devices and gates shall meet the following requirements: (1) any single gated opening used for ingress and egress shall be a minimum of 26 feet in width, clear-to-sky; (2) any divided gate opening (when each gate is used for a single direction of travel (i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky; (3) gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way and shall be provided with a turnaround having a minimum of 32 feet of turning radius (if an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device); (4) All limited access devices shall be a type approved by the RFD; and (5) gate plans shall be submitted to the RFD prior to installation and show all locations, widths, and details of the proposed gates.

Traffic calming devices (e.g., speed humps) are typically utilized to reduce vehicle the travel speed of motorists in areas where pedestrians and children may be present and enhance public safety. Without careful planning, with regards to emergency vehicles, traffic calming devices can produce the undesired effect of increasing response times. As a result, pursuant to Section 503.7 (Traffic Calming) in Chapter 15.28 (Fire Code) in Title 15 (Building and Construction) of the City Municipal Code, all traffic calming measures shall be submitted to the RFD or to the appropriate fire protection agency with jurisdiction over the project for review, prior to implementation.

Since none of the threshold criteria would be exceeded, the identified impact on fire protection services would be less than significant and no mitigation is recommended or required.

Public Schools

Environmental Impact 9-3*. Public Schools. Based on the proposed dedication of a number of on-site school sites, project-specific construction activities could occur in close proximity to an existing school facility and prove to be disruptive to school activities and operations.*

Preliminary Determination 9-3*. Less-than-significant impact.*

Although an overall phasing plan is presented herein, construction schedules for each planning area will occur based on infrastructure availability, market conditions, and the individual project-level schedules formulated by the developers of each such area. As such, while no public schools presently exist on the project site, one or more RUSD schools may be constructed

within the LCRSP boundaries in the future. Those schools may become operational prior to or concurrent with the development of adjoining PAs.

Development activities occurring in close proximity to an existing school site could prove disruptive to educational endeavors and related pursuits, introduce public safety hazards associated with construction vehicles operating in close proximity to areas where children may be present, and result in closure of travel lanes and sidewalks near school zones. In addition, construction activities, including equipment staging and material stockpiling, may present an attractive nuisance, defined as any condition which is unsafe or unprotected and, thereby, dangerous to children and which may reasonably be expected to attract children to the property and to the risk of injury by playing with, in, or on it. Potential construction-term noise, air quality, and traffic impacts are separately addressed under other corresponding sections of this analysis and are not again repeated herein.

In Rowland v. Christian, the California Supreme Court held that the appropriate test for landowner liability is liability pursuant to Section 1714 of the California Civil Code and based on whether the landowner acted reasonably with regard to the care of the property. Section 1714 imposes a duty requiring landowners to exercise due care in the management of his property to avoid injuries to others.[145] As a result, owners of property (including construction sites) have an existing obligation to exercise reasonable care with respect to those properties and the activities conducted thereupon and requires persons to maintain land in their possession and control in a reasonably safe condition. An exception to the statutory rule of liability for failure to use ordinary care in the management of one's property requires clear support in public policy.

In addition, although proposed in response to a traffic safety consideration, a number of mitigation measures (Mitigation Measure 6-2 and Mitigation Measure 6-3) have been previously formulated by the Lead Agency which would also serve to address construction safety. As specified, prior to the issuance of the final grading plan for new major development projects, the Applicant would be required to submit and, when deemed acceptable, the City Engineer would approve a traffic control plan (TCP) describing the Applicant's efforts to maintain vehicular and non-vehicular access throughout the construction period. If temporary access restrictions are proposed, the plan would delineate the period and likely frequency of such restrictions and describe emergency access and safety measures that would be implemented during those closures and/or restrictions (Mitigation Measure 6-2).

Also, prior to the issuance of the final grading permit for new major development projects, the Applicant would be required to submit and, when deemed acceptable, the City would approve a construction traffic mitigation plan (CTMP) identifying the travel and haul routes through residential neighborhoods, if any, to be used by construction vehicles; the points of ingress and egress of construction vehicles; temporary street or lane closures, temporary signage, and temporary striping; the location of materials and equipment staging areas; maintenance plans to remove spilled debris from neighborhood road surfaces; and the hours during which large construction equipment may be brought onto and off the project site. Each CTMP would provide for the scheduling of construction and maintenance-related traffic so as to not unduly create safety hazards to children, to pedestrians, and to other parties (Mitigation Measure 6-3).

[145]/ Section 1714 of the Civil Code sets forth the general duty of a property owner toward others: "Everyone is responsible, not only for the result of his or her willful acts, but also for an injury occasioned to another by his or her want of ordinary care or skill in the management of his or her property or person, except so far as the latter has, willfully or by want of ordinary care, brought the injury upon himself or herself."

As specified, in pertinent part, in Section 18.72.010 (Maintenance of Buildings, Structures and Unattended Land – Nuisance) in Chapter 18.72 (Property Maintenance – Nuisance) in Title 18 (Zoning) of the City Municipal Code: "Every owner, lessee, occupant, or person having charge of any property or premises within the city is required to maintain such property or premises in a manner so as not to violate the provisions of this chapter. . .The following acts and conditions when performed or existing upon any property, lot or parcel of land within the city are declared to be unlawful and are defined as and declared to be public nuisances which are injurious or potentially injurious to the public health, safety and welfare, which have a tendency to degrade the aesthetic appearance and property values of, or injure or potentially injure, surrounding property, or which cause damage to public streets, property, or right-of-ways. . .Maintenance of premises in such condition as to be detrimental to the public health, safety or general welfare or in such as to constitute public nuisance as defined by Civil Code, Section 3400 or Section 17980 *et seq*., of the Health and Safety Code."

Temporary fencing is routinely erected or, when stipulated by the Building Official, can be installed around construction sites in order to protect adjacent properties from construction activities and debris and to safeguard public safety by restricting public access to the construction site and minimizing construction nuisance. In addition, law enforcement surveillance will also serve to deter criminal acts (such as graffiti, theft, and vandalism) that could occur at or near construction sites.

Although construction activities conducted near school sites and other locations where children may be present can constitute an attractive nuisance, existing requirements, regulations, and other provisions are already in place which provide reasonable assurance that any nuisance conditions created during construction would be avoided or substantively minimized. Since none of the threshold criteria would be exceeded, the identified construction-term impact would be less than significant and no mitigation is recommended or required.

Public Libraries

Because no public libraries presently exist or are planned in proximity to the project site, construction activities associated with the proposed project will neither adversely impact nor prove disruptive to the public library system. Additionally, any short-term demands that may be imposed on the SBCPL, particularly the Rialto Branch Library, attributable to construction workers coming to the project site from other residences located in outlying communities (and affiliated with other in-County or out-of-County branch libraries), can be accommodated at existing SBCPL facilities. Construction-term impacts on SBCPL would be di minimus.

Public Recreational Facilities

Environmental Impact 9-4*. Public Recreational Facilities. Construction activities will occur adjacent to existing recreational areas, including Glen Helen Regional Park and the San Bernardino National Forest, and, during construction, could impede access to or temporarily detract from the enjoyment of those areas and facilities.*

Preliminary Determination 9-4*. Less-than-significant impact.*

Portions of the project site abut Glen Helen Regional Park and the San Bernardino National Forest. Construction activities conducted adjacent to National Forest lands and/or public parks could potentially impede access to trails and other facilities and produce noise, air emissions

(including TACs and fugitive dust), and other short-term impacts that could temporarily diminish recreational experiences now available on those public lands. Although no local or neighborhood parks presently abut the project site, because project development is projected to occur over a number of years, future residential and non-residential construction activities may occur adjacent to or in close proximity to new neighborhood parks and other accessible open space areas now proposed on the project site. Park areas may contain a pedestrians and bicyclists, inattentive children unaware of the presence of construction equipment and vehicles traveling along local access roads and/or operating adjacent to park areas.

The potential environmental impacts of construction activities (e.g., noise, air pollutants, and traffic) on adjoining sensitive receptors are addressed under other corresponding sections of this EIR and are not again repeated herein. In addition, for new major development projects, in order to further enhance public safety, separate mitigation measures have been previously formulated requiring the development of construction traffic mitigation plans (Mitigation Measure 6-2) and traffic control plans (Mitigation Measure 6-3).

Construction activities undertaken directly adjacent to the National Forest or other open space areas could increase the risk of wildlife fires. Cal/OSHA requires employers to prepare a "fire safety plan" (General Industry Safety Order 3221) addressing the safe storage, handling, and disposal of hazardous materials, the identification of known fire hazards, potential ignition sources, fire alarm systems, inspection protocols designed to identify fire risks, and employee safety training information. At a minimum, each fire prevention plan shall include: (1) potential fire hazards and their proper handling and storage procedures, potential ignition sources (such as welding, smoking and others) and their control procedures, and the type of fire protection equipment or systems which can control a fire involving them; (2) names or regular job titles of those responsible for maintenance of equipment and systems installed to prevent or control ignitions or fires; and (3) names or regular job titles of those responsible for the control of accumulation of flammable or combustible waste materials (8 CCR 3221[b). Compliance with existing Cal/OSHA requirements and safe construction practices will reduce construction-related fire hazards to a less-than-significant level.

Although construction activities conducted near parklands could impede access to or temporarily detract from the enjoyment and functionality of those areas and facilities, existing requirements, regulations, and other provisions are already in place which provide reasonable assurance that any short-term impacts that might be created during construction would be avoided or substantively minimized. Since none of the threshold criteria would be exceeded, the identified construction-term impact would be less than significant and no mitigation is recommended or required.

4.9.5.2 Operational Impacts

Police Protection

Environmental Impact 9-5*. Police Protection. Based on the Rialto Police Department's (RPD) existing staffing ratios, at full project build-out, the projected population of approximately 32,720 persons would generate an additional staffing demand for about 39.6 sworn offices and 17.2 full-time and 5.2 part-time civilian employees. Additional unquantified demands upon the RPD would also result from the operation of commercial and other non-residential uses and the congregation of people in public places. Those*

RPD employees would have corresponding equipment and spatial requirements that would not likely be met with existing RPD resources.

***Preliminary Determination 9-5**. Potentially significant unless mitigation incorporated.*[146]

The proposed project will add new residential units and additional non-residential square footage to the City and expand the existing patrol area and emergency response responsibilities of the RPD. Based on a per unit average population of 3.892 individuals per dwelling unit,[147] the proposed project will add an estimated 32,720 new residents to the City (based on a zero percent vacancy rate). Additional residential development and creation of new areas were people congregate will require additional police department services for a range of law enforcement activities. These incrementally increases in traffic volumes, number of dwelling units, square footages of non-residential space, City population, and expansion of service area will add to the need for the RPD to hire new personnel, add additional facility space to accommodate added personnel, and purchase and maintain additional equipment. Absent an expansion of RPD personnel and/or other affirmative actions, implementation of the proposed project would result in a reduced level of service, increased response times, and potentially increased rates of criminality within the City.

As noted by the RPD: "With an estimated increase in population of approximately 30,000 new residents as a result of this proposed development, the [Rialto] Police Department would need to grow by about 30% over the multiyear progress of the plan. Presently our current facility is outdated, as it was built when the City's population was less than 40,000, with no real plan for departmental growth. We are currently working out of an existing building, and three modular buildings. Any substantial increase in population would absolutely necessitate an entire new police facility, on and above the need to proportionally increase manpower and equipment."[148] With regards to the proposed project, the RPD further noted:

> It is noted that [Rialto] Police Department responses to calls for services may at times be excessive, which may have an impact on public safety. Officers responding to calls in the area have access by either the I-15 Freeway or Glen Helen Road. Frequently the I-15 Freeway experiences gridlock to the point of standstill traffic. When this occurs commuters attempt to avoid the freeway gridlock by taking the only other way through, which is Glen Helen Road. Traffic on Glen Helen Road can back up considerably and cause substantial delays. The Phase One [Neighborhood I] area is not large enough to warrant the full time stationing of a police officer. It is an unavoidable fact that in-progress serious crimes occurring in the central portions of Rialto draw much of our daily deployment of officers away from the north and south ends of the City. The proposed Phase One area is geographically distant from where officers will likely be responding from. That

[146]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, and/or other public facilities; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

[147]/ California Department of Finance, Table E-5 (City/County Population and Housing Estimates, 1/1/2008).

[148]/ Memorandum form Paul Wing, Sergeant, Rialto Police Department to Gina Gibson, Senior Planner, Development Services Department (Subject: Lytle Creek Specific Plan), September 16, 2009, p. 1.

> distance combined with the frequent traffic problems and limited means of access could create unsafe delays in police responses. Additionally, we cannot rely on the availability of mutual aid from the Sheriff's Department if an extreme danger existed, and our response was delayed. . .Disaster planning and preparation are also major concerns of the [Rialto] Fire Department. Both the Phase One [Neighborhood I] and Phase Four [Neighborhood IV] are surrounded by woodlands and are in an area where extreme Santa Ana winds are common. Fires occurring with this combination of conditions can make responses to the area impossible. In the 2003 during the Old and Grand Prix fires the I-15 Freeway and Glen Helen Road were completely shut down, with vehicles blocking any access. Additionally, there are not sufficient evacuation routes for the public should a windswept fire on the scale of the Old, Grand Prix, or Panorama fires occur in the Phase One area.[149]

The RPD acknowledge that Neighborhood I area is also subject to flooding and seismic hazards. During and immediately following flooding and seismic events, RPD "responses to the area would be difficult, as would any necessary evacuations. Phase Two [Neighborhood II] and Three [Neighborhood III], along the north side of Riverside Avenue, with the existing City limits of Rialto, do not pose the extreme concerns as those mentioned about Phase One [Neighborhood I]. There would still be manpower and infrastructure needs, including an entire new police facility, but the fire, flood, distance, and access problems would not be of the same magnitude. The Phase One development, and to a lesser degree, the Phase Four development would create significant challenges to the [Rialto] Police Department in response to both routine and emergency calls for service."[150]

As indicated in the "Rialto Police Department Chief's Report," the City's 115 sworn officers serve a population of 95,000 individuals.[151] Although the RPD's annual budget includes a broad range of costs (e.g., personnel, services and supplies, capital outlay, and debt service), based on an RPD FY 2008/2009 budget of about $23.93 million,[152] the average annual cost of each sworn officer can be calculated at about $208,110 per officer.

Based on those statistics, in the City, the ratio of sworn officers-to-population is about 1:825 or about 1.2 sworn officers per 1,000 residents. Assuming a desire on the part of the City to maintain that same population-to-sworn officer ratio, based on a projected on-site population of approximately 32,720 individuals at full project build-out (based on a zero percent vacancy rate), an additional 39.6 sworn officers would need to be incrementally added to the RPD.[153] Applying that same average annual cost per sworn officer (in 2008 dollars), at full build-out, the proposed project's recurring costs on the RPD could be estimated to be about $8.24 million (in 2008 dollars).[154] It would be anticipated that a substantial portion of those costs will be collected by the City in the form of increased property valuation.

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[149]/ *Ibid*., pp. 1-2.

[150]/ *Ibid*., p. 2.

[151]. City of Rialto Police Department, Rialto Police Department Chief's Report, March 2008, p. 3.

[152]/ *Op. Cit*., City of Rialto – Two Year Budget, Fiscal Years 2008/2009 & 2009/2010, p. 55.

[153]/ In addition to sworn officers, the RPD is presently (2008) comprised of 50 full-time and 15 part-time civilian employees, representing an employee to population ratio of 1:1,900 (0.5 full-time employee per 1,000 residents) and 1:6,333 (0.2 part-time employees per 1,000 residents), respectively. Assuming the same ratios were maintained, at project build-out, an additional 17.2 full-time and 5.2 part-time civilian employees would need to be added to the RPD. Each of those employees would contribute to the need for new equipment and added space. Those generalities do not consider any unique requirements that may be imposed by the anticipated demographics of the future LCRSP population, including seniors and children.

[154]/ These estimations are generalities and should not be interpreted as determinant of the actual impacts of the proposed project on the RPD.

As indicated in the City General Plan, it is not the goal of the City to merely maintain existing officer-to-population ratios. As indicated therein, the City shall provide a minimum of one full-time police officer for every 650 to 750 residents (Goal 7.2), which equates to about 1.3 to 1.5 full-time police officer for about every 1,000 residents. Using the less restrictive of those figures, the City General Plan stated goal translates into a project-related need for about 43.6 new sworn-officers. Based on the same average cost per sworn office cited above, at full build-out the estimated recurring annual cost would be about $9.08 million (in 2008 dollars). These estimates are consistent with the estimated $8.75 million (without 5 percent contingency) to $9.19 million (with 5 percent contingency) total recurring costs for police protection, as presented in the "detailed projected fiscal impacts" after build-out of the total specific plan (in constant 2007 dollars) in the "Lytle Creek Specific Plan Fiscal Analysis."[155]

There presently exists no direct mechanism to equate crime propensity to local land-use decisions. As specified under Resolution No. 4484 and as authorized under Sections 66000-66025 of the CGC, the City presently (2008) collections the following "development impact fee" for law enforcement: (1) $422 per "single-family unit"; (2) $988 per "multi-family unit"; (3) $0.24 per square foot for office, retail, and service space; and (4) $0.01 per square foot for industrial space.[156] In accordance therewith, assuming, for the purpose of approximation, that "single-family units" were synonymous with "single-family detached" and "multi-family units" were synonymous with all other housing types listed in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), the 7,082 "single-family units," 1,325 "multi-family units," and 849,240 square feet of non-residential uses (if categorized as "office, retail, and service space") authorized under the LCRSP would yield a one-time law enforcement development fees of approximately $4,501,522 (in 2008 dollars).[157]

It is noted that the current (2008) law enforcement development fee of approximately $4.50 million is less than the estimated recurring annual cost of about $8.24 million (in 2008 dollars) calculated herein for the provision of police services to the project site at full build-out.[158] The development impact fee has been independently determined from a Citywide perspective and is not intended to represent the estimated annual recurring cost to the RPD attributable to any single development project.

It is impractical for all development projects to dedicate real property for new police facilities since the siting of those facilities must occur on an areawide basis and remain subject to specific RPD-established facility siting criteria. As such, in addition to development impact fees, funding for law enforcement is typically derived through ad valorum taxation and based on yearly allocations that occur through the City's annual budget process. Increased property valuation provides a mechanism whereby the City, at the discretion of the City Council, has the

[155]/ *Op. Cit.*, Lytle Creek Specific Plan Fiscal Analysis, October 29, 2007, Table 3, p. 4.

[156]/ *Op. Cit.*, City of Rialto Schedule of Development Impact Fees, revised May 29, 2008.

[157]/ With regards to the payment of school impact fees, Section 65995(h) of the CGC states: "(h) The payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." Although no similar language is contained in Sections 66000-66025 of the CGC, it can be presumed that the payment of development impact fees constitutes "full and complete" mitigation for the impacts for which those fees are collected.

[158]/ The comparison between the estimated one-time development impact fee for law enforcement and the RPD's estimated recurring annual cost is presented for informational purposes only and is not intended to suggest that the payment of any such one-time fee directly equates with or provides full compensation to the Lead Agency for the RPD's ongoing obligation to provide additional service to the project site attributable to the proposed project.

ability to augment existing RPD resources to accommodate reasonably anticipated project-related demands. In general, police department staffing is based on each agency's own independent needs determination. There does not exist a standard ratio that can be universally applied to equate police department staffing to local population size. As such, quality of life considerations and other factors, rather than solely population growth, should be the basis for assessing the RPD's project-related future staffing needs.

As noted in a recent "FBI Law Enforcement Bulletin": "Population growth remains one issue that may affect staffing needs for police departments. An increase in population will result in additional calls for service, which will result in a need for additional police personnel. The degree to which a police agency integrates technology into their organization can affect staffing levels as well. Technology either can assist in making an organization's staffing levels leaner and flatter or may have little influence. Regardless of the issues that can affect staffing, at some point, managers must make a decision on how many additional personnel to add to their department. Data from several sources indicates that a number of different staffing ratios exist that police managers could use to project future staffing scenarios for their departments. They should view their new and existing staff in terms of some unit of measure, such as in relation to community population on a per-capita basis. Most law enforcement administrators will agree that funding for additional positions remains difficult to secure. In addition, as departments add personnel, administrators must maintain standards, and most important, they must base their staffing levels and goals on a predetermined officer-per-population ratio. Conversely, some city administrators believe that community growth through annexation has great potential to stretch the resources of a city and that a police department should base its staffing increases upon need, rather than a per-population ratio."[159]

As population levels increase and new community nodes are established, with increasing emphasis on community-based policing and bicycle patrols, at some time in the future, the RPD may benefit from having a satellite facility in the northern portion of City. Since population increases will occur incrementally as development occurs within each LCRSP neighborhood, a project-related need for new RPD facilities cannot be established at this time. A mitigation measure (Mitigation Measure 9-1) has been formulated to address potential project-specific impacts upon the RPD.

One factor that could affect the number of service calls is the configuration of the project's design, as well as the design, configuration, and orientation of individual dwelling units. Based on access and reduced surveillance opportunities, homes adjacent to parks and open space areas may have an increased propensity for criminality. Areas with limited opportunities for surveillance by residents, site users, or law enforcement personnel could become locations for crime. Oscar Newman, in "Defensible Space – Crime Prevention through Urban Design," noted: "Improvements in surveillance capacity – the ability to observe the public areas of one's residential environment and to feel continually that one is under observation by other residents while on the grounds of projects and within the public areas of building interiors – can have a pronounced effect in securing the environment for peaceful activities."[160]

Defensible space involves using architectural and environmental design to minimize the potential for criminal activity by promoting visibility and creating a sense of ownership. When space is used in such a way that makes people feel safe and secure in the community, design

[159]/ Maloney, Mike and Moty, Leonard, The Impact of Community Growth on the Staffing and Structure of a Midsized Police Department, FBI Law Enforcement Bulletin, Research Forum, Vol. 71. No. 1, January 2002, p. 9.
[160]/ Newman, Oscar, Defensible Space – Crime Prevention through Urban Design, 1973, p. 78.

can foster the likelihood for increased social interactions and deter criminality. Techniques, such as lighting, walls and fencing, and landscaping, can define spaces in a manner that promotes community safety by decreasing criminal activity.

The term "crime prevention through environmental design" (CPTED) was originally coined in 1971 by Ray Jeffery in "Crime Prevention through Environmental Design."[161] Jeffery's CPTED approach emphasized the role of the physical environment in the development of pleasurable and painful experiences for the offender that would have the capacity to alter behavioral outcomes. Numerous others have sought to build on his work. CPTED has now been integrated into design guidelines formulated by a number of police departments and other public agencies, notably the Cities of San Diego (California) and Tempe (Arizona).

As noted by the San Diego Police Department, CPTED "is based on a set of four design and usage concepts that can lead to a reduction in the incidence and fear of crime and an improvement in the quality of life. These concepts are defined briefly as follows: (1) Surveillance. Involves the location and use of physical features, electrical and mechanical devices, activities, and people to maximize visibility. It creates a risk of detection for intruders and a perception of safety for legitimate users. (2) Access control. Employs people, electrical and mechanical devices, and natural measures to create a perception of risk to intruders and deny them access to targets. It also guides legitimate users safely through the environment. (3) Territoriality. Uses physical features and activities to express ownership and control of the environment and promotes pride in the environment. It also discourages presence of outsiders by controlling the movement of people and vehicles, having someone be responsible for maintaining all areas in the environment for their intended uses, and delineating public, semi-public/private, and private spaces, and controlling the movement of people and vehicles. (4) Maintenance. Allows the continued use of areas for their intended uses and maintains the effectiveness of measures employed for surveillance, access control, and territoriality."[162]

Although not directly applicable to the proposed project, code provisions from other communities provide examples of how some municipalities are adding CPTED. For example, as codified in the City of Tempe's (Arizona) "Zoning and Development Code": "Safe environments and pedestrian activities are interrelated and one cannot exist without the other. Therefore building designs should support pedestrian activities and provide natural surveillance of spaces from key locations inside and next to buildings. This should be accomplished through the appropriate design and placement of windows, entrances, pedestrian amenities, lighting, outdoor rooms (e.g., balconies, arcades, and similar features), and activity support. Buildings should incorporate entrances, windows, balconies, and activities allowing visibility of the street, parking areas, and entrances from inside buildings; and visibility of building entrances and other public gathering spaces from the street."[163]

While retaining design and development options and individuality for each planning area and seeking to avoid needless regimentally within individual neighborhoods, the Applicant has sought to incorporate a number of CPTED principals into the LCRSP. Applicable design concepts identified by the Applicant include the following.

[161]/ Jeffery, C. Ray., Crime Prevention through Environmental Design, 1971.
[162]/ San Diego Police Department, Neighborhood Policing Resource Team, Crime Prevention through Environmental Design (CPTED) for Urban Village Centers, May 2005, p. 1.
[163]/ City of Tempe, Arizona, Zoning and Development Code, adopted January 20, 2005, Appendix A, p. A-3.

- The front yards, the fronts of buildings, and the main entries to dwelling units should face streets or driveways so as to facilitate normal patrolling by police cars and police response to residents' request for assistance. This will enable residents across the street, whose units also face the street, to survey their neighbors' front doors.
- Sidewalks or walkways shall be provided for safe convenient direct access to each dwelling unit and for safe pedestrian circulation throughout a development between facilities and locations where major need for pedestrian access is anticipated. Walkways shall be located so that they are easily seen from the interiors of units.
- Lighting shall be provided at walks, ramps, parking lots, and entrances to dwelling units. The intent is not to bathe the site with light, but to provide adequate lighting for surveillance purposes. In most cases, lighting should be directional to avoid unnecessary sky glow, glare, and light trespass.
- Plantings should not be placed so as to screen the doors and windows of dwelling units from views from the street or from walkways leading from the street to the dwelling unit entries.
- Plant materials should be selected and arranged to permit full safe sight distance between approaching vehicles at street intersections. Additional attention is required where driveways enter streets, at crosswalks and especially in areas of concentrated mixed pedestrian and vehicular movement. Plantings that hide pedestrians from passing motorists should be avoided.
- Distinguish private spaces from public spaces by using landscaping plantings, pavement designs, walls and fences, grade changes, and other visual cues to differentiate spaces.
- Perceived safety is as important as actual safety. A park that is well-maintained and cared for presents itself as a safe and fun place where people want to spend time.
- Design walls to be "graffiti resistant" through carefully selecting materials and coatings. Installing plant materials along walls will help to make walls less desirable to graffiti vandalism.
- Design spaces around public buildings so that residents can meet and interact (e.g., foundations, benches, playgrounds, seating walls, etc.).

Notwithstanding the inclusion of these Applicant-proposed concepts, a number of mitigation measures (Mitigation Measure 9-2 through Mitigation Measure 9-3) have been formulated specifying the provision of clearly identifiable street addresses and building numbers to facilitate emergency response, providing the RPD the opportunity to review the project's individual design elements in order to reduce the potential demand upon police services though the incorporation of CPTED principals, obligating payment of applicable fees, and imposing such additional requirements as may be reasonably imposed by the RPD. Implementation of those measures would reduce project-related impacts on the RPD to a less-than-significant level.

Environmental Impact 9-6*. Police Protection. Construction and occupancy of 8,407 dwelling units and 849,420 square feet of non-residential uses and the traffic those units and uses generate on Interstate freeway system and along roadways in County unincorporated areas will increase existing demands upon California Highway Patrol resource.*

Preliminary Determination 9-6*. Less-than-significant impact.*

The CHP responds to traffic accidents on State highways, components of the Interstate highway system, and traffic accidents on all streets located in unincorporated areas of the State. The primary source of funding for the CHP is through California's Motor Vehicle Registration Fee.

The allocation of these fees to each service area is determined by CHP headquarters (Sacramento) based on its determination of each area's service needs. Each division determines its own staffing allocation relative to the geographic needs within its boundaries based on that service area's unique requirements and budget constraints.

The CHP provides law enforcement assistance to the SBCSD, RPD, and to other municipal law enforcement agencies through an informal mutual aid agreement. CHP General Order 0.1 specifies that one of the missions of the CHP, in its role as a major Statewide law enforcement agency, is that it "supports local law enforcement and stands ready to assist in emergencies exceeding local capabilities."

The CHP has not formulated any long-range planning document, established any staffing requirements or standards, or adopted impact fees which would allow individual development projects to quantify impacts on CHP resources. Although annexation of unincorporated lands into the City would reduce the CHP service area, it can be assumed that the construction and occupancy of 8,407 dwelling units and 849,420 square feet of non-residential land uses and the traffic those units and uses will generate on the State and Interstate freeway system and other roadways in County unincorporated areas will increase existing demands upon CHP resources, including traffic enforcement, emergency incident management, public service, assistance, and accident investigation on unincorporated roadways and freeways. If staffing and resource levels were to be maintained at existing levels, increasing traffic volumes would likely translate into longer (delayed) response times and decreased service levels.

The traffic analysis concludes that, as mitigated, areawide roadways would not be significantly impacted as a result of project-generated traffic. Project implementation will, therefore, not result in the creation of traffic delays that would impact emergency response times. The payment of motor vehicle registration and driver's license fees by on-site residents and businesses will increase revenue opportunities available to the CHP and provide funding for additional staffing and equipment to meet, either in whole or in part, future demands.

Fire Protection

Environmental Impact 9-7*. Fire Protection. Based on the Rialto Fire Department's (RFD) existing staffing ratios, at full project build-out, the projected population of approximately 32,720 persons would generate an additional staffing demand for about 27.2 department personnel. Additional unquantified demands upon the RFD would also result from the operation of commercial and other non-residential uses and the congregation of people in public places. Those RFD employees would have corresponding equipment and spatial requirements that would not likely be met with existing RFD resources.*

Preliminary Determination 9-7*. Potentially significant unless mitigation incorporated.*[164]

[164]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, and/or other public facilities; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The RFD notes that the area comprising Neighborhoods I and IV are a concern with regards to emergency response time and coverage. A plan for fire protection and services has not been developed by the RFD and the RFD and the SBCFD have not met to formalize and finalize plans and/or agreements for fire service delivery to that area. In addition, the City has a contract in place with Rialto Firefighters Local 3688 that requires membership approval or voters' approval to contract fire services. Additionally, the RFD has rights granted through the H&SC allowing the City to provide advanced and basic life support ambulance transportation. Annexed areas must have RFD paramedic transport or the local emergency management service (EMS) agency could revoke the City's rights within the current City boundaries.

In discussions between the Applicant and representatives of the RFP, four options have been identified with regards to the provision of fire protection and paramedic services to the project site. Each of those options is briefly described below.

- **Option 1 (Full annexation and City provides fire protection services)**. Under this option, the geographic area comprising the proposed LCRSP would be annexed into the City and the RFP would provide fire protection services for the full development. The RFP has indicated that an additional Engine Company and Medic Ambulance would be required. In addition, a new fire station would be needed to serve the area. Capital costs for equipment and the new fire station are estimated to be $5,160,000 and annual operations and maintenance costs are estimated to be $2,275,475 (2008 dollars).

- **Option 2 (Full annexation and City and County share fire protection services)**. Under this option, the geographic area comprising the proposed LCRSP would be annexed into the City, the County would provide fire protection services to that portion of Neighborhood I located to the north of the I-15 Freeway from a new fire station planned in that area (i.e., County Fire Station No. 81), and the City would provide fire protection services for the remainder of the proposed LCRSP. Under this option, the SBCFD would need to be reimbursed by the City for their estimated operations and maintenance costs for providing fire protection services to a portion of Neighborhood I and all of Neighborhood IV. In this case, the RFD has identified a need for an additional Medic Ambulance that would operate out of City Fire Station No. 4. Capital costs for a Medic Ambulance is estimated to be $160,000 and annual operations and maintenance costs are estimated to be $752,5805 (2008 dollars).

- **Option 3 (Partial annexation and City and County provide fire protection service within their respective jurisdictions)**. Under this option, the area located to the north of the I-15 Freeway would not be annexed into the City and the City and the County would provide fire protection services for their respective jurisdictions. Under this option, the SBCFD would not need to be reimbursed by the City for their estimated operations and maintenance costs for providing fire protection services to a portion of Neighborhood I and all of Neighborhood IV. Since this area would not be annexed, there would be no transfer of the underlying fire protection fire protection property tax to the City. In this case, the RFD has identified a need for an additional Medic Ambulance that would operate out of City Fire Station No. 4. Capital costs for a Medic Ambulance is estimated to be $160,000 and annual operations and maintenance costs are estimated to be $752,5805 (2008 dollars).[165]

[165]/ Memorandum from Stan Hoffman, President, Stanley R. Hoffman Associates to Jim Bruce, Deputy Fire Chief, City of Rialto Fire Department (Subject: Lytle Creek Annexation Fire Protection Service Alternatives), June 12, 2008, p. 2.

- **Option 4 (Pay per call plan)**. Under this option, the RFD would maintain primary service to Neighborhoods I and IV and would develop a pay per call plan for reimbursement to the County for fire protection services provided to those neighborhoods.

Proposed is the detachment of all or a portion of project lands from the San Bernardino County Fire Protection District and its Valley Service Zone and the transfer of fire protection and paramedic responsibilities for those lands so detached to the RFD. Upon annexation, unless otherwise modified pursuant to the provisions of a memorandum of understanding and cooperative fire operations agreement or similar instrument that may be executed between the City and the County,[166] the RFD will provide the following services to the annexation area: fire suppression, hazardous materials, fire investigation, fire prevention, fire permits and plan review, paramedic service, ambulance transport, weed abatement, public education, and other services as needed. As it does in the remainder of the City, the RFD would rely on CONFIRE, a joint powers authority, to provide dispatch and communications services to support the fire department service in the annexation area.[167]

Annexation of County unincorporated areas would alter the boundaries of State Responsible Area (SRA) lands and the jurisdictional authority of CALFIRE and the RFD over those lands. Upon annexation, the SRA designation would be removed and the financial obligation for fire protection over those lands transferred to the City. The RFD and CALFIRE may execute a memorandum of understanding and cooperative fire operations agreement or similar instrument specifying any resources to be shared and the areas in which the parties will provide mutual aid.

The proposed project will add new residential units and additional non-residential square footage to the City and expand the existing service area and emergency response responsibilities of the RFD. The proposed project will add an estimated 32,720 new residents to the City. Additional residential and non-residential development and the creation of new areas were people will congregate will require additional fire and paramedic services. These incrementally increases in traffic volumes, number of dwelling units, square footages of non-residential space, City population, and expansion of existing service area will require the RFD to hire new personnel, potentially add new fire department facilities, and purchase and maintain additional apparatus. Absent an expansion of RFD personnel and/or other affirmative actions by the RFD, implementation of the proposed project would result in a reduced level of service, increased response times, and potentially increased public safety risks.

As indicated in the "Rialto Fire Department Annual Report – 2006," serving a reported population of 105,000 persons, the RFD has 82 authorized full-time one part-time personnel, as well as 28 volunteer explores, 8 reserves, and 4 chaplains.[168] Similarly, the RFD's annual budget for FY 2008/2009 of about $14.48 million lists 82 budgeted personnel.[169] Although the RFD's annual budget includes a broad range of costs (e.g., personnel, services and supplies,

[166]/ Under a memorandum of understanding and cooperative fire operations agreement or similar instrument that may be executed between the City and the County, the SBCFD could continue to provide primary fire protection and paramedic services to certain portions of the project site that may be collectively determined to be best serviced by existing or proposed County facilities. Any such agreement would delineate the geographic areas of responsibility and include a mechanism for the allocation of revenues between agencies based, in part, on service area responsibilities.

[167]/ CONFIRE is staffed by the County by contract and currently serves the annexation area.

[168]/ City of Rialto Fire Department, Rialto Fire Department Annual Report – 2006, undated, p. 8.

[169]/ *Op. Cit*., City of Rialto – Two Year Budget, Fiscal Years 2008/2009 & 2009/2010, p. 51.

capital outlays, and debt service), based on that budget, the annual cost per full-time personnel is about $176,530.

Based on those statistics, in the City, the ratio of full-time personnel-to-population is about 1:1,280 or about 0.78 fire personnel per 1,000 residents. According to the International City/County Managers Association (ICMA) Performance Consortium, the national average is 1.0 firefighters per one thousand population.

Assuming a desire on the part of the City to maintain that same fire department personnel-to-population ratio, based on a projected on-site population of approximately 32,720 individuals at full project build-out (based on a zero percent vacancy rate), an additional 25.5 full-time personnel would need to be incrementally added to the RFD. Applying that same average annual cost per full-time personnel (in 2008 dollars), at full build-out, the proposed project's recurring costs on the RFD could be estimated to be about $4.51 million (in 2008 dollars).[170] It would be anticipated that a substantial portion of those costs will be collected by the City in the form of increased property valuation. These estimates are consistent with the estimated $4.15 million (without 5 percent contingency) to $4.36 million (with 5 percent contingency) total recurring costs for fire protection, as presented in the "detailed projected fiscal impacts" after build-out of the total specific plan (in constant 2007 dollars) in the "Lytle Creek Specific Plan Fiscal Analysis."[171]

As specified under Resolution No. 4484 and as authorized under Sections 66000-66025 of the CGC, the City presently (2008) collections the following "development impact fee" for fire facilities: (1) $390 per "single-family unit"; (2) $413 per "multi-family unit"; (3) $0.24 per square foot for office, retail, and service space; and (4) $0.01 per square foot for industrial space.[172] In accordance therewith, assuming, for the purpose of approximation, that "single-family units" were synonymous with both "single-family attached" and "single-family detached" and "multi-family units" were synonymous with "multi-family," as listed in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), the 7,082 "single-family units," 1,325 "multi-family units," and 849,240 square feet of non-residential uses (if categorized as "office, retail, and service space") authorized under the LCRSP would yield a one-time fire facility development impact fee of approximately $3,513,023 (in 2008 dollars).[173]

It is noted that the current (2008) one-time fire facilities development fee of approximately $3.51 million is less than the estimated recurring annual cost of about $4.51 million (in 2008 dollars) calculated herein for the provision of fire protection services to the project site at full build-out.[174] The development impact fee has been independently determined from a Citywide perspective and is not intended to represent the estimated annual recurring cost to the RFD attributable to any single development project.

[170]/ These estimations are generalities and should not be interpreted as determinant of the actual impacts of the proposed project on the RFD.

[171]/ *Op. Cit*., Lytle Creek Specific Plan Fiscal Analysis, October 29, 2007, Table 3, p. 4.

[172]/ *Op. Cit*., City of Rialto Schedule of Development Impact Fees, revised May 29, 2008.

[173]/ It can be presumed that the payment of development impact fees constitutes "full and complete" mitigation for the impacts for which those fees are collected.

[174]/ The comparison between the estimated one-time fire facilities development fee and the RFD's estimated recurring annual cost is presented for informational purposes only and is not intended to suggest that the payment of any such one-time fees directly equates with or provides full compensation to the Lead Agency for the RFD's ongoing obligation to provide additional service to the project site attributable to the proposed project.

The RFD reports a total of 10,400 calls per year,[175] inclusive of both emergency and non-emergency and both residential and non-residential calls. Based on a RFD reported service population of 105,000 persons, in the City, a call generation factor of 0.1 calls per capita can be calculated. The project's estimated population of 32,720 individuals would, therefore, generate a total of about 3,272 calls per year. On average, this represents about 9.0 calls per day. Since emergency events do not occur on a regular schedule, there will be days of higher and lesser activity. The RFP reports that about 76 percent of all calls are for "emergency medical service/rescue" (EMS) 6 percent are for "fire," and 4 percent are "false alarms." It could be assumed that similar percentages would likely apply to calls associated with or attributable to the proposed project.[176]

The RFD data most likely over-estimates the call volume to the proposed development as the data includes calls to the older parts of the community, including the downtown area. These areas typically generate more calls than new "upscale" areas. In most fire departments, the fire stations in old downtown areas are the busiest.[177]

The number of emergency calls would not typically be the sole basis for determining whether a new fire station is required. Typically, the decision to build a new fire station would be premised on the ability of the local provider to attain the response time performance standards (e.g., NFPA 1710) established by that agency for emergency calls.

As noted by the Commission on Fire Accreditation International (CFAI) (now the Center for Public Safety Excellence): "As a city grows in population, so will the number of emergency responses requiring fire department intervention. This increased call volume places more demands on fire department assets. The new calls occur either in new areas far from an existing station (which results in long response times) or within the normal coverage area. Call volume increase results in each apparatus being busier, and thus each fire company has a higher probability of being busy when another call for service comes in. This then requires an apparatus from another station to respond; the farther away the station, the greater the response time. As this simultaneous demand for department assets rises, response times increase. At some point, the percentage of calls that meet the desired response time criteria will drop below the desired performance goals. The threshold point is defined as the point at which a station drops below the desired response time performance standard."[178] As further noted by the CFAI: "Generally, fire protection practitioners try to position stations to cover 90 percent of the ground in each first-due district, provide overlap for concentration, and allow for redundancy to handle multiple calls for service and for equity of access to customer service. It is economically impossible to cover 100 percent of the ground."[179]

The CFAI recognizes that response time elements area a "cascade of events," including: (1) notification (Notification begins when the fire dispatcher receives the call or alarm); (2) alarm processing (alarm processing is defined as the interval of time between the notification of alarm to the dispatcher and the receipt of the alarm by the emergency responders; the CFAI benchmark is 50 seconds); (3) turnout time (turnout time is from when the alert tones in the

[175]/ *Op Cit.*, Fire Agencies Emergency Response Study for the Lytle Creek Ranch Development, Rialto, California, p. 3.
[176]/ *Op. Cit.*, Rialto Fire Department Annual Report – 2006, p. 9.
[177]/ *Op. Cit.*, Fire Agencies Emergency Response Study for the Lytle Creek Ranch Development, Rialto, California, p. 3.
[178]/ Commission on Fire Accreditation International, Creating and Evaluating Standards of Response Coverage for Fire Departments, Forth Edition, undated, Chapter 6, p. 12.
[179]/ *Ibid.*, Chapter 6, p. 9.

station until units indicate they are responding to the call; the CFAI benchmark is 60 seconds); (4) travel time (this is the point at which the units indicate they are responding to the call until they indicate arrival at the scene; and (5) on-scene time (on-scene time is the point at which the responding unit arrives at the emergency and ends recording of the total response time).[180] When this sequence of events is considered in combination with the NFPA 1710 criteria of 4-minute initial response time, the CFAI's fire response first company guidelines are 5 minutes and 50 seconds at least 90 percent of the time, measured from alarm processing to on-scene.

ISO fire station siting criteria (e.g., within 1½ miles for a first-due engine company and within 2½ miles a ladder-service company) serves as a general guideline and is predicated, in whole or in part, on the achievement of the recommended response time for a local fire department to arrive at an incident. More detailed information, based on an isochronal evaluation, can effectively substitute for uniform station siting.

A "four-minute response time analysis" was conducted to ascertain whether existing fire stations could access areas proposed for development within the four-minute response time outlined in NFPA 1710. Those areas proposed for retention as open space were not considered since EMS responses would not typically be generated from those areas. Although fire incidents could originate from within those areas, no occupied structures are planned therein.

As illustrated in Figure 4.9-15 (Rialto Fire Department - Four-Minute Response Time Analysis), based solely on response from RFD Stations 202 and 204, with the exception of limited areas in PA 82 (designated "SRF-3") and PA 83 (designated "SFR-2) in Neighborhood II, Neighborhoods II and III are located within a 4-minute response distance from existing RFD stations. As a result, based on facility siting and absent any consideration of personnel and equipment, it can be reasonably concluded that Neighborhoods II and III are adequately served by the RFD.

With regards to existing RFD facilities, no portion of Neighborhood I and all or a substantial portion of Neighborhood IV appears to fall outside a four-minute response time. Although USFS Station 32 (Sycamore Station) is located within or directly adjacent to Neighborhood I and is situated in close proximity to Neighborhood IV, because it is neither a City nor County facility and is only operational during wildland fire season (typically May through November), based on its current operational status, USFS Station 32's proximity and availability cannot be applied to an assessment of the proposed project. As a result, existing RFD facilities do not currently appear to allow attainment of NFPA 1710 standards for ≥90 percent of the project site. However, as described above, a number of options have been identified by the RFD which would allow for the provision of acceptable service to Neighborhoods I and IV. Additional information concerning fire agency emergency response is presented in Appendix III-I (Fire Agency Emergency Response Study).

Within County unincorporated areas, fire protection and emergency services are presently provided to the LCNPD, GHSP, and Lower Lytle Creek areas by the SBCFD. The nearest SBCFD facilities to those areas are Station 2 (1511 Devore Avenue, Devore) and Station 75 (2156 Darby Street, Muscoy). Station 2 is the nearest to Neighborhoods I and IV, located more than 1½ miles to the northeast.

The Fontana Fire Protection District serves the northern portion of the City of Fontana and certain unincorporated areas from Station 79 (5075 Coyote Canyon Road, Fontana) and Station

[180]/ *Ibid*., Chapter 5, pp. 2-3.

78 (7110 Citrus Avenue, Fontana). Station 79 is the nearest to Neighborhoods I and IV, located more than 1½ miles to the southwest. The response time from these stations to Neighborhoods I and IV are in excess of 10 minutes, deemed to be "unacceptable when life/safety and emergency medical help is needed. However, these two stations will provide valuable backup to the community for those incidents that exceed the capabilities of a single engine response."[181] As a result, reliance upon SBCFD Station 2 and/or FFPD Station 79 alone will not allow attainment of NFPA 1710 standards for ≥90 percent of Neighborhoods I and IV.

When approving the LCNPD, as stipulated by the County Board of Supervisors, this new fire station must be constructed prior to occupancy of the 1,000th dwelling unit in Rosena Ranch and, upon completion, will be staffed and operated by the SBCFD. The following condition of approval (Condition 127) was established at that time: "Fire Protection. Prior to the approval of the first final tract map, including the initial subdivision of the project site into specific planning areas, the Applicant shall enter into an agreement with the San Bernardino County Fire Department addressing the Applicant's 'fair-share contribution' toward the funding of any capital improvements (i.e., facilities and equipment) and associated operations-maintenance budget as may be required for the provision of fire protection services to the project site. The Applicant's 'fair-share contribution' could include the provision of other in-kind resource acceptable to the SBCCFD. Execution of that agreement and the fulfillment of any performance requirements imposed on the Applicant thereunder shall serve to demonstrate the SBCCFD's ability and willingness to adequately serve and support the project and shall serve to fully mitigate the project's impacts on all fire protection agencies that may provide primary or secondary response to the project site."[182]

As noted, the LCNPD is conditioned upon the development of a new County fire station (SBCFD Station 81) on Glen Helen Parkway. With regards to that station, following the approval of Lytle Creek North, the LCNPD's project proponents executed a fair-share agreement with the County. As stipulated therein: "LDC [Lytle Development Company] shall (i) build and deliver to SBCCFD a fire station in accordance with the specifications and requirements set forth on Exhibit D attached hereto (the 'Fire Station'), and (ii) advance to SBCCFD sufficient funds to purchase a Type I fire engine and equipment in accordance with the specifications and requirements set forth on Exhibit D attached hereto (the 'Fire Equipment'). LDC shall substantially complete the Fire Station prior to the issuance of a certificate of occupancy for the 1000th detached single family residential unit in the [LCNPD] Project. Lytle shall advance the required ordering deposit for the Fire Equipment at least one year prior to the projected substantial completion date for the Fire Station and pay the balance of the cost of the Fire Equipment upon delivery. For purposes hereof, the Fire Station shall be deemed 'substantially complete' when (a) the Fire Station has been completed except for minor punchlist items that do not prevent occupancy and use of the Fire Station and (b) the County has issued a temporary or permanent certificate of occupancy for the Fire Station. Subject to the reimbursement requirements of Section 5 below, the County and SBCCFD acknowledge and agree that (i) the construction and delivery of the Fire Station, (ii) the delivery of the Fire Equipment, and (iii) the payment of the Operating Cost Deficit Contribution described in Section 3.2 below collectively constitute LDC's fair share contribution

[181]/ County of San Bernardino, Special Districts Department, Report/Recommendation to the Board of Supervisors of San Bernardino County, California and Record of Action, Subject: Approve Fair-Share Contribution Agreement(s) between Lytle Development Company and County Service Area 70, Improvement Zone GH (Glen Helen) and the San Bernardino County Consolidated Fie District for the Lytle Creek North Planned Development Project, April 19, 2005, Exhibit E.

[182]/ *Ibid*., Exhibit C.

for the mitigation of impacts to fire facilities and services in connection with the [LCNPD] Project."[183]

As proposed SBCFD Station 81 will be sited within or adjacent to PAs 14 and 15. Once operational, with regards to the LCNPD and by extension the proposed LCRSP, "response time to emergencies within the community will be 4-6 minutes, well within NFPA guidelines."[184]

Assuming that SBCFD Station 81 were operational, based on facility siting and absent any consideration of personnel, equipment, and other organizational (e.g., between the City and the County with regards to the provision and funding of services) or other considerations (e.g., contract provisions), it can be reasonably concluded that Neighborhoods I and IV are adequately served by the SBCFD. However, SBCFD Station 81 is not yet constructed, no building permits have been issued by the County for that facility, and no agreements have been executed between the City and the County with regards to the SBCFD's provision of fire protection and emergency services to those portions of the LCRSP not previously a part of the LCNPD and GHSP.

Pending the commencement of operation of SBCFD Station 81, because adequate response times to Neighborhoods I and IV cannot be reasonably assured, a mitigation measures (Mitigation Measure 9-4) has been formulated which would effectively serve to restrict development within Neighborhoods I and IV until such time as SBCFD Station 81 were to commence operation, alternative fire protection and emergency response facilities were to be provided, or evidence of adequate and appropriate services and compensatory fire protection could be provided to the satisfaction of the RPD or the agency with fire protection and emergency services jurisdiction over that area. An additional mitigation measure (Mitigation Measure 9-5) obligating payment of applicable fees and imposing such additional requirements as may be reasonably imposed by the RFD is included herein. Implementation of those measures would reduce project-related impacts on the RFP to a less-than-significant level.

Public Schools

Environmental Impact 9-8*. Public Schools. Project implementation will increase enrollment within the Rialto Unified School District, Fontana Unified School District, and/or San Bernardino City Unified School Districts, thus placing additional personnel, resource, and spatial demands on existing facilities located in the general project area, and/or predicating the need to construct, staff, and equip new elementary, middle, and/or high schools to serve increased attendance.*

Preliminary Determination 9-8*. Potentially significant unless mitigation incorporated.*[185]

[183]/ *Ibid*., Section 3.1.
[184]/ *Ibid*., Exhibit E.
[185]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, and/or other public facilities; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

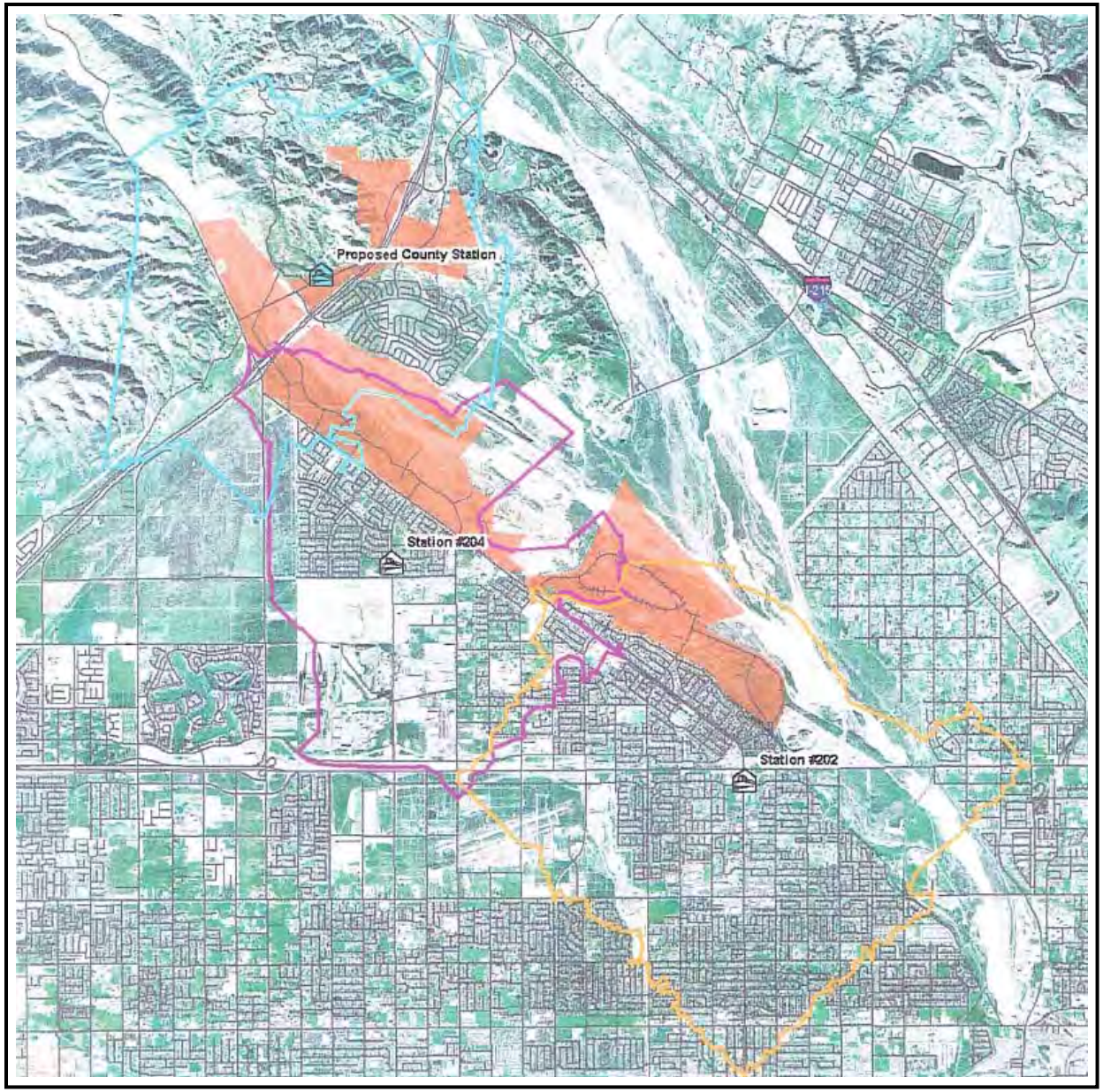

Figure 4.9-15
RIALTO FIRE DEPARTMENT FOUR-MINUTE RESPONSE TIME ANALYSIS
Source: Hunt Research Corporation

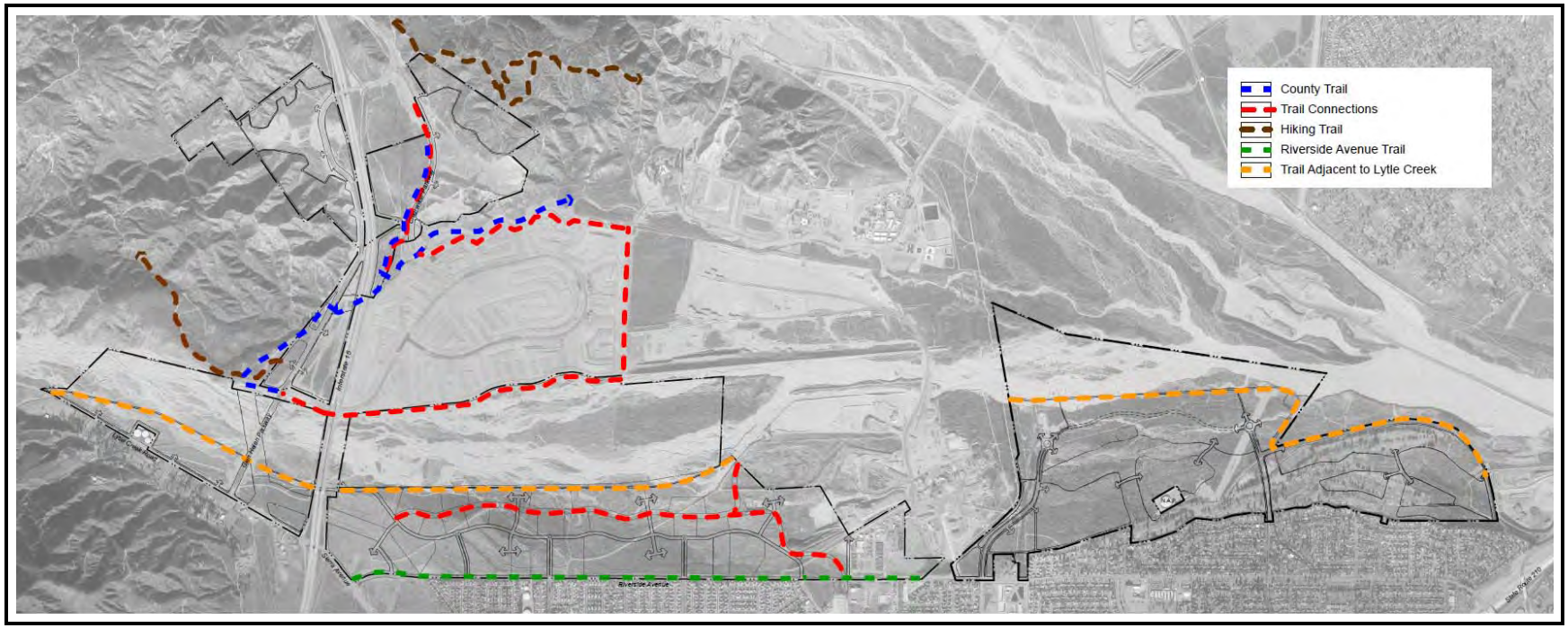

Figure 4.9-16
LYTLE CREEK RANCH SPECIFIC PLAN CONCEPTUAL TRAIL SYSTEM
Source: Lytle Development Joint Venture III

The project site is located within the boundaries of three separate school districts. As illustrated in Figure 4.9-10 (Existing School District Boundaries) a portion of Neighborhood I and the developed areas within Neighborhoods II and III are located within the boundaries of the Rialto Unified School District (RUSD). A portion of Neighborhood I and the undeveloped portions of Neighborhoods II and III are located within the boundaries of the San Bernardino City Unified School District (SBCUSD).

Neighborhood IV is located within the boundaries of the Fontana Unified School District (FUSD). New residential development within those neighborhoods will directly impact each school district through the introduction and enrollment of new school-age children. New non-residential development will introduce new workers within district boundaries who may elect to enroll children into schools within the district where they are employed.

As proposed, Neighborhood II will be comprised mostly of age-restricted housing. It would be anticipated that few, if any, school-age children would reside in Neighborhood II. As such, although 2,931 active-adult dwelling units are planned therein, the number of new students originating from Neighborhood II would be expected to be minimal. Notwithstanding the nature of housing proposed therein, nothing in School Facilities Act of 1986 appears to exempt the payment of statutory school impact fees (Section 17620, CEC) for age-restricted housing.[186] Individual school districts (including the RUSD, FUSD, and SBCUSD), recognizing their lower generation student generation rates associated, impose a lesser fee on senior housing (comparable to that assessed commercial and industrial uses) that other residential unit types. As such, any assessment of school enrollment impacts must look beyond merely the number of dwelling units and non-residential square footage now proposed and examine the precise nature of the project-level development being considered.

The planning areas that comprise the LCRSP are not coterminous with existing school district boundaries, such that the potential exists that families residing on the same block or along the same street (such that the children interact in a residential setting) may send their school-age children to different schools in different districts. Because the project's planning areas and each district's boundaries are not aligned and the internal transferability or residential units and non-residential square footages between neighborhoods, pending the preparation of project-level loting plans, it is not possible to precisely predict the number of dwelling units and/or the square footage of non-residential uses that would be located within each school district. Similarly, because the proposed LCRSP includes two future school sites (proposed within the jurisdiction of the RUSD) the Applicant may seek approval from one of more school districts to allow for modifications of existing school district boundaries in order to reduce the need for student busing and/or avoid situations where neighbors' children attend different schools.

Assuming the retention of the existing school boundaries and a reasonable approximation of the residential and non-residential development that is now proposed within each of those districts, estimates of district-specific impacts can be formulated but remain subject to revision once project-project development proposals are submitted to the City. Each of the three school districts is separately discussed below.

- **Rialto Unified School District**. A substantial portion of the project site lies within the boundaries of the RUSD. Because much of the discussion of school-related impacts would be expected to be reasonably similar regardless of which school district were to

[186] State law generally allows local jurisdictions to reduce or waive fees for affordable or senior housing projects (e.g., Section 65589.5[a], CGC).

be affected, some of the following discussion should also be viewed as applicable or potentially applicable to project-related impacts upon the FUSD and SBCUSD.

◊ **Capacity Compared to Enrollment**. As illustrated in Table 4.9-12 (Rialto Unified School District – Existing School Building Capacity Compared to Current Enrollment),[187] the RUSD's "School Facilities Needs Analysis" concludes that existing (2007) school enrollment is in excess of the design capacity of existing RUSD facilities. As a result, the RUSD states that, if this shortfall were converted into "equivalent schools," the RUSD has a "current need for approximately 6.2 elementary schools, 80% of a middle school, and 20% of a high school."[188]

Table 4.9-12
RIALTO UNIFIED SCHOOL DISTRICT - EXISTING SCHOOL BUILDING CAPACITY COMPARED TO CURRENT ENROLLMENT

Grade	Capacity	Enrollment	Capacity Excess (Shortfall)
K-6	11,312	15,956	(4,644)
7-8	3,632	4,637	(1,005)
9-12	8,183	8,666	(483)
Total	23,127	29,259	(6,132)

Source: Rialto Unified School District

Because "there are no existing seats for any new students in the District, all students generated by new residential construction are considered to be unhoused." Based on already approved projects, the total number of unhoused (2,218) students projected from "unmitigated new construction" is 1,235 students in Grades K-6, 315 students in Grades 7-8, and 669 students in Grades 9-12.[189] The total number of new schools required for by the RUSD merely to accommodate existing unhoused students are 1.65 elementary (Grades K-6), 0.26 middle (Grades 7-8), and 0.22 new high (Grades 9-12) schools.[190]

◊ **School Impact Fees**. The RUSD's "School Facilities Needs Analysis" notes that, based on a review of fee collection data comprising a total of 499 detached and 204 attached dwelling units between 2002 and 2007, the average size of a newly constructed "detached" unit within the district was 2,088 square feet and the average size of a newly constructed "attached" unit was 1,063 square feet.[191] Assuming, for the purpose of approximation, that "detached" is synonymous with "single-family detached" and "attached" is synonymous with both "single-family attached" and "multi-family," as listed in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), the 3,409 detached units and 4,998 other units which would be authorized under the proposed LCRSP would yield a total of 12,430,866 square feet of residential use.

[187]/ Rialto Unified School District (Brenda Curtis), School Facilities Needs Analysis, April 2007, Table 11, p. 26.
[188]/ *Ibid*., p. 27.
[189]/ *Ibid*., p. 28.
[190]/ *Ibid*., p. 33.
[191]/ *Ibid*., p. 20.

Making no distinction for senior vs. non-senior housing, applying the current (2008) maximum base Level 1 fees of $2.97 allowable under Section 17620 of the CEC, a total of approximately $36,919,672 would be paid to those school districts in whose jurisdiction those residential units were constructed. In addition, based on a maximum of 849,420 square feet of additional non-residential development and a maximum allowable school impact fee of $0.47 per square foot, $339,768 in additional school fees would be generated. These estimates are, however, subject to substantial change and revision.

School impact fees are subject to bi-annual revision by the SAB and, when imposed, will be allotted to the three school districts based on project-level development plans. As such, it is conjecture as to the amount of fees that each school district would collect over the build-out phase of the proposed project.

◊ **School Facilities Funding and Mitigation Agreement**. The RUSD's "School Facilities Needs Analysis" includes projected increases in the number of housing units within the district jurisdiction between 2005 and 2015. With regards to the two census tracts which encompass the LCRSP (Census Tracts 27.01 and 27.02), the RUSD assumes only an increase of 236 dwelling units over that time 10-year time period.[192] While the precise build-out schedule for the LCRSP cannot be determined, it must be assumed that development would occur at a faster rate than predicted in the RUSD's modeling. As a result, the RUSD may reasonably assert that the needs projection upon which its school impact fees are derived does not accurately reflect the likely impacts of the added enrollment attributable to the LCRSP. The RUSD may, therefore, seek to enter into a fair-share school facilities funding and mitigation agreement with the Applicant, rather than accept payment of school impact fees under Section 17620 of the CEC.

The likelihood of that agreement is made even more relevant as a result of the Applicant's proposed designation (and potential dedication) of two future school sites and abutting joint-use facilities within the LCRSP boundaries, including a 10-acre "elementary school" (PA 49) and 5-acre "open space/joint use" site (PA 48) and a 14-acre "elementary/middle school" (PA 69) and 12-acre "open space/joint use" site (PA 74) in Neighborhood III. The Applicant, subject to permit authorization and bilateral agreement, further retains the ability and discretion to construction recreational facilities within the "open space/joint use" properties and to apply the cost of those improvements as off-sets to any school impact fees owned to the benefitting school district.

The RUSD will independently determine whether: (1) the need exists for those school sites based on LCRSP-based and areawide attendance projections; (2) the sites are adequately sized and appropriately located based on applicable CDE siting criteria; (3) the appropriate amount of any off-set against school impact fees associated with real property dedication; (4) the amount of any additional fees owned to the district, if any; (5) the precise terms of any joint-use agreement with regards to the "open space/joint use" areas; and (5) the ownership and maintenance responsibilities of the shared facilities.

[192]/ *Ibid*., p. 12.

The Applicant may request that the City and/or one or more school districts form a community facility district (CFD) applicable to the proposed project and the project site, or some portion thereof. The Applicant, the City, and the school district(s) would then make best efforts to enter into a "CFD formation and funding agreement" setting forth those terms and conditions reasonably acceptable to those parties for financing the obligations set forth therein. The agreement would be expected to include provisions for securing payment of the special taxes with the project CFD, the total tax obligations to be imposed on homes with the project CFD, allocation of project CFD bond proceeds, and other terms consistent with applicable laws, policies, and procedures. The Applicant would be required to advance funds for the formation of the project CFD and issuance of any bonds thereof, subject to reimbursement, generally without interest, from project CFD bond proceeds.

The establishment of CFDs is exempt from CEQA.[193] Similarly, the potential existence of a fair-share school facilities funding and mitigation agreement between the Applicant and the RUSD does not elevate to a level of significance under CEQA.

◊ **Student Generation**. The student generation factor (SGF) for "detached" housing units within the RUSD is projected at 0.94 Grade K-12 students per dwelling unit, including 0.45 Grade K-5 students/unit, 0.19 Grade 6-8 students per unit, and 0.29 Grade 9-12 students pr unit. Counter-intuitively, the student generation rate for "attached" housing units within the RUSD is projected at 0.99 Grade K-12 students per dwelling unit, including 0.56 Grade K-5 students per unit, 0.20 Grade 6-8 students per unit, and 0.23 Grade 9-12 students per unit. This indicates that "attached" housing, which in the case of the RUSD is primarily apartments, generates more students than "detached" housing, particularly at the elementary level.[194]

In accordance therewith, assuming, for the purpose of approximation, that no school-age children would be generated from 2,931 active-adult living units proposed in Neighborhood II and that "detached" units were synonymous with "single-family detached" and "attached" units were synonymous with all other housing types listed in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), the 4,998 "attached" units and 3,409 "detached" units, presented in Table 4.9-13 (Student Generation Rate based on Rialto Unified School District Student Generation Factors) is the estimated number of students generated within the LCRSP within Grades K-12 at project build-out.

[193]/ In Kaufman & Broad - South Bay, Inc. v. Morgan Hill Unified School District, the courts found that the formation of a CFD by a local school district was not a "project" where the monies generated through the formation of that district were not committed to any particular course of action resulting in physical impacts on the environment. In that case, the school district successfully argued that the "mere act of securing financing for anticipated but uncertain future projects" would not have a significant effect on the environment. While the formulation of the CFD could contribute to the school district's ability to ultimately construct new schools, the CFD did not commit the school district to any particular course of action and did not influence "the ultimate decisions which affect the environment - whether, where, and when to build new schools." Since the formation of the CFD would not create a need for new schools and since the construction of new schools was not entirely dependent on the formation of the CFD, the court reasoned that there was no causal link between the formation of the CFD and the ultimate environmental effects that would be expected through the construction of new school facilities.

[194]/ *Op. Cit*., School Facilities Needs Analysis, p. 21.

Table 4.9-13
STUDENT GENERATION RATE BASED ON RIALTO UNIFIED SCHOOL DISTRICT STUDENT GENERATION FACTORS

Neighbor.	Grade	Housing Type		Student Generation Factor (students/DU)		Estimated Number of Students
		Attached (DUs)	Detached (DUs)	Attached	Detached	
I	K-5	695	583	0.45	0.56	639
	6-8			0.19	0.20	249
	9-12			0.29	0.23	371
II	K-5	1,443	1,488	NA[1]	NA[1]	Minimal[1]
	6-8					
	9-12					
III	K-5	1,991	1,338	0.45	0.56	1,645
	6-8			0.19	0.20	646
	9-12			0.29	0.23	885
IV	K-5	869	0	0.45	0.56	391
	6-8			0.19	0.20	165
	9-12			0.29	0.23	252

Notes:
1. Active-adult (age-restricted) housing.

Source: Environmental Impact Sciences

Collectively, the number of school-aged children residing in the project's 8,407 dwelling units is estimated to generate a total of 5,243 students, include 2,675 Grade K-5, 1,060 Grade 6-8, and 1,509 Grade 9-12 students. Based on school size criteria presented in Tables 1-6 of the CDE's "School Site Analysis and Development, 2000 Edition," assuming a school size of 1,200 students for both Grade K-5 (17.6 acres) and Grade 6-8 (23.1 acres) and 2,400 students for Grade 9-12 (52.7 acres), at build-out, the proposed project is estimated to generate a need for approximately 2.23 new elementary schools (39.23 acres), 0.88 new middle schools (20.4 acres), and 0.63 new high schools (33.14 acres), divided among three school districts.

It is noted that, for planning purposes, the RUSD defines "standard school size" as 750 students for Grades K-6 (13.6 acres), 1,200 students for Grades 7-8 (22.5 acres), and 3,000 students for Grades 9-12 (54.4 acres).[195] Based on grade differences, a direct application of those standards is not possible. It would appear, however, that the application of those school size standards would produce a need for a greater number of new elementary schools, a similar number of new middle schools, and a lesser number of new high schools, including a corresponding increase or decrease in school acreage.

Independent of the school size standard selected, the proposed LCRSP includes the designation of a single 10.0-acre elementary school site (PA 49), with an adjoining 5.0-acre area designated "Open Space/Joint Use" (PA 48), and single

[195]/ *Ibid*., Tables 12 and 15, pp. 27 and 31.

14.0-acre combined elementary/middle school site (PA 69) with an adjoining 12.0-acre area designated "Open Space/Joint Use" (PA 74). The number and acreage of those potential school sites would appear to fall short of those identified school needs, both in turns of the number and type of school sites identified and the acreage allotted for the development of new school facilities.

The Applicant's minimum obligations to local school districts, however, does not entail the designation and/or dedication of real property for school sites but only the payment of applicable school impact fees. Section 65995(h) of the CGC provides that "[t]he payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." As such, the Applicant can fulfill Section 17620 obligations through a variety of actions including, but not limited to, the dedication of real property, the payment of school impact fees, or the creation of a community facilities district.

Based on a broader assessment of school facility needs and the independent long-range plans of each school district, the affected district, rather that the City, should dictate the appropriate manner of compliance. A mitigation measure (Mitigation Measure 9-6) has been formulated that stipulates that, prior to the issuance of any building permits, the Applicant shall deliver to the City evidence of compliance with applicable school impact fee requirements. The City's receipt of that documentation constitutes evidence that impacts on each affected school district have been mitigated to a less-than-significant level.

◊ **School Site Designation**. The planned designation of two future school sites is not the same as the actual dedication of those sites to the affected school district. Since both sites are located within the boundaries of the RUSD, an affirmative acceptance of those sites would be required from the district, including a determination that each site was acceptably sized and located based on specified siting criteria. Absent consideration of additional acreage associated with adjoining "open space/joint use" sites, the 10-acre elementary school (except for an elementary school with enrollment of only 450 students) and the 14-acre elementary/middle school properties do not appear to conform to Table 1-6 of the CDE's "School Site Analysis and Development, 2000 Edition." However, with the addition of the adjoining "open space/joint use" sites, or some portion thereof, those spatial standards can be reasonably satisfied.

Real property dedications, if accepted by the benefitting school district, can serve as in-kind contributions to those districts and off-set, in whole or in part, the payment of school impact fees required under Section 17620 of the CEC. Because, at this time, the RUSD may be unable to quantify the precise amount of school impact fees required for residential and non-residential development activities proposed within its jurisdiction under the LCRSP, a mitigation measures (Mitigation Measure 9-6) has been formulated stipulating the Applicant's delivery

of a certificate of compliance or other documentation evidencing payment of school impact fees to the RUSD and/or execution of an AB 2926-authorized school facilities funding mitigation agreement. In addition, a mitigation measure (Mitigation Measure 9-7) has been formulated specifying that any school sites identified in the LCRSP be deemed acceptable to the benefitting school district.

- **Fontana Unified School District**. As authorized under School Board Policy 7211: "In order to finance the construction or reconstruction of school facilities needed to accommodate students coming from new development, the FUSD Governing Board may establish, levy and collect developer fees on residential, commercial and industrial construction within the district, subject to the restrictions specified by law and administrative regulations."

  Based on the findings of a "Developer Fee Impact Analysis," the FUSD has adopted the following per square foot fee schedule: (1) residential ($4.93); (2) commercial/industrial ($2.97); and (3) senior housing ($0.47). Although the fees assessed by the FUSD are substantially higher than those currently charged by the RUSD, the above analysis, including the recommended conditions of approval and mitigation measures, reasonably describe and adequately mitigate the impacts of the proposed project on the FUSD.

- **San Bernardino City Unified School District**. The SBCUSD's "Residential Development School Fee Justification Study for San Bernardino City Unified School District" and "Commercial/Industrial Development School Fee Justification Study for San Bernardino City Unified School District"[196] present the district's current (2008) assessment of average generation rates, amount of future development, and costs of school facilities required to accommodate new students generated from such development. In accordance therewith, the SBCUSD assesses the maximum allowable statutory school impact fees of $2.97 per square foot for accessible space of new residential construction and $0.47 per square foot of chargeable covered and enclosed space for commercial/industrial construction.

  Because the fees assessed by the SBCUSD are the same as those currently charged by the RUSD, the above analysis, including the recommended conditions of approval and mitigation measures, reasonably describe and adequately mitigate the impacts of the proposed project on the SBCUSD.

The Mello-Roos Act authorizes local government agencies to form CFDs to "finance the purchase, construction, expansion, improvement, or rehabilitation of any real or other tangible property with an estimated useful life of five years or longer," as well as related planning and design work (Section 53313.5, CGC). In fulfillment of Section 17620 (CEC) obligations, Section 65995(g) of the CGC authorizes the establishment of CFDs in lieu of the payment of school impact fees. The establishment of CFDs may be exempt from CEQA.

[196]/ San Bernardino City Unified School District (Dolinka Group), Residential Development School Fee Justification Study for San Bernardino City Unified School District, February 2008, adopted March 4, 2008; San Bernardino City Unified School District (Dolinka Group), Commercial/Industrial Development School Fee Justification Study for San Bernardino City Unified School District, February 2008, adopted March 4, 2008.

Public Libraries

***Environmental Impact 9-9**. Public Libraries. Project implementation will increase the resident population of the City or Rialto, including the number of school-age children, incrementally increasing existing spatial and resource-related demands now being placed on the San Bernardino County Public Library, Rialto Branch.*

***Preliminary Determination 9-9**. Less-than-significant impact.*

The introduction of new residents will increase localized demands on existing SBCPL services and facilities. Absent library expansion (measured in terms of spatial, collection size, personnel, and operational budget), existing service levels will decrease, materials will show greater wear, new resources and systems will not be introduced at a comparable rate, and access to County library services will diminish. Each of those areas is discussed below.[197]

- **Library Facility Impacts**. As indicated in the "San Bernardino County Library Master Plan," because the County Public Library "is required to absorb the cost of increasing library space, through purchase or lease, the ability to add public library space is severely impacted."[198]

  From a spatial perspective, the "San Bernardino County Library Master Plan" notes: "For many years the generally accepted minimum amount of library space for just adequate service was 0.60 SF [square feet] per capita."[199] Although examples of standards ranging between 0.8 square feet to 1.0 square feet per capita are cited, no formal spatial standards have been established for library facilities. The County notes: "There is no accrediting agency that will close, fine, or otherwise sanction any library system if adequate amounts of space are not provided. What does happen – at least in the experience of the library planning consultants – is that persons begin to make less use of a public library as it becomes increasingly crowded."[200] Absent formal facility planning goals, a reasonable measurement of library-related impacts would be predicated on per capita statistics concerning existing Countywide and local library facilities.

  Excluding its administrative facilities, the SBCPL has a total of 196,121 square feet of library space, representing a per capita average of about 0.19 square feet.[201] Although population projections for the LCRSP can vary substantially based on average household size factors selected, an on-site population of 32,754 persons (based on an average household size of 3.896 persons per unit and zero percent vacancy rate) has been estimated herein. Based on that population projection, the proposed project would generate a need for about 6,223 square feet of new library space just to maintain existing SBCPL space-to-population ratios. In comparison, the Rialto Branch Library has a total of 10,000 square feet of library space, representing a per capita average of about 0.11 square feet. Based on a projected on-site population of 32,754 persons, the

[197]/ Absent from the following analysis is any discussion of other independent library services and facilities including, but not limited to, those provided by the RUSD, FUSD, and SBCUSD and available at each school site and any private libraries not readily available to the general public.
[198]/ *Op. Cit.*, San Bernardino County Library Facilities Plan, p. 20.
[199]/ *Ibid.*, p. 35.
[200]/ *Ibid.*, p. 43.
[201]/ *Ibid.*, pp. 23 and 43.

proposed project would generate a need for about 3,600 square feet of new library space just to maintain existing Rialto Branch Library space-to-population ratios.

The County Public Library predicts that, by 2021, the Rialto Branch Library's service population is estimated to be 98,234 persons. As indicated in the "San Bernardino County Library Facilities Master Plan," based on that projected population, "because the current facility is already too small and there is insufficient space to expand, the consultants recommend a new facility for the Rialto service area. Assuming a one-story building with a net-to-gross efficiency factor of 75 percent, the consultants propose a building size of 43,971 SF, requiring 146 public and staff parking spaces."[202]

- **Collection Size Impacts**. The SBCPL has a collection size totaling about 1,222,490 items, representing an average of about 1.20 items per capita. Based on the project's projected on-site population, an additional 39,305 items would need to be added to the County collection merely to maintain existing Countywide averages. In comparison, the Rialto Branch Library has a collection of 65,799 items, representing an average of about 0.72 items per capita. In order to maintain that Citywide ratio, an additional 23,583 items would need to be added to the Rialto Branch Library. It is unlikely that sufficient space exists at that facility to accommodate those additional resources. If no new resources were added, ignoring other areawide growth and adding the proposed project's 32,754 new customers to the library's current 91,873 customers, the number of items per capita that would be available to those 98,553 potential library users would diminish to about 0.67.

- **Personnel and Operating Budget Impacts**. Any expansion of existing library services and/or facilities would likely predicate an increased need for additional staffing. The number, type, and qualifications of new employees would be determined by the County Public Library based on an assessment of need. The "San Bernardino County Library Facility Master Plan" reports that the "San Bernardino County per capita expenditure was $9.90, or 52% less than the State average."[203] These costs are inclusive of all Public Library expenditures. Applying that per capita cost to the project's projected population of 32,754 individuals represents an annual cost of $324,265.

  With regards to the SBCPL, as reported by the American Library Association: "According to a recent survey by the California State Library, the County's libraries collectively spend less per resident than almost any other library system - $10.54 per capita compared with the Statewide median of $26 per person. In terms of material expenditures, books per capita and the number of full-time library staff members employed in the area, the County also ranked at or near the bottom."[204] Assuming that higher per capita cost, the project's on-site population would result in $345,227 in recurring costs.

As specified under Resolution No. 4484 and as authorized under Sections 66000-66025 of the CGC, the City presently (2008) collections the following "development impact fee" for a new library building: (1) $65.96 per "single-family unit"; (2) $51.51 per "multi-family unit"; (3) no fee

[202]/ *Ibid*., p. 157.
[203]/ *Ibid*., p. 19.
[204]/ American Library Association, Library Funding, California (http://www.ala.org/PrinterTemplate.cfm?section=libraryfunding&template=/cfapps/pio/state.cfm&state=ca).

for office, retail, and service space; and (4) no fee for industrial space.[205] In accordance therewith, assuming, for the purpose of approximation, that "single-family units" were synonymous with both "single-family attached" and "single-family detached" and "multi-family units" were synonymous with "multi-family," as indicated in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), the project's 7,082 "single-family units," 1,325 "multi-family units," and 849,240 square feet of non-residential uses (if categorized as "office, retail, and service space") authorized under the LCRSP would yield a one-time library fee estimated at $535,380 (in 2008 dollars).[206]

New library building fees collected pursuit to Resolution No. 4484 exceed the projected recurring costs associated with the provision of expanded library services attributable to the proposed project. Because the fee structure is independently established by the City and can be periodically modified based on the City's assessment of the compensatory costs required to effectively mitigate impacts on the SBCPL, payment of applicable developer impact fees will mitigate project-related library impacts to a less-than-significant level. Under CEQA, no mitigation is required.

Public Recreational Facilities

Environmental Impact 9-10*. Public Recreational Facilities. As indicated in the City General Plan, Rialto has adopted a standard of three acres of parkland for each one thousand residents. As further specified in Section 17.23.030 of the City Municipal Code, for qualifying projects, 3.0 acres of property for each one thousand persons residing within the City shall be devoted to neighborhood and community parks.*

Preliminary Determination 9-10*. Less-than-significant impact.*

The introduction of new residents and, to a lesser extent, new businesses into the City will increase existing demands on City-provided and City-maintained recreational facilities. In recognition of that increased demand, the City has adopted a goal of 3.0 acres of new parkland for each 1,000 City residents. The methodology for calculating actual park dedication and/or in-lieu fee requirements is presented in Chapter 17.23 (Park and Recreation Facilities Dedication) in the City Municipal Code.[207]

[205]/ *Op. Cit*., City of Rialto Schedule of Development Impact Fees, revised May 29, 2008.

[206]/ It can be presumed that the payment of development impact fees constitutes "full and complete" mitigation for the impacts for which those fees are collected.

[207]/ As stipulated in Section 17.23.060 (Standards and Formula for Dedication of Land) in Title 17 (Subdivisions) in the City Municipal Code: "Where a park or recreational facility has been designated in the element of the General Plan of the City, and is to be located in whole or in part within the proposed development to serve the immediate and future needs of the residents of the development, the developer shall dedicate land for a park and pay a fee for the development thereof. The amount of land to be provided shall be determined pursuant to the following standards and formula: (1) A= 3.0 (D.F. x No. D.U.)* ÷1000; *When a proposed development contains dwelling units with different density factors, the formula shall be used for each density factor and the results shall be totaled. (B) Definition of Terms. (1) A. - the area in acres required to be dedicated as park site or to be appraised for fee payment for the development. (2) 3.0 - park acreage standard for the City, number of acres per one thousand persons. (3) D.F. - density factor obtained from Section 17.23.070 as applicable for the development. (4) No. D.U. - number of dwelling units proposed in the development. (C) The developer shall, without credit, provide full street and utility improvements including, but not limited to, curbs, gutters, sidewalks, street paving, sewer, water and drainage improvements. The land to be dedicated and improvements to be made pursuant to this section shall be approved by the City."

As indicated by the United States Census Bureau, the average occupied household is comprised of 3.753 persons.[208] For the purpose of this EIR analysis, since Section 17.23.070 (Population Density) of the City Municipal Code explicitly references the use of the most recent Census data, that average occupancy figure (rather than the 3.892 persons per household used elsewhere herein) is used as the "density factor" for calculating park dedication requirements. In accordance with the above formula, a total of approximately 94.65 acres of on-site parklands are required in fulfillment of the project's Quimby Act obligations.

As illustrated in Figure 2.6 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan) and Figure 2.7 (Lytle Creek Ranch Specific Plan – Conceptual Parks and Recreation Plan) and outlined in Table 4.9-14 (Lytle Creek Ranch Specific Plan – Conceptual Parks and Recreation Plan), a total of about 345.7 acres of parklands (inclusive of golf course, SCE right-of-way, neighborhood park, joint-use parks, Grand Paseo, active adult recreation center, private recreation centers, passive recreational areas and trails) is identified in the proposed LCRSP, including approximately 328.8 acres designated "Open Space/Recreation (OS/R)" and 17.0 acres designated "Open Space/Joint Use (OS/JU)" in the proposed LCRSP.

In addition, PA 72, which contains approximately 35.7 acres of land, is designated on the land-use plan with a "Park Overlay." This land may be developed with a mixture of community and neighborhood park elements. If developed as a community park, the Applicant and the City will mutually agree on the improvements to be provided in the park area. Because the land-use plan designates this area as an "overlay" rather than the underlying land use, unless otherwise specified in the project's development agreement and/or included in the subsequent "B" level subdivision map, there exists no assurance that a 35.7-acre community park will be developed within PA 72. If so developed, the possible implication of that development on the Applicant's provision of other recreational facilities within the proposed LCRSP is not known.

Excluding the golf course and SCE right-of-way, of that approximately 104.7 acres designated "Open Space/Recreation (OS/R)" and "Open Space/Joint Use (OS/JU)" in the proposed LCRSP, the eligibility of other designated planning areas to fulfill the project's park dedication obligations need to be examined.

- **El Rancho Verde Royal Vista Golf Course** (PAs 87, 95, 99, and 101). Section 17.23.140 (Credit for Special Facilities) in Chapter 17.23 (Park and Recreation Facilities Dedication) in the City Municipal Code contains certain provisions allowing for the receipt of partial "credit" for special facilities (e.g., golf course, lake, or the like).[209] Although the El Rancho Verde Royal Vista Golf Course constitutes an existing facility, under the proposed LCRSP, the Applicant intends to reconfigure and enlarge that existing facility from approximately 183 acres[210] to approximately 207 acres.

[208]/ *Op. Cit*., Table DP-4 (Profile of Selected Housing Characteristics: 2000), Geographic Area: Rialto City, California, undated, p. 4.

[209]/ With regards to the El Rancho Verde Royal Vista Golf Course, as stipulated in Section 17.23.140 (Credit for Special Facilities) in the City Municipal Code: "When the developer's master plan of development allocates space for a golf course, lake or the like, designed to serve both the residents of a subdivision and the general public, the developer may, at the City's discretion, be credited for supplying a portion of the requirements of this chapter in an amount not to exceed fifty percent credit on only those residential units that abut such special facility. Such special facility shall not eliminate the need for other designated park and recreation facilities needed to serve the subdivision. Said special facility shall be restricted to its initial purpose and shall be permanently devoted or dedicated to use by the general public, unless a satisfactory substitute is approved by the City Council."

[210]/ City of Rialto, Final Environmental Impact Report for the El Rancho Verde Specific Plan, SCH No. 1992082028, certified August 1, 1995 (Resolution No. 4143), pp. III-3 and V-13.

Table 4.9-14
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL PARKS AND RECREATION PLAN

Neighborhood	Planning Area	Land-Use District	**Conceptual Park and Recreation Use** (acres)								
			Neighborhood Park	Joint-Use Park	Grand Paseo	SCE Easement	Golf Course	Active Adult Rec. Center	Private Rec. Center	Trail	Subtotal / Total
I	10	OS/R	11.0	-	-	-	-	-	-	-	-
Subtotal	-	-	11.0	-	-	-	-	-	-	-	11.0
II	81	OS/R	-	-	-	-	-	-	-	5.0[2]	-
	85	OS/R	-	-	-	-	-	-	-	1.0	-
	86	OS/R	-	-	-	-	-	3.0	-	-	-
	87	OS/R	-	-	-	-	45.0	-	-	-	-
	88	OS/R	-	-	-	-	-	-	-	5.0[2]	-
	95	OS/R	-	-	-	-	67.0	-	-	-	-
	97	OS/R	-	-	-	-	-	-	-	5.0[2]	-
	99	OS/R	-	-	-	-	60.0	-	-	-	-
	101	OSR	-	-	-	-	35.0	-	-	-	-
Subtotal	-	-	-	-	-	-	207.0	3.0	-	16.0	226.0
III	29	OSR								5.0	
	32	OS/R	-	-	-	9.8	-	-	-	-	-
	34	OS/R	-	-	-	7.3	-	-	-	-	-
	37	OS/R	-	-	2.6	-	-	-	-	-	-
	40	OS/R	-	-	-	-	-	-	6.0[3]	-	-
	45	OS/R	-	-	3.1	-	-	-	-	-	-
	48	OS/JU	-	5.0	-	-	-	-	-	-	-
	51	OS/R	-	-	1.0	-	-	-	-	-	-
	53	OS/R	-	-	-	-	-	-	8.0[3]	-	-
	56	OS/R	-	-	4.8	-	-	-	-	-	-
	61	OS/R	-	-	1.4	-	-	-	-	-	-
	64	OS/R	-	-	-	-	-	-	6.0[3]	-	-
	67	OS/R	-	-	6.3	-	-	-	-	-	-
	74	OS/JU	-	12.0	-	-	-	-	-	-	-
	75	OS/R	-	-	4.3	-	-	-	-	-	-
	79									5.2[2,4]	
Subtotal	-	-	-	17.0	23.5	17.1	-	-	20.0[3]	10.2	87.8
IV	19	OS/R	-	-	-	-	-	-	-	3.0	-
	24	OS/R	-	-	-	-	-	-	-	1.0	
	26	OS/R	-	-	-	17.0	-	-	-	-	-
Subtotal	-	-	-	-	-	17.0	-	-	-	4.0	21.0
Subtotal OS/R	-	-	11.0	-	23.5	34.1	207.0	3.0	20.0[3]	30.2	328.8
Subtotal OS/JU	-	-	-	17.0	-	-	-	-	-	-	17.0
Total	-	-	11.0	17.0	23.5	34.1	207.0	3.0	20.0[3]	30.2	345.8

Table 4.9-14 (Continued)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL PARKS AND RECREATION PLAN

Notes:
1. As represented in Figure 2-6 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan) and Figure 2-7 (Lytle Creek Ranch Specific Plan – Conceptual Parks and Recreation Plan).
2. Passive open space with a trail component.
3. Identified in the proposed LCRSP as comprising "private" recreational facilities.
4. Identified as a 24-foot wide parkway improvements along Riverside Drive.

Source: Lytle Development Joint Venture III

As authorized under Section 17.23.140 (Credit for Special Facilities) in the City Municipal Code, the additional approximately 24 acres (207 - 183 = 24) may be eligible to receive a 50 percent Quimby Act "credit" of about 12 acres. At the City's discretion, within Neighborhood II, the City may or may not allow for the inclusion of approximately 12.0 acres (or an alternative acreage) of parkland associated with the expansion of the El Rancho Verde Royal Vista Golf Course.

- **SCE Easement** (PAs 24, 26, 32, and 34). Proposed is the creation of on-site recreational opportunities within the existing SCE right-of-way. There, however, exists uncertainty with regards to the Applicant's ability to secure requisite authorizations from SCE and/or from the CPUC for the utilization of that existing utility easement for park purposes.[211] In addition, because the easement contains a 500-kV overhead transmission line, there also exists uncertainty with regards to the acceptability[212] of those lands to satisfy City park dedication requirements. In addition, left unaddressed in the Applicant's "parks and recreation plan" is the nature of any real property interests to those lands (likely leasehold rather than fee simple) and the term (likely not to exceed the length of the CPUC-granted authorization) of any real property interests that may be secured thereto. The City, at its discretion, may allow or disallow the inclusion of the approximately 34.1-acre SCE right-of-way located in Neighborhoods III and IV.

- **Riverside Avenue parkway improvements** (PA 79). As proposed, this 5.2-acre area would be improved as a 24-foot-wide landscaped parkway improvement located along the east side of Riverside Avenue (between Locust and Linden Avenues). The City, at its discretion, may or may not allow the inclusion of this approximately 5.2-acre parkway improvement in Neighborhoods II.

- **Private open space** (PAs 40, 53, 64, and 86). Section 17.23.130 (Credit for Private Open Space) in the City Municipal Code makes certain provisions of the applicability of "private open space" to satisfy Quimby Act requirements, authorizing a 25 percent "credit" on park development fees, subject to certain specified requirements,[213] within a

[211]/ Section 851 of the PUC states, in part, that no utility shall lease any part its plant, system, or other property necessary or useful in the performance of its duties to the public without first having secured from the CPUC an order authorizing it to do so. Every such lease made other than in accordance with the order authorizing it is void.

[212]/ As specified in Section 17.23.060 (Standard and Formula or Dedication of Lands), the land to be dedicated and improvements to be made pursuant to this section shall be approved by the City.

[213]/ As stipulated in Section 17.23.130 (Credit for Private Open Space) in the City Municipal Code: "(A) A twenty-five percent credit on park development fees shall be given for minimum of three acres of usable and contiguous park and recreation land developed in conjunction with a PRD-D or PRD-A planned residential development. In order to qualify for the credit, the park and recreational land shall provide a minimum of five of the following seven elements: (1) Children's play apparatus area; (2) Landscape park-like with quiet areas; (3) Family

"Planned Residential Development – Attached (PRD-A)" or a "Planned Residential Development – Detached (PRD-D) district. [214] Although the project site does not currently possess either a "PRD-A" or a "PRD-D" designation, the Lead Agency may nonetheless determine that, pursuant or similar to the authorization of Section 17.23.130 (Credit for Private Open Space), that the "twenty-five percent credit on park development fees" for "private open space" is applicable to the proposed LCRSP.

As indicated in the proposed LCRSP: (1) private recreation centers will be constructed in portions of PAs 40, 53, and 64 for use by Neighborhood III residents; these recreation centers are planned to be privately owned and maintained by a HOA or other entity acceptable to the City; (2) residents of Neighborhood II will have their own recreational facilities designed specifically for active-adult users; the active-adult recreation center (PA 86) is planned to be privately owned and maintained by a HOA or other entity acceptable to the City; and (3) at the discretion of the Applicant, small, private recreation centers (consisting of a swimming pool, restrooms, drinking fountain, and/or other recreational amenities) may be constructed; if provided, these recreation centers shall be privately owned and maintained by a HOA or other entity acceptable to the City.

The Quimby Act does not mandate that the City grant open space credit for "private open space" in common interest developments. It is within the discretion of the City to determine whether or not or under what circumstances "credit" should be given for "private open space."[215] As a result, at the City's discretion, the proposed approximately 3.0-acre "active-adult recreation center" (PA 86) located in Neighborhood II and those "private recreational centers" (PAs 40, 53, and 64) located in Neighborhood III, totaling approximately 20 acres, may or may not be eligible for full or partial Quimby Act "credit."

- **Joint-use areas** (PAs 48 and 74). Adjacent to and associated with the designation of an "Elementary School (ES)" (PA 49) and "Elementary School/Middle School (ES/MS)" (PA 69) in Neighborhood III, the Applicant has identified a 5.0-acre (PA 48) and separate 12.0-acre (PA 74) joint use facility, designated "Open Space/Joint Use (OS/JU)," which

picnic area; (4) Game court area; (5) Turf playfield; (6) Swimming pool; (7) Recreation center buildings. (B) A determination if the development qualifies for the credit will be made by the development review committee at the time of approval of the precise plan of design for the PRD-D or PRD-A development, based on recommendations of the recreation community services department)."

[214]/ As indicated in Section 18.80.010 (Implementation) in Chapter 18.80 (Planned Residential Development – Attached [PRD-A] District) in Title 18 Zoning) in the City Municipal Code: "There is implemented the PRD-A, planning residential development-attached district. Whenever placed on the land use zoning map, "PRD-A" shall be indicated as the district designation of the area over which it is placed, and the provisions of said "PRD-A" district shall apply." As further indicated in Section 18.90.010 (Implementation) in Chapter 18.90 (Planned Residential Development – Detached [PRD-D] District) therein: "There is implemented the PRD-D, planned residential development-detached district. Whenever placed on the land use zoning map, "PRD -D" shall be indicated as the district designation of the area over which it is placed, and the provisions of said "PRD -D" district shall apply."

[215]/ In Branciforte Heights LLC v. City of Santa Cruz (2006), the court held that the City's decision to provide private open space credit under the Quimby Act is discretionary. Section 66477(a) of the Quimby Act authorizes a city to require subdividers to dedicate lands for park or recreational services or to pay fees in lieu of dedication as a condition to approval of a subdivision if the city meets the specified requirements. In addition to Section 66477(a) authorized credit if the developer constructs park improvements, Section 66477(e) recognizes a separate credit for private open space dedications. However, the court held that, in contrast to Section 66477(a), the language of Section 66477(e) leaves discretion to the local government in deciding whether to issue the private open space credit. Section 66477(e) states that common interest developments are "eligible" to receive a credit against the amount of land required to be dedicated, or the amount of a fee imposed, pursuant to the section. The court, therefore, determined that the overall language of Section 66477(e) and its legislative history demonstrates that localities retain the flexibility to implement a private open space credit as they might determine under local conditions.

would be primarily utilized by the Rialto Unified School District (RUSD) during school hours and as part of school-organized events and would become a neighborhood park when not required by the RUSD and/or subject to a joint-use agreement with the City.

In the event that the RUSD elects to acquire one or both of the designated sites or determines the need for different acreages, these sites may be consolidated into the adjoining campus. Conversely, if the RUSD elects not to acquire these sites, under the provisions of the proposed LCRSP, both properties could be developed for a non-recreational use. Similarly, since the RUSD would be the primary user, the Applicant would likely seek to obtain an off-set against school impact fees for the allocation of these lands. The Applicant's receipt of an off-set against school impact fees may influence the City's determination where less than 100 percent park "credits" should be assigned to those sites. Additionally, since these properties would not be available to the same extent as other neighborhood parks, the reduced accessibility may further influence the City's consideration of the value of these joint-use facilities. As a result, the City, at its discretion, may allow or disallow the inclusion of these approximately 17.0-acre joint-use facilities in Neighborhood III.

As specified in Chapter 17.23 (Park and Recreational Facility Dedication) in the City Municipal Code, in developments of over 50 parcels, the developer shall both dedicate land and pay a fee in lieu thereof, in accordance with the criteria presented in Section 17.23.090. Because the project is represented as a phased development, to the extent that the City seeks to extract that exaction by development phase, presented in Table 4.9-15 (Park Dedication Requirements by Neighborhood) is the estimated park dedication requirement by neighborhood and the park acreage currently identified in the proposed LCRSP.[216]

Based on the broad discretion afforded the City, separate calculations have been performed based on the following eligibility assumptions concerning all "Open Space/Recreation (OS/R)" and "Open Space/Joint Use (OS/JU)" planning areas. All such lands are eligible for Quimby Act off-sets: (1) excluding the approximately 207.0-acre golf course but including 50 percent of the 24.0-acre golf course expansion; (2) excluding the approximately 207.0-acre golf course and excluding 100 percent of the 24.0-acre golf course expansion; (3) excluding the golf course expansion and the SCE right-of-way but including the "private" recreational facilities and the parkway improvements; (4) excluding the golf course expansion, the SCE right-of-way, and the "private" recreational facilities but including the parkway improvements; (5) excluding the golf course expansion, the SCE right-of-way, the "private" recreational facilities, and the parkway improvements; and (6) excluding the golf course expansion, the SCE right-of-way, the "private" recreational facilities, the parkway improvements, and 50 percent of the joint-use sites.

Since no assurances now exist that a community park will be developed thereupon, none of the above scenarios include the 35.7-acre "park overlay" proposed in PA 72. If (through the development agreement or through such other means as may be acceptable to the City), a community park is dedicated within that or another planning area, such lands and such dedication could serve to reduce the proposed project's Quimby Act requirements.

[216]/ Excluding the El Rancho Verde Royal Vista Golf Course, because a substantial portion of the project site is located outside City limits, none of the Applicant-proposed parklands constitute a park or recreational facility "designated in the element of the General Plan of the City." Since the City must make a finding that the proposed specific plan is consistent with the City General Plan, adoption of the proposed LCRSP will serve to satisfy that conditional requirement.

As indicated in Table 4.9-15 (Park Dedication Requirements by Neighborhood), based on an eligibility determination concerning which "Open Space/Recreation (OS/R)" and "Open Space/Joint Use (OS/JU)" planning areas are to be included in or excluded from the calculations and what percentage of each area may be eligible, with regards to land dedication only, the proposed LCRSP produces an estimated 50.95-acre park dedication surplus, a 35.15-acre deficiency, or other surpluses or deficits in between based on what assumptions are applied. Note that in each successive scenario, the eligible parkland acreage decreases, the surplus acreage of dedicated parklands shrinks, and the deficit grows. In all scenarios considered,[217] when examined in isolation Neighborhoods I and II produce a parklands deficiency.

Since the Applicant is authorized to pay in lieu fees to satisfy park dedication requirements,[218] an assessment of Quimby Act compliance is not limited to only an assessment of land dedication. Although an acreage deficiency is identified herein with regards to certain neighborhoods, the City can accept payment of impact fees in lieu of dedication. As specified under Resolution No. 4484 and as authorized under Sections 66000-66025 of the CGC, the City presently (2008) collects the following "development impact fee" for park facilities: (1) $2,102.32 per "single-family unit"; (2) $1,977.97 per "multi-family unit"; (3) no fee for office, retail, and service space; and (4) no fee for industrial space.[219] In accordance therewith, assuming, for the purpose of approximation, that "single-family units" were synonymous with both "single-family detached" and "single-family attached," and "multi-family units" were synonymous with "multi-family," as listed in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), the 7,082 "single-family units," 1,325 "multi-family units," and 849,240 square feet of non-residential uses (if categorized as "office, retail, and service space") authorized under the proposed LCRSP would yield a one-time park facility fee of $17,509,440 (in 2008 dollars).[220]

Unless otherwise modified through a development agreement, fee-simple dedication of real property offered in compliance with Quimby Act requirements and Applicant-sponsored improvements to those lands constitute off-sets against park facility fee requirements. As stipulated in Section 17.23.160 (Specific Plan Areas – Land Dedication): "When a developer has submitted data concerning proposed parks on a specific plan area, land dedication or fee will be determined by an appraisal of land applicable to all subdivisions within the subject specific plan." As further stipulated in Section 17.23.180 (Subdivider-Provided Park and Recreation Improvements): "The value of park and recreation land and improvements provided by the subdivider shall be credited against the fees and dedication of land required by this chapter."

Since the project can reasonably satisfy Quimby Act requirements through the dedication of on-site lands and/or the payment of in-lieu fees, the proposed LCRSP can be deemed to be in general compliance with applicable City General Plan and City Municipal Code requirements relating to parkland dedication. Additionally, since none of the threshold criteria would be exceeded, the identified operational impact on park facilities would be less than significant and no mitigation is recommended or required.

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[217]/ Based on the number of possible scenarios, including a reduction in the potential demand for park acreage, the Quimby Act impact associated with the implementation of one or more land-use overlay districts was not expressly examined.

[218]/ In developments of over 50 parcels, the developer shall both dedicate land and pay a fee in lieu thereof, in accordance with the criteria presented in Section 17.23.090 (Criteria for Requiring Both Dedication and Fee).

[219]/ *Op. Cit*., City of Rialto Schedule of Development Impact Fees, revised May 29, 2008.

[220]/ It can be presumed that the payment of development impact fees constitutes "full and complete" mitigation for the impacts for which those fees are collected.

Table 4.9-15
PARK DEDICATION REQUIREMENTS BY NEIGHBORHOOD[1]

Neighborhood	Dwelling Units	Density Factor	Park Requirement (acres)	Proposed Parkland[2] (acres)	Surplus or Shortfall (acres)
All OS/R and OS/JU Planning Areas					
Including 50% of the Golf Course Expansion					
I	1,278	3.753	14.39	11.00	(3.39)
II[3]	2,931	3.753	33.00	31.00	(2.00)
III[4]	3,329	3.753	37.48	87.80	45.12
IV	869	3.753	9.78	21.00	11.22
Total	8,407	3.753	94.65	150.80	50.95
Including 0% of the Golf Course Expansion					
I	1,278	3.753	14.39	11.00	(3.39)
II[3]	2,931	3.753	33.00	19.00	(14.00)
III[4]	3,329	3.753	37.48	87.80	45.12
IV	869	3.753	9.78	21.00	11.22
Total	8,407	3.753	94.65	138.80	38.95
All OS/R and OS/JU Planning Areas Excluding Golf Course Expansion and SCE Easement					
Including 100% of "Private Open Space,"[4] Parkway Improvements, and Joint-Use Sites					
I	1,278	3.753	14.39	11.00	(3.39)
II	2,931	3.753	33.00	19.00	(14.00)
III[4]	3,329	3.753	37.48	70.70	33.22
IV	869	3.753	9.78	4.00	(5.78)
Total	8,407	3.753	94.65	104.70	10.05
Including 25% of "Private Open Space"[5,6] and 100% of Parkway Improvements, and Joint-Use Sites					
I	1,278	3.753	14.39	11.00	(3.39)
II	2,931	3.753	33.00	16.75	(16.25)
III[4]	3,329	3.753	37.48	55.70	18.22
IV	869	3.753	9.78	4.00	(5.78)
Total	8,407	3.753	94.65	87.45	(7.20)
Including Parkway Improvements and Joint-Use Site but Excluding "Private Open Space"[5]					
I	1,278	3.753	14.39	11.00	(3.39)
II	2,931	3.753	33.00	16.00	(17.00)
III[4]	3,329	3.753	37.48	50.70	13.22
IV	869	3.753	9.78	4.00	(5.78)
Total	8,407	3.753	94.65	81.70	(12.95)
Including Joint-Use Sites but Excluding "Private Open Space"[4] and Parkway Improvements					
I	1,278	3.753	14.39	11.00	(3.39)
II	2,931	3.753	33.00	16.00	(17.00)
III[4]	3,329	3.753	37.48	45.50	8.02
IV	869	3.753	9.78	4.00	(5.78)
Total	8,407	3.753	94.65	76.50	(18.15)

Table 4.9-15
PARK DEDICATION REQUIREMENTS BY NEIGHBORHOOD[1]

Neighborhood	Dwelling Units	Density Factor	Park Requirement (acres)	Proposed Parkland[2] (acres)	Surplus or Shortfall (acres)
All OS/R and OS/JU Planning Areas Excluding Golf Course Expansion and SCE Easement (Continued)					
Excluding "Private Open Space,"[4] Parkway Improvements, and 50% of the Joint-Use Sites					
I	1,278	3.753	14.39	11.00	(3.39)
II	2,931	3.753	33.00	16.00	(17.00)
III[4]	3,329	3.753	37.48	37.00	(0.48)
IV	869	3.753	9.78	4.00	(5.78)
Total	8,407	3.753	94.65	68.00	(26.65)
Excluding "Private Open Space,"[4] Parkway Improvements, and 100% of the Joint-Use Sites					
I	1,278	3.753	14.39	11.00	(3.39)
II	2,931	3.753	33.00	16.00	(17.00)
III[4]	3,329	3.753	37.48	28.50	(8.98)
IV	869	3.753	9.78	4.00	(5.78)
Total	8,407	3.753	94.65	59.50	(35.15)

Notes:
1. As specified in Section 66477(a)(5) of the CGC: "The amount and location of land to be dedicated or the fees to be paid shall bear a reasonable relationship to the use of the park and recreational facilities by the future inhabitants of the subdivision."
2. Based on acreage of lands designated "Open Space/Recreation (OS/R)" and "Open Space/Joint Use (OS/JU)" in the proposed LCRSP, excluding those planning areas identified as "Golf Course" (PAs 87, 95, 97, 99, and 101) and those planning areas identified as "SCE Easement" (PAs 26, 32, and 34).
3. With regards to the El Rancho Verde Royal Vista Golf Course, as stipulated in Section 17.23.140 (Credit for Special Facilities) in the City Municipal Code: "When the developer's master plan of development allocates space for a golf course, lake or the like, designed to serve both the residents of a subdivision and the general public, the developer may, at the City's discretion, be credited for supplying a portion of the requirements of this chapter in an amount not to exceed fifty percent credit on only those residential units that abut such special facility. Such special facility shall not eliminate the need for other designated park and recreation facilities needed to serve the subdivision. Said special facility shall be restricted to its initial purpose and shall be permanently devoted or dedicated to use by the general public, unless a satisfactory substitute is approved by the City Council."
4. Not inclusive of the proposed 35.7-acre "Park Overlay" within PA 72.
5. "Private open space" is assumed to include the "active adult recreation center" (PA 86) in Neighborhood II and the "private recreational centers" (PAs 40, 53, and 64) in Neighborhood III.
6. As stipulated in Section 17.23.130 (Credit for Private Open Space) in the City Municipal Code: "(A) A twenty-five percent credit on park development fees shall be given for minimum of three acres of usable and contiguous park and recreation land developed in conjunction with a PRD-D or PRD-A planned residential development. In order to qualify for the credit, the park and recreational land shall provide a minimum of five of the following seven elements: (1) Children's play apparatus area; (2) Landscape park-like with quiet areas; (3) Family picnic area; (4) Game court area; (5) Turf playfield; (6) Swimming pool; (7) Recreation center buildings. (B) A determination if the development qualifies for the credit will be made by the development review committee at the time of approval of the precise plan of design for the PRD-D or PRD-A development, based on recommendations of the recreation community services department)."

Source: Environmental Impact Sciences

***Environmental Impact 9-11**. Public Recreational Facilities. Numerous regional hiking, bicycling, and equestrian trails are identified in planning documents illustrating the project site. Failure to identify, preserve, and construct specified trail segments in a manner and in a location consistent with regional trail plans could adversely affect the functionality of those trails.*

***Preliminary Determination 9-11**. Potentially significant unless mitigation incorporated.*[221]

Regional trails provide or can provide unique opportunities for recreation, education, and exploration. Trails can also provide alternative routes for non-motorized transportation and linkages between areas minimizing pedestrian and motor vehicle conflicts. Because they often cover large geographic areas, many not yet ripe for development, trail dedications and improvements typically occur over time when individual projects located along identified routes are brought before local decision-making bodies. Once a plan has been formulated, it becomes increasing important that individual segments along identified routes are either developed for that recreational purpose or preserved for later incorporation into an improved trail system.

As illustrated in Figure 4.1-10 (San Bernardino County General Plan – Open Space Element/Resources Overlay) herein, planned components to the County's regional trails that include segments potentially located on or project site include, but may not be limited to, the Lytle Creek, Greenbelt, Frontline, and Frontline Connection Trails.

As indicated in Figure 4.9-16 (Lytle Creek Ranch Specific Plan – Conceptual Trail System), an extensive trail system is proposed both on the project site and was previously approved as part of the adjacent LCNPD. Numerous on-site planning areas (PAs 19, 24, 29, 81, and 97) will include paved trails. However, when Figure 4.1-10 (San Bernardino County General Plan – Open Space Element/Resources Overlay) and Figure 4.9-17 (Lytle Creek Ranch Specific Plan – Conceptual Trail System) are compared, it is evident that certain trails presented in the County General Plan or, more specifically, those segments thereof which are illustrated in the County General Plan as occurring or illustrated within the project site, have not been specifically incorporated into the proposed LCRSP. Those trail segments include the Lytle Creek, Greenbelt, and Frontline Connection Trails.

With limited exception (e.g., the trails adjacent to Lytle Creek will be 20 feet in width), absent from the proposed LCRSP are any proposed design, development, and maintenance standards for those trails.[222] Implementation of the proposed LCRSP could, therefore, foreclose future opportunities for the development of a regional trail system and/or result in the introduction of obstacles that prevent trail users from traversing the subject property and connecting to other off-site segments of those County trails.

[221]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, and/or other public facilities; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

[222]/ The proposed LCRSP does note that "[a]ll regional trails shall be the responsibility of the City of Rialto or other public entity to design, fund, construct, and maintain."

Consistent with other environmental considerations, a mitigation measure (Mitigation Measure 9-8) has been formulated to ensure that opportunities are retained for the development of on-site segments of County-identified trails and that trail planning become integrated into other proposed elements of the Applicant's non-motorized transportation plans. Implementation of the recommended mitigation measure will reduce project-related impacts on regional trails to a less-than-significant level.

> ***Environmental Impact 9-12****. Public Recreational Facilities. As proposed, a number of sites have been designated "Open Space/Joint Use" (OS/JU) and are intended for joint use by the Rialto Unified School District for recreational purposes associated with adjoining school sites and by the City of Rialto for general recreational use. Operational joint-use problems could be encountered based on the distinct needs of those two separate users groups.*
>
> ***Preliminary Determination 9-12****. Potentially significant unless mitigation incorporated.*[223]

As proposed, the LCRSP includes the designation of two future school sites and abutting joint-use facilities, including a 10-acre "elementary school" (PA 49) and 5-acre "open space/joint use" site (PA 48) and a 14-acre "elementary/middle school" (PA 69) and 12-acre "open space/joint use" site (PA 74) in Neighborhood III. These abutting joint-use facilities (PAs 48 and 74) will provide school-related recreational facilities during those periods when school is in session and community-related recreational facilities when not otherwise in use by the school district. Since it is the Applicant's intent that these "joint-use" facilities be counted toward the Applicant's Quimby Act obligations, the Lead Agency needs to ascertain whether multiple use.

Joint-use facilities can prove beneficial to school districts and recreation and park agencies but introduce certain complexities as to the manner of their operation, the time periods when available to diverse user groups, costs and responsibilities for maintenance, and the types of amenities to be provided. In a survey conducted by the California Park & Recreation Society (CPRS) and California State Parks, a number of "obstacles" and "best practices" concerning the joint use of school facilities were identified.[224] As individually described below, certain obstacles prevent or otherwise restrict use to recreation and park agencies attempting to access school-owned facilities for public use while other obstacles prevent or otherwise restrict schools from allowing access to their athletic and recreational facilities for general public use.

- **Obstacles limiting park agencies access to school-owned facilities for public use**. Obstacles preventing recreation and park agencies access to school-owned athletic and recreational facilities for general public use include, but are not limited to: (1) school facilities may have "facility use fees" charged by the school that cannot be recovered through participant fees; (2) school officials may find it necessary to cancel public use of their facilities in order to accommodate last minute school-related activities; (3)

[223]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, and/or other public facilities; and (2) increase the use of existing neighborhood parks, regional parks, or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

[224]/ California Park & Recreation Society and California State Parks, Education Leader's Opinions of Parks and Recreation: A Survey of California School Superintendents, 2003.

frequently, use of school facilities by the public requires that restrooms be pen during public use; (4) patrons and/or staff associated with park programs on a school site do not feel safe; (5) turf issues from school principles and site staff, lack of formal joint-use agreements, and lack of understanding for recreation agencies; (6) fields so minimally maintained that they are dangerous to use (by city standards); (7) schools scheduling commercial uses preventing recreation and park agencies from using facilities.

The hours of school usage limits public use of facilities. Schools are generally open daily from sunrise to almost sunset. Those hours do not allow use of the fields by the public while children are in school. In addition, after school activities take precedent over park usage. Consequently, any school activities have priority, limiting usage of school sites to primarily on weekends. If parks and schools are sharing expenses for development and maintenance, this may becomes a restrictive investment for park agencies. Schools operating on a year-round schedule means that public usage is restricted year round.

- **Obstacles limiting schools from allowing access to school facilities for public use**. Obstacles preventing or otherwise restricting schools from allowing access to their athletic and recreational facilities for general public use include, but are not limited to: (1) schools may discourage use of their facilities during non-school hours because it reduces additional vandalism to school grounds and facilities; (2) school do not want additional wear-and-tear to their facilities; (3) schools fear that their facilities may be damaged from public use; (4) schools want the flexibility of being able to schedule their facilities when and if they are needed; (5) school officials may feel that there should be a better balance of reciprocity between the school district and the park agency; (6) teachers are not willing to let an “outside” group come into their classroom; (7) funding to maintain facilities and fields that are used by recreation agencies; (8) school districts wishing to recover costs of organizations using their facilities; (9) opening school grounds leave the buildings open to vandalism; (1) school districts leave decision making up to their individual principals; (12) poor conditions of school facilities due to inadequate maintenance; and (13) lack of supervision and accountability of volunteer groups and overuse of facilities.

  Common issues that arise during joint-use agreement negotiations include security and liability associated with facility use, costs for extra personnel and/or utilities during use of the school by others, and school’s concerns regarding flexibility of use of their facilities.

The existence of these “obstacles” suggests that joint-use arrangements are potentially problematic and that general public use of shared facilities may be limited based on school needs and priorities. Joint-use facilities, therefore, cannot be viewed in the same fashion as single-use facilities which are made available for general public use without those same restrictions. For simplicity, without factoring in each party’s percentage contribution to the cost for initial construction and the time-value that may be applicable to specified time periods, if there exist distinct users of a shared facility (such that concurrent use opportunities did not exist or could not be practically instituted), each user’s percentage ownership interests and associated obligations would be based on the allocation of useable time to that facility made available to those users. If general public use were allowable only one-half of the time (of the total hours of operation), assuming no premiums were placed on certain hours of operation (e.g., weekends and evenings), that facility’s Quimby Act “credit” would thus only equal 50 percent of value attainable if joint-use opportunities were not created.

Based on unfulfilled need, the Applicant's failure to provide an acceptable amount of publically access on-site lands for recreational purposes would likely result in increased demands for off-site recreational facilities. Because a project would normally be deemed to produce a significant effect on the environment if that project were to increase the use of existing recreational facilities such that substantial physical deterioration of those facilities would occur or be accelerated, compliance with Quimby Act obligations must be examined from both a CEQA and public policy perspective. To the extent that the Applicant seeks City approval, against Quimby Act obligations, for the dedication of any real property designated in the LCRSP for "open space/joint use," the Lead Agency must retain discretion concerning the applicability of any such shared resources. As a result, a mitigation measure (Mitigation Measure 9-9) has been formulated which promotes the retention of that discretion with regards to Quimby Act credits applicable to "open space/joint use" designated areas.

In addition, because the dedication of real property to the school district, the Applicant's provision of recreational facilities designed for joint school and broader public use, and the provisions of a joint-use agreement could have land-use and other implications germane to the City, a mitigation measure (Mitigation Measure 9-10) has been formulated stipulating that a park-dedication agreement be executed with the City. Implementation of the recommended mitigation measures would reduce potential joint-use impacts to a less-than-significant level.

4.9.5.3 Cumulative Impacts

Environmental Impact 9-13*. The approval of other reasonably foreseeable future development projects within the general project area will increase existing demands on the San Bernardino County Sheriff's Department and Rialto Police Department law enforcement activities, San Bernardino County Fire Department and Rialto Fire Department fire protection and emergency services, increase the number of school-aged children served by the Rialto Unified School District, Fontana Unified School District, and San Bernardino City Unified School District, and increase the demand for park and recreational facilities within the County and throughout the City.*

Preliminary Determination 9-13*. Less-than-significant impact.*

Areawide development will increase the number of individuals residing in the general project area, result in the conversion of vacant and underutilized lands to more intensive uses, introduce new businesses, increase the use of products and materials those businesses utilize, and increase the inventory of products, merchandise, and other material goods. As population levels increase, so to does the demand for public services and facilities.

Based on a Statewide, regional, areawide, and/or local assessment of need, public agencies have the ability to construct new facilities, purchase new equipment, and add personnel in response to identified demands. Local agencies have the ability to deny or condition individual development applications based on each agency's independent assessment of potential project-related impacts upon law enforcement and fire protection agencies, facilities, equipment, and personnel. Public agencies have the ability to respond to those changes through increases or decreases in annual budgetary allocations provided to law enforcement (e.g., CHP, SBCSD, and RPD) and fire protection (e.g., USFS, CALFIRE, SBCFD, and RFD) agencies.

All affected school districts (e.g., RUSD, FUSD, and SBCUSD) are authorized to impose school impact fees upon those residential and non-residential development projects within each school

district's jurisdiction. The imposition and collection of those statutory fees or the execution of an AB 2926 mitigation agreements is deemed presumptive that project-related impacts on school districts and their facilities are effectively mitigated to a less-than-significant level.

Local agencies are authorized to impose Quimby Act fees and/or require the dedication of real property for park and recreational purposes. Since local agencies can independently set and collect those fees, each agency has the ability to increase parkland within their jurisdictions in a manner consistent with population growth. Similarly, as with the County Public Library, the decision-making bodies of affected municipalities can set local priorities and allocate resources in a manner designed to allow for the attainment of locally established goals and objectives.

To the same extent those project-level impacts upon public services and facilities identified herein have been effectively mitigated to a less-than-significant level through the imposition of mitigation measures and other conditions of approval, each agency is empowered to impose conditions on related project activities to ensure that the impacts attributable to those project are reduced to the maximum extent feasible. As a result, cumulative impacts associated with other related projects will remain at a less-than-significant level.

4.9.6 Recommended Mitigation Measures

- **Mitigation Measure 9-1**. Police Protection. The Applicant shall take such actions and pay such fees as may be reasonably imposed by the Rialto Fire Department (RPD) to ensure the timely provision of adequate and appropriate police protection and emergency services to the LCRSP and the uses authorized therein. This measure neither precludes the Applicant from identifying alternative actions and/or fees which can be demonstrated to result in the attainment of those same or similar objectives nor obligates the RPD to accept those alternative measures and/or fees in lieu of those identified by the RPD. If consensus cannot be reached between the RPD and the Applicant, the City Council shall establish the actions and fees applicable to the proposed project.

  Should the City subsequent adopt an impact fee program for police protection services, unless a substitute measure(s) is imposed by the City, payment of applicable impact fees would effectively mitigation project-related impacts upon police protection services and serve to fulfill the Applicant's obligations hereunder.

- **Mitigation Measure 9-2**. Police Protection. As specified by the RPD and in accordance with Section 505.1 (Premise Identification) in Chapter 15.28 (Fire Code) in Title 15 (Building and Construction) of the City Municipal Code, final design plans for individual residential and non-residential development projects shall include clearly visible street address signs and/or building numbers to allow for ease of identification during both day and nighttime periods and facilitate emergency response.

- **Mitigation Measure 9-3**. Police Protection. Prior to the issuance of building permits for new construction projects, the RPD shall be provided the opportunity to review and comment upon building plans in order to: (1) facilitate opportunities for improved emergency access and response; (2) ensure the consideration of design strategies that facilitate public safety and police surveillance; (3) offer specific design recommendations to enhance public safety; and (4) through the incorporation of "crime prevention through environmental design" (CPTED) strategies, reduce potential demands upon police services.

- **Mitigation Measure 9-4**. Fire Protection. Prior to the issuance of building permits for any habitable use in Neighborhoods I and IV, the Applicant shall demonstrate to the satisfaction of the RFD and/or to the agency with fire protection and emergency service jurisdiction over that area that either: (1) NFPA 1710 response standards can and will be satisfied prior to the issuance of any occupancy permits within those areas; or (2) although NFPA 1710 response standards cannot be satisfied, that alternative actions, measures, and/or design features, acceptable to the RFD and/or the jurisdictional agency, have been incorporated into the project's development plans and/or habitable uses as to constitute an acceptable response standard for those areas.

- **Mitigation Measure 9-5**. Fire Protection. The Applicant shall take such actions and pay such fees as may be reasonably imposed by the RFD to ensure the timely provision of adequate and appropriate fire protection and emergency services to the LCRSP and the uses authorized therein. This measure neither precludes the Applicant from suggesting alternative actions and/or fees which can be demonstrated to result in the attainment of those same or similar objectives nor obligates the RFD to accept those alternative measures and/or fees in lieu of those identified by the RFD. If consensus cannot be reached between the RFD and the Applicant, the City Council shall establish the actions and fees applicable to the proposed project.

  Should the City subsequent adopt an impact fee program for fire protection services, unless a substitute measure(s) is imposed by the City, payment of applicable impact fees would effectively mitigation project-related impacts upon fire protection services and serve to fulfill the Applicant's obligations hereunder.

- **Mitigation Measure 9-6**. Schools. Prior to the issuance of any building permits for residential and/or non-residential uses within the boundaries of the Rialto Unified School District (RUSD), the Fontana Unified School District (FUSD), and/or the San Bernardino City Unified School District (SBCUSD), the Applicant shall present the City with a certificate of compliance or other documentation acceptable to the City demonstrating that the Applicant has complied with applicable school board resolutions governing the payment of school impact fees and/or has entered into an Assembly Bill 2926-authorized school facilities funding mitigation agreement with the applicable school district(s) or is exempt from the payment of school impact fee exactions.

- **Mitigation Measure 9-7**. Schools. Prior to the recordation of any "B" level final subdivision map (excluding any "A" level subdivision map for financing purposes only) specifying the location for a new public school site(s), the Applicant shall present the City with documentation, acceptable to the City, evidencing that the location, configuration, and size of the proposed school site has been found acceptable or has been found conditionally acceptable by the public school district in whose jurisdiction the site is located. The City, at its discretion, may condition the approval of the final subdivision map and/or any subsequent entitlements therein upon the fulfillment of any conditions subsequent or the Applicant's performance of such other actions as may be reasonably anticipated to produce compliance with conditions identified by that school district.

- **Mitigation Measure 9-8**. Parks and Recreation. Prior to the recordation of any "B" level subdivision map (excluding any "A" level subdivision map for financing purposes only) affecting lands upon which a regional trail segment has been identified in the "County of San Bernardino General Plan" (e.g., "Open Space – A Plan for Open Space and Trails

for the County of San Bernardino"), the Applicant shall submit and, when acceptable, the City shall approve a "regional trail component plan" addressing the Applicant's plans to implement any on-site segments of those identified trails, including preservation of rights-of-way, recordation of easements, and applicable design and development standards governing the construction, operation, and maintenance of those trail segments, if any.

- **Mitigation Measure 9-9**. Parks and Recreation. To the extent that the Applicant seeks to apply the dedication and/or physical improvement of any lands designated "open space/joint use" in the LCRSP against City-imposed Quimby Act obligations, the City, at its sole discretion, shall determine to what extend, if any, such dedication and/or physical improvement constitutes an off-set against the Applicant's obligations under Chapter 17.23 (Park and Recreation Facilities Dedication) in the City Municipal Code.

- **Mitigation Measure 9-10**. Parks and Recreation. Prior to the recordation of the first "B" level subdivision map (excluding any "A" level subdivision map for financing purposes only), the Applicant shall execute a park-dedication agreement, in a form acceptable to the City, stipulating: (1) the type, quantity, location, and timing of any real property to be dedicated to the City; (2) any improvements thereupon which will be undertaken by the Applicant; and (3) identifying the party or parties that will be responsible for the maintenance of those lands. The land to be dedicated shall be suitable for public use as parks, trails, and/or active open space, as shall be determined in the sole discretion of the City and the City shall not be required to accept land which, in the sole discretion of the City, is not useable for parks, trails, and/or active open space or which would require extensive expenditures on the park of the City to make usable or which possess environmental conditions or constraints that would preclude their use for public park and recreational purposes. If deemed applicable, the City may require that the Applicant provide a bond or other instrument acceptable to the City ensuring the Applicant's performance under that agreement.

4.9.7 Significant Unavoidable Adverse Effects

As mitigated, the approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative public services and/or recreation impacts.

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4.10 UTILITIES AND SERVICE SYSTEMS

Presented herein is an analysis of potential project-related and cumulative impacts on a number of utilities and service systems, including water supply, sewage disposal, and solid waste (other than hazardous waste). Storm drain facilities are addressed in Section 4.4 (Hydrology and Water Quality). Fire services, police protection services, schools, library services, and recreation are separately addressed in Section 4.9 (Public Services and Recreation). Energy-related services are separately addressed in Section 4.14 (Energy Resources) herein.

4.10.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- CH2M Hill, Final Report – Feasibility Study of Tertiary Wastewater Treatment Alternatives for City of Rialto, California, March 1986.
- City of Rialto (John Egan and Associates), Urban Water Management Plan, February 2006.
- Otte-Berkeley Groupe, Inc., Description of Proposed Sewer Infrastructure, Lytle Creek Ranch Project, October 13, 2009 (see Appendix III-K-A).
- Roberson Water Consulting, Lytle Creek Ranch – Preliminary Onsite Treatment Options Review, Wastewater Treatment Plant & Water Recycling Plant Option, July 2009 (see Appendix III-K-A).
- TRC, City of Rialto Wastewater Collection System Analysis, September 2005.
- West Valley Water District (Engineering Resources of Southern California, Inc.), Water Master Plan, November 2004.
- West Valley Water District (Engineering Resources of Southern California Inc.), Water Supply Assessment for the Lytle Creek Ranch Development, March 4, 2008 (see Appendix III-J).

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.10.2 Regulatory and Policy Setting

4.10.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Federal Clean Water Act**. The Safe Drinking Water Act of 1974, codified as Section 303 *et seq*. of the CWA, provides for: (1) establishment of primary regulations for the protection of the public health; (2) establishment of secondary regulations relating to the taste, odor, and appearance of drinking water; (3) measures to protect underground drinking water sources; and (4) record-keeping, inspection, and issuance of regulations. The primary standards are designed to provide maximum feasible protection of the public health, utilizing the best treatment methods generally available.

Pursuant to Sections 13576 and 13577 of the CWA (Water Recycling Act of 1991): (1) the development of traditional water resources in California has not kept pace with the State's increasing population; (2) there exists a need for a reliable source of water for uses not related to the supply of potable water; (3) the benefits associated with the use of recycled water include a reduced demand for water in the Sacramento – San Joaquin Delta; (4) the use of recycled water has proven to be safe from a public health standpoint; (5) the use of recycled water is a cost-effective, reliable method of helping to meet California's water supply needs; and (6) a Statewide goal has been established to recycle a total of one-million acre-feet[1] per year by the year 2010.

- **Safe Drinking Water Act**. The Safe Drinking Water Act (42 USC 300f) (SDWA) applies to every public water system in the United States. The responsibility for making sure these public water systems provide safe drinking water is divided among USEPA, states, tribes, water systems, and the public. SDWA provides a framework in which these parties work together to protect this drinking water resources. The USEPA sets national standards for drinking water based on sound science to protect against health risks, considering available technology and costs. These National Primary Drinking Water Regulations set enforceable maximum contaminant levels for particular contaminants in drinking water or required ways to treat water to remove contaminants. Each standard also includes requirements for water systems to test for contaminants in the water to make sure standards are achieved.

4.10.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **California Water Code**. As required under the Urban Water Management Planning Act (UWMPA), codified in Sections 10610-10656 in Division 5 of the CWC, "[e]very urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640)" (Section 10620[a], CWC). As defined therein, an "urban water supplier" is defined as a publicly or privately owned supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually (Section 10617, CWC). Each urban water supplier shall update its plan at least once every five years (Section 10621, CWC).

  Senate Bills 610 and 221, which became effective on January 1, 2002, amended State law to improve the link between information on water supply availability and certain land-use decisions in California. SB 610 and SB 221 are companion measures that seek to promote more collaborative planning between local water suppliers and cities and counties. These two statutes require that detailed information regarding water availability be provided to decision makers prior to approval of specific large development projects (e.g., 500 units or larger) and that information be included in the administrative record that serves as the evidentiary basis for an approval action on such projects.

  Under SB 221, city or county approval of certain residential subdivisions require an affirmative written verification of sufficient water supply. Under SB 610, water supply

[1]/ One acre-foot represents the amount of water required to cover one level acre of land to a uniform depth of one foot and represents 325,851.4 United States gallons of water.

assessments (WSAs) must be furnished to local governments for inclusion in any CEQA documentation for certain large projects. Qualifying projects include those that would consume an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. For those projects, the WSA must be requested from the local water provider by the city or county considering the project at the time the city or county determines whether an EIR, a negative declaration, or a mitigated negative declaration is required under CEQA. The water agency must then provide the WSA within 90 days but, under certain circumstances, may request a time extension. The WSA must include specific information, as detailed in the legislation, including an identification of existing water supply entitlements and contracts. If groundwater is anticipated as a source of water, the assessment must contain additional information. The governing board of the water agency must approve the WSA at a public meeting. A foundational document for compliance with both SB 610 and SB 221 is the urban water management plan (UWMP). Both statutes identify the UWMP as a planning document that can be used by a water supplier to meet the standards set forth therein.

In addition, Section 13550 of the CWC states that the Legislature hereby finds and declares that the use of potable domestic water for non-potable uses is a waste or an unreasonable use of the water within the meaning of Section 2 of Article X of the California Constitution, if reclaimed water is available which meets all of the following conditions, as determined by the SWRCB: (1) the source of reclaimed water is of adequate quality for these uses and is available for these uses; (2) the reclaimed water may be furnished to these uses at a reasonable cost to the user; (3) after concurrence with the California Department of Public Health (CDPH), formally the California Department of Health Services (DHS), the use of reclaimed water from the proposed source will not adversely affect downstream water rights, will not degrade water quality, and is determined not to be injurious to plant life, fish, and wildlife.

Section 13523 of the CWC provides that a RWQCB, after consultation with and receiving recommendations of the CDPH (DHS) and after any necessary hearings may prescribe reclamation requirements for effluent which is used or proposed to be used as reclaimed water if it determines such action to be necessary to protect the public health, safety, or welfare. Section 13523 further provides that such requirements shall include or be in conformance with the Statewide reclamation criteria.

- **Public Resources Code**. The California Integrated Solid Waste Management Act of 1989 (AB 939), codified in Division 30, Section 40000 *et seq*. of the PRC, requires every city and county in the State to reduce or recycle 25 percent of the solid wastes disposed in landfills by the year 1995 and 50 percent by the year 2000. For those jurisdictions unable to meet AB 939 diversion objectives and established deadlines, monetary penalties can be imposed against those agencies. As required under AB 939, each city and county shall prepare a "source reduction and recycling element" (SRRE), a "household hazardous waste element" (HHWE), and a "non-disposal facility element" (NDFE). The SRRE serves to document the agency's existing waste stream and delineates the agency's solid waste diversion plans. The HHWE specifies how each jurisdiction will safely collect, recycle, treat, and dispose of its household hazardous wastes (HHW). The NDFE identifies all existing and proposed non-disposal facilities needed to implement the SRRE.[2]

[2]/ In January 1995, the County adopted a "Source Reduction and Recycling Element" and "Non-Disposal Facility Element." In August 1997, the County adopted a "Source Reduction and Recycling Element." In January

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327), codified in Sections 42900 through 42911 of the PRC, requires that the California Integrated Waste Management Board (CIWMB) draft a model ordinance[3] requiring the designation of areas for collecting and loading recyclable materials in "development projects." As defined in Section 42905 of the PRC, "development projects" include: "(a) A project for which a building permit will be required for a commercial, industrial, or institutional building, marina, or residential building having five or more living units, where solid waste is collected and loaded and any residential project where solid waste is collected and loaded in a location serving five or more units. (b) Any new public facility where solid waste is collected and loaded and any improvements for areas of a public facility used for collecting and loading solid waste."

The State Agency Waste Diversion Law of 1999 (AB 75), codified in Section 42921(b) of the PRC, requires that State agencies reduce waste by 50 percent by 2004. California law does not presently mandate the implementation of school district waste reduction programs.

- **California Government Code**. In accordance with Section 53091(d) of the CGC, building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

  In recognition of the potential hazards to underground pipelines associated with grading and associated earthmoving activities, the State has imposed certain requirements regarding excavation activities in proximity to existing underground infrastructure.[4] As required under Section 4216.2(a) of the CGC: "Except in an emergency, every person planning to conduct any excavation shall contact the appropriate regional notification center, at least two working days, but not more than 14 calendar days, prior to commencing that excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated." As further indicated in Section 4216.9(a) of the CGC: "No permit to excavate issued by any local agency, as defined in Section 4216, or any State agency, shall be valid unless the applicant has been provided an initial inquiry identification number by a regional notification center pursuant to Section 4216.2."[5]

1995, the City adopted a "Source Reduction and Recycling Element" (amended October 2005), "Non-Disposal Facility Element," and "Household Hazardous Waste Element." Although identified in the statute as "elements," those documents do not constitute components of either the County General Plan or the City General Plan and, therefore, do not have the same status as the mandatory and optional elements contained therein.

[3]/ The model ordinance requires that all new developments projects include adequate, accessible, and convenient areas for collecting and loading recyclable and green waster materials. Local agencies are required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects. If a local agency had not adopted its own ordinance, the model ordinance adopted by the CIWMB took effect on a specified date.

[4]/ Chapter 3.1, Article 3, Sections 4215-4216.9, CGC.

[5]/ As defined in Section 4216(h) of the CGC, a "regional notification center" is defined to mean "a nonprofit association or other organization of operators of subsurface installations which provides advance warning of excavations or other work close to existing subsurface installations, for the purpose of protecting those installations from damage, removal, relocation, or repair."

Compliance with those requirements, which is mandatory for all contractors, ensures that grading activities fully consider and avoid potential impacts upon any "subsurface installation" (i.e., any underground pipeline, conduit, duct, wire, or other structure, except non-pressurized sewer lines, non-pressurized storm drains, or other non-pressurized drain lines) that may exist within the area of proposed ground disturbance.

Pursuant to Sections 54999-54999.6, subject to specified provisions, a public agency providing public utility service may charge another agency a capital facilities fee or capacity charge in order to pay the capital cost. "Public utility facility" means a facility for the provision of water, light, heat, communications, power, or garbage service, for flood control, drainage or sanitary purposes, or for sewage collection, treatment, or disposal.

- **California Code of Regulations**. CDPH (formally DHS) is responsible for establishing uniform Statewide reclamation criteria to ensure that the use of recycled water is not detrimental to public health and protects beneficial uses. In Title 22, Division 4, Chapter 3 (Water Recycling Criteria), the CDPH (DHS) sets forth water quality criteria, treatment process requirements, and treatment reliability criteria for reclamation operations. According to CDPH (DHS), tertiary-treated effluent can be used for almost any purpose except for direct drinking water. Table 4.10-1 (Suitable Uses of Reclaimed Water) lists the possible uses of reclaimed water and the level of treatment required for these uses.

The following State laws require the use of water-efficient plumbing fixtures in structures: (1) Sections 25352(i) and (j), Title 24, CCR; (2) Sections 1604(g) and 1606, Title 20, CCR; (3) Sections 17921.3 and 116785, H&SC; and (4) Section 65591 *et seq*., CGC.

The provision of potable water and toilet facilities is required under OSHA (29 CFR 1926.51) and Cal/OSHA (Section 1524-1526, CCR) standards. As required by OSHA, during construction, toilets shall be provided for employees according to the following ratio: (1) twenty or fewer employees – one toilet; (2) 20 to 200 employees – one toilet seat and one urinal for each 40 employees; and (3) more than 200 employees – one toilet seat and one urinal for each 50 employees. Typically, "port-a-potties" are brought onto construction sites and are maintained by the firm providing those temporary facilities. Using a vacuum truck, waste materials are then disposed of off those sites in accordance with the permits held by those vendors.

4.10.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **County of San Bernardino General Plan**. As noted in the County General Plan, any increase in population strains existing infrastructure and facilities. Without proper maintenance and regular investments through improvements and upkeep, the needs of existing and future residents cannot be adequately addressed.[6] In the context of the proposed project, those utility and service system goals, objectives, and programs

[6]/ *Op. Cit*, County of San Bernardino 2007 General Plan, Circulation and Infrastructure Element, p. III-13.

presented in the County General Plan that appear to be most closely related to the unincorporated County portion of the project site are presented below.

- Goal CI11. The County will coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high quality water supply for all residents and ensure prevention of surface and groundwater pollution.

  - ◊ Policy CI11.1. Apply federal and State water quality standards for surface and groundwater and wastewater discharge requirements in the review of development proposals that relate to type, location and size of the proposed project to safeguard public health.

  - ◊ Policy CI11.4. Cooperate with sewering agencies to encourage the development of general sewering plans that will protect groundwater quality.

  - ◊ Policy CI11.7. Assist in the development of additional conveyance facilities and use of groundwater basins to store surplus surface or imported water.

  - ◊ Policy CI11.9. Encourage water conservation, replenishment programs, and water sources in areas experiencing difficulty in obtaining timely or economical water service from existing potential suppliers, or water quality or quantity problems.

  - ◊ Policy CI11.10. Because the recharge of groundwater basins is vital to the supply of water in the County, and because these areas can function only when retained in open space, the County will consider retaining existing groundwater recharge and storm flow retention areas as open space lands.

  - ◊ Policy CI11.12. Prior to the approval of new development, ensure that adequate and reliable water supplies and conveyance systems will be available to support the development, consistent with coordination between land use planning and water system planning.

    Programs. [1] Consider the effect of development proposals and whether or not they should include the phased construction of water production and distribution systems. Hydrologic studies may be required as appropriate. [2] Encourage new development to locate in those areas already served or capable of being served by an existing approved domestic water supply system.

  - ◊ Policy CI11.13. Prevent surface and groundwater pollution and continue the cleanup of contaminated waters and watersheds.

- Goal CI12. The County will ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.

Table 4.10-1
SUITABLE USES OF RECLAIMED WATER

Use	Conditions in which Use is Allowed			
	Disinfected Tertiary Reclaimed Water	**Disinfected Secondary 2.2 Reclaimed Water**	**Disinfected Secondary 23 Reclaimed Water**	**Undisinfected Secondary Reclaimed Water**
Supply for a non-restricted recreational impoundment	Allowed	Not Allowed	Not Allowed	Not Allowed
Flushing toilets and urinals and priming drain traps	Allowed	Not Allowed	Not Allowed	Not Allowed
All water uses other than potable use for food production	Allowed	Not Allowed	Not Allowed	Not Allowed
Irrigation of parks, playgrounds, school yards, residential yards, golf courses, and associated with residences	Spray, drip, or surface	Not Allowed	Not Allowed	Not Allowed
Restricted access golf courses, cemeteries, and freeway landscapes	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not Allowed
Non-edible vegetation at other areas with limited public exposure	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not Allowed
Sod farms	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not Allowed
Ornamental plants for commercial use	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not Allowed
All food crops	Spray, drip, or surface	Not Allowed	Not Allowed	Not Allowed
Food crops that are above ground and not contacted by reclaimed water	Spray, drip, or surface	Drip or surface	Not Allowed	Not Allowed
Pastures for milking animals and other animals	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not Allowed
Fodder, fiber, and seed crops not eaten by humans	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Drip or surface
Orchards and vineyards bearing food crops	Spray, drip, or surface	Drip or surface	Drip or surface	Drip or surface
Orchards and vineyards not bearing food crops	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Drip or surface
Christmas trees and other trees not grown for food	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Drip or surface
Food crops which must undergo commercial pathogen-destroying processing before consumption	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Drip or surface
Other uses: Industrial cooling utilizing cooling towers, forced air evaporation, spraying, or other feature that creates aerosols or other mist	Allowed	Not Allowed	Not Allowed	Not Allowed
Notes: 1. The numbers refer to limits on the number of coliforms per 100 ml in the reclaimed water.				

Source: Title 11 (California Water Reclamation Criteria), May 1994

◊ Policy CI12.11. Prior to approval of new development, ensure that adequate and reliable wastewater systems will be available to support the development, consistent with coordination between land use planning and wastewater system planning.

Programs. (1) Require the connection to the community sewerage system for any proposed development or subdivision of land within a sewer or sanitation district. In areas where sewers are required by the appropriate RWQCB and a sewer or sanitation district does not exist, a district and appropriate assessments will be established. Exceptions may be approved subject to review and approval by the County DEHS, the appropriate RWQCB, and the wastewater agency. (2) Cooperate with the local wastewater/sewering authority to consider the effect of development proposals and whether they should include the phased construction of wastewater treatment facilities. (3) Work with wastewater agencies to ensure planned capacity increases in locations where sewerage facilities are approaching capacity.[7]

- **County of San Bernardino Development Code**. Chapter 83.09 (Infrastructure Improvement Standards) of the County Development Code establishes the level of infrastructure improvement which are required for proposed development in order to ensure that the development does not result in fiscal liabilities to County residents (Section 83.09.010). These standards apply to all new residential and non-residential subdivisions and non-residential development in the Valley Region (Section 83.09.020). As stipulated therein, residential projects shall connect to a water purveyor when the nearest property line is within 200 feet of a water line. This requirement increases by 100 feet for each dwelling unit in the project. Sewers shall be required within established sewer service districts and outside such districts when required by the RWQCB. Projects shall connect to a sewer system when the nearest property line is within 200 feet of a sewer line. This requirement shall be increased by 100 feet for each dwelling unit in the project (Section 83.09.030).

  As further stipulated in Section 87.06.050(h) in Chapter 87.06 (Subdivision Design and Improvement Requirements), each parcel within an approved subdivision shall be provided an approved on-site sewage disposal system before final building inspection or connection to an approved community sewage collection, treatment, and disposal system. Chapter 84.19 (Recycling Facilities) imposes specific standards and procedures for the siting and operation of various types and sizes of commercial recycling facilities.

  Although the County has not adopted a construction and demolition (C&D) debris diversion ordinance, the County has prepared a "Construction & Demolition Waste Recycling Guide & Directory" which provides information on reducing, reusing, and recycling the volume of construction and demolition materials at the source.[8] No quantitative or qualitative goals or objectives are, however, established therein.

[7]/ *Ibid*., pp. III-13 through III-20.
[8]/ County of San Bernardino, Solid Waste Management Division, Construction & Demolition Waste Recycling Guide & Directory, 2006.

4.10.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. Although not specifically a "County island," as that term is used in the City General Plan, much of the project area is nonetheless County unincorporated lands located adjacent to the City's corporate boundaries. As such, City policies addressing existing "County islands" located in the "Northern Sector" may offer decisionmakers some policy guidance. As noted in the City General Plan, a "continuation of unincorporated areas within the City poses a number of problems: the unsewered islands are a threat to underground aquifers, an important source of potable water; vacant island land can be developed without application of City standards; deteriorated island neighborhoods can affect adjoining City neighborhoods negatively; island residents use City-funded facilities such as parks and bicycle trails without providing their share of support; and more prosperous island neighborhoods which refuse to share in the benefits and responsibilities of local government can diminish the City's social, economic and political unity."[9] In the context of the proposed project, those utility and service system goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

  - Goal 4.1.4. Encourage the annexation of all County islands located within the boundaries of the City of Rialto.

    - ◊ Policy 4.1.4.1. Work with the [Regional] Water Quality Control Board to require sewering of all new development within County islands.

    - ◊ Policy 4.1.4.3. Work with the County of San Bernardino to require that City of Rialto development standards are met in all new development within County islands.[10]

  Applicable or potentially applicable utilities and service systems policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. As specified in Section 18.02.070 (Public Utility Lines) in Title 18 (Zoning) of the City Municipal Code: "The provisions of this title do not limit or interfere with the construction, installation, operation, and maintenance for public utility purposes, of water and gas pipes, mains and conduits, electric light and electric power transmission and distribution lines, telephone and telegraph lines, oil pipe lines, sewers and sewer mains, and incidental appurtenances."

  As stipulated in Section 12.32.040 (Engineers Report) in Title 12 (Public Utilities) in the City Municipal Code, recycled water uses may include, but not be limited to, the irrigation

[9]/ *Op. Cit*., City of Rialto General Plan, Land Use Element, p. II-25.
[10]/ *Ibid*., pp. II-25 and II-26.

of greenbelt and agricultural areas, filling of artificial lakes, and appropriate industrial and commercial uses.[11]

To offset the prolonged effects of a drought, on December 18, 1990, the City adopted Ordinance 1130 to provide water conservation measures to minimize the effects of a water shortage. The ordinance outlines four stages of action to be implemented during a water shortage and includes both voluntary and mandatory stages. The priorities for the use of available water is to help protect the public health, safety, and welfare and to help assure an adequate supply to meet the domestic, sanitation, and protection needs with the City's service area.[12]

With regards to water conservation, as indicated in Section 12.20.010 (Policies) of Chapter 12.20 (Water Conservation Requirements), the policies of this chapter include the following: (1) All new structures shall be equipped with ultra low-flush toilets (Section 17921.3 of the H&SC), with low-flow showers and faucets (Title 24, Part 6, Article 1, T20-1406F, CCR), and all hot water lines shall be insulated in accordance with California Energy Commission (CEC) rules; (2) All remodeled or expanded existing structures, if not so equipped, shall be retrofitted with new toilets resulting in 1.5 gallon per flushes and low-flow showers and faucets; (3) The use of native or water-conserving plant species for landscaping purposes is encouraged; (4) The use of lawns shall be minimized in commercial, hotel, condominium, and large-scale housing developments and shall be subject to Commission review and conditioning; (5) The City shall cooperate with local water surveyors, appropriate State agencies, and other responsible agencies in facilitating a continuous program to increase consumer awareness about the need for and benefits of water conservation; (6) Large water users shall be encouraged to implement water recycling and reuse processes; (7) Water conservation measures shall be as reliable a method in reducing water demands as water supply projects are in meeting such demands; (8) Large water users shall be encouraged to submit a water conservation plan to the Public Services Director and to promote implementation of same; (9) Water demand, use and mitigation shall be addressed in every EIR; and (10) All new services, with the exception of single-family residences and apartment complexes up to and including four units per meter, shall be required to install a separate water meter for the on-site landscaping.

The City has not adopted a C&D debris diversion ordinance.

4.10.3 Environmental Setting

4.10.3.1 Regional Setting

Water Supply

The State Water Resources Act of 1945 provided the SWRCB powers to initiate and conduct investigations of the water resources of the State. In response, the State Water Resources

[11]/ The City has constructed a hydro-pneumatic booster station and approximately 7,000 feet of 10-inch diameter transmission water line to provide Caltrans with recycled water for irrigation of landscape for the I-10 Freeway from Pepper Avenue to Cherry Avenue. This is approximately 42,000 feet of landscape irrigation corridor with the right-of-way for the I-10 Freeway. The City has a long-term reclaimed water supply of 18,000 acre-feet per year or 16 mgd (Source: City of Rialto [John Egan and Associates], Urban Water Management Plan, February 2006, pp. 61 and 63).

[12]/ City of Rialto (John Egan and Associates), Urban Water Management Plan, February 2006, p. 51.

Board released a series of bulletins addressing the water resources of the State. In "Bulletin No. 1," the State recognized that "[a] century of experience in California has demonstrated that growth and development of the State depend on the adequacy and economical utilization of its water supply. The California Water Plan to be set forth in State Water Resources Board Bulletin No. 3 will furnish the pattern to meet that need. Its implementation will provide a truly comprehensive and coordinated development of this great and most vital resource. However, as the future unfolds and conditions change, planning must continue."[13]

SWRCB Bulletin No. 3 described a comprehensive master plan for the control, protection, conservation, distribution, and use of the water of the State to meet present and future needs for all beneficial uses. The plan was intended to indicate the general manner in which California's water resources should be developed to satisfy its potential ultimate water requirements, with emphasis on Statewide water projects.

The "California Water Plan" is the State's strategic plan for managing and developing water resources. Since the publication of Bulletin No. 3 in 1957, the California Department of Water Resources (DWR) has prepared seven water plan updates (known as the Bulletin 160 series). The CWC now requires that the water plan be updated every five years. In addition, the plan shall include a report on each hydrologic region's development of regional and local water projects to improve water supplies to meet municipal, agricultural, and environmental water demands and minimize the need to import water from hydrologic regions. The project site is located in the South Coast Hydrologic Region.

As indicated in the 2005 update of the "California Water Plan" (Bulletin 160-05): "Projected population increases will have a significant impact on water demands. More than 50 percent of the region's water supplies are imported from other parts of the State through the SWP [State Water Project], the Los Angeles Aqueduct, and the Colorado River Aqueduct [CRA]. By year 2016 California's Colorado River allocation will be reduced from the current 5.3 million acre-feet per year to 4.4 million acre-feet per year. Several water exchange, conjunctive use, and conservation programs must be developed to offset this reduction. Drought impacts are a long-term concern and require the development of other local sources of supply to meet dry year demands, including recycling, expanded conservation, conjunctive use, and desalination."[14]

Climate change experts believe that the timing and quality of available water resources in the coming decades may be less predictable due to changing climate conditions. For California, over the past century there have been observed changes in air temperatures, annual precipitation, runoff, and sea levels. Further changes are expected over the next century due to climate change. These changes in precipitation and temperature patterns may lead to impacts to California's water resources and water project operations.[15]

Because climate change may seriously affect the State's water resources, particularly the SWP's[16] ability to deliver water, climate change is identified in the "California Water Plan Update

[13]/ State Water Resources Board, Water Resources of California, Bulletin No. 1, 1951, p. 23.

[14]/ The Resources Agency, California Department of Water Resources, California Water Plan Update, December 2005, Volume I (Strategic Plan), p. 3-22.

[15]/ The Resources Agency, California Department of Water Resources, Progress on Incorporating Climate into Planning and Management of California's Water Resources, July 2006, p. 2-75.

[16]/ The SWP is a water storage and delivery system of reservoirs, aqueducts, power plants, and pumping plants that extends for more than 600 miles. Its main purpose is to divert and store surplus water during wet periods and distribute it to service areas in Northern California, the San Francisco Bay area, the San Joaquin Valley, the Central Coast, and Southern California. Other project purposes include flood control, power generation, recreation, fish and wildlife protection, and water quality management in the Sacramento-San Joaquin Delta (Source: The

2005" as a key consideration in planning for the State's future water management. As indicated therein, the State's "water systems have been designed and operated based on data from a relatively short hydrologic record. Mounting scientific evidence suggests that forecasted climate changes could significantly change California's precipitation patterns and amount from that shown by the record. Less snowpack would mean less natural water storage. More variability in rainfall, wetter at times and drier at times, would place more stress on the reliability of existing flood management and water systems. California's high dependence on reservoir storage and snowpack for water supply and flood management makes us particularly vulnerable to these types of projected hydrologic changes."[17] Despite these uncertainties, "[t]he region's water agencies generally have solid plans for adapting to changing conditions and meeting future water needs."[18]

As reported in the "California Water Plan Update 2005," between 1972 and 2003, the Metropolitan Water District of Southern California (MWD) imported an average of 703,000 acre-feet per year (AFY) of water from the SWP. The contracted amount is 1,811,000 AFY and imports after 2003 have been closer to this amount. In addition, depending on the availability of surplus water, the MWD imports 680,000 AFY or more from the CRA. Fifteen percent of the region's water supply is developed by water agencies located outside the service area of the MWD and its member agencies. These agencies also import water from the SWP or use local supplies, primarily groundwater. Groundwater resources meet about 23 percent of the region's water demand in normal years and about 29 percent in drought years.[19]

The primary water source for the SWP is the Feather River, a tributary of the Sacramento River. Storage released from Oroville Dam on the Feather River flows down natural river channels to the Sacramento-San Joaquin River Delta. The Delta is comprised of 738,000 acres of land interlaced with channels that receive runoff from about 40 percent of the State's land area.

Twenty-nine State water contractors have signed long-term water supply contracts with the DWR for a total of 4,173 thousand acre-feet (TAF) per year. Signed in the 1960's, all contracts are in effect to at least 2035 and are essentially uniform. Each contract contains a schedule (Table A[20]) of the maximum amount of water the contractor can receive annually. The annual amount was designed to increase each year, with most contractors reaching their ultimate maximum amount in 1990. In many cases, SWP water is an important component of local water supplies.

Resources Agency, California Department of Water Resources, The State Water Project Delivery Reliability Report 2007, Draft, December 2007, p. 3).

[17]/ *Ibid*., p. 3-15.

[18]/ *Ibid*., p. 5-16.

[19]/ *Ibid*., Volume 3 (Regional Reports), pp. 5-3 and 5-4.

[20]/ All water-supply related costs of the SWP are paid by the SWP contractors and Table A serves as a basis for allocating some of the costs. In addition, Table A plays a key role in the annual allocation of available water supply among contractors. When the SWP was being planned, the amount of water projected to be available for delivery to the contractors was about 4.2 million acre-feet (MAF) per year. This was referred to the minimum project yield and it was recognized that, in some years, the project would be unable to deliver that amount and, in other years, project supply could exceed that amount. The 4.2 MAF number was used as the basis for apportioning available supply to each contractor and as a factor in calculating each contractor's share of the project's costs. This apportionment is accomplished by Table A in each contract. Table A lists, by year and acre-feet, the portion of the 4.2 MAF deliverable to each contractor. Other contract provisions permit changes to an individual contractor's Table A under special circumstances. As of 2007, the total of the maximums in all the contracts now equals 4.173 MAF (Source: The Resources Agency, California Department of Water Resources, The State Water Project Delivery Reliability Report 2007, Draft, December 2007, Appendix C).

The San Bernardino Valley Municipal Water District (SBVMD) is a SWP contractor. The SBVMD's maximum annual SWP Table A amount is 102,600 acre-feet (AF).[21]

In response to a 2000 settlement agreement with the Planning and Conservation League, (Planning and Conservation League v. Department of Water Resources), DWR is tasked to prepare a biennial assessment report of the existing delivery capacity of the SWP over a range of hydrologic conditions. The range of conditions is to include the total amount of SWP water delivered and the amount of projected water delivered to each contractor for each of the ten years preceding the report. As indicated in most recent delivery reliability report (2005), based on a maximum total contract amount of 4.13 million acre-feet per year (MAFY), DWR estimates that (a) in 75 percent of the years, the annual water delivery of the SWP is estimated to be at or above 2.7 MAFY (65 percent of the 4.13 MAFY, (b) in 50 percent of the years, it is estimated to be at or above 3.5 MAFY (85 percent of the 4.13 MAFY), and (c) in 25 percent of the years, it is estimated at 4.13 MAFY (100 percent of the 4.13 MAFY).[22]

The DWR's "The State Water Project Delivery Reliability Report 2007, Draft" includes CalSim II simulations conducted to evaluate current (2007) SWP delivery reliability and incorporate actions to protect the delta smelt pursuant to a 2007 federal court ruling.[23] As described therein, simulations to evaluate future (2027) SWP delivery reliability incorporated the current interim court-ordered operating rules related to delta smelt and a range of possible climate change impacts to hydrology in the Central Valley. To provide a range of estimated water deliveries, the interim operating rules for delta smelt were simulated at a more-restricted and a less-restricted level for Delta exports. For 2007, two studies are conducted and, for 2027, ten simulations are used to reflect the four assumed scenarios for climate change and the two levels of operating rules. The results of these updated CalSim II simulations are presented in the draft 2007 SWP reliability report along side results from the 2005 SWP reliability report to identify and explain impacts to delivery reliability due to actions to protect delta smelt and future climate change.

As indicated in Table 4.10-2 (SWP Table A Delivery from the Delta under Future Conditions),[24] under the updated future conditions (2027), the draft 2007 SWP reliability report shows that the average SWP delivery amounts may decrease from 8-11 percent of maximum Table A amounts compared to earlier estimates. Table 4.10-3 (Average and Dry Period SWP Table A Deliveries from the Delta under Future Conditions),[25] which is also drawn from the draft 2007 SWP delivery reliability report, includes estimates of SWP Table A deliveries for single- and multi-year droughts and includes the average of the Table A deliveries for comparison purposes.

In 2005, the California Energy Commission (CEC) conducted a preliminary assessment on methods for measuring current water supply reliability (including an evaluation of three

[21]/ The Resources Agency, California Department of Water Resources, The State Water Project Delivery Reliability Report 2007, Draft, December 2007, Table C-1, p. C-2.

[22]/ The Resources Agency, California Department of Water Resources, The State Water Project Delivery Reliability Report 2005, April 2006, pp. 21-22.

[23]/ On August 31, 2007, United States District Judge Oliver W. Wanger (Natural Resources Defense Council v. Kempthorne) significantly restricted water deliveries from the Sacramento-San Joaquin Delta (Delta) in order to protect the federally threatened delta smelt. The reduced pumping resulting from that ruling translates into a loss of as much as one-third or more of previously available water supplies. This action (effective December 25, 2007) will likely have long-term Statewide implications and may affect SWP water resources available to the MWD and other water agencies.

[24]/ *Op. Cit*., California Department of Water Resources, The State Water Project Delivery Reliability Report 2007, Draft, Table 6-13, p. 39.

[25]/ *Ibid*., Table 6-14, p. 20.

computer models used to estimate water supply impacts of changing climate scenarios) and methods for projecting changes in supply reliability caused by climate change. The literature review showed that climate change will affect California's hydrology in several ways.

Table 4.10-2
SWP TABLE A DELIVERY FROM THE DELTA UNDER FUTURE CONDITIONS

Study of Future Conditions	Average Delivery[1]		Maximum Delivery[1]		Minimum Delivery[1]	
	Thousand AFY (TAF/year)	Percent Maximum Table A[2]	Thousand AFY (TAF/year)	Percent Maximum Table A[2]	Thousand AFY (TAF/year)	Percent Maximum Table A[2]
2005 SWP Reliability Report Study 2025	3,178	77%	4,133	100%	187	5%
Update with 2027 Studies[3]	2,724-2,850	66-69%	4,133	100%	255-293	6-7%

Notes:
1. 1922-1994 for 2005 SWP delivery reliability report; 1922-2003 for update with 2027 studies.
2. Maximum Table A Amount is 4,133 TAF/year.
3. Range in values reflects four modified scenarios of climate change: annual Table A deliveries were first interpolated between full 2050 level and no climate change scenarios then averaged over the two scenarios of Old and Middle River flow targets.

Source: Department of Water Resources

Table 4.10-3
AVERAGE AND DRY PERIOD SWP TABLE A DELIVERIES FROM THE DELTA UNDER FUTURE CONDITIONS

Study of Future Conditions	SWP Table A Delivery from the Delta (in percent of maximum Table A[1])					
	Long-Term Average[2]	Single Dry-Year (1977)	2-Year Drought (1976-1977)	4-Year Drought (1931-1934)	6-Year Drought (1987-1992)	6-Year Drought (1929-1934)
2005 SWP Reliability Report Study 2025	77%	5%	40%	33%	42%	38%
Update with 2027 Sudies[3]	66-69%	7%	26-27%	32-37%	33-35%	33-36%

Notes:
1. Maximum Table A Amount is 4,133 TAF/year.
2. 1922-1994 for 2005 SWP delivery reliability report; 1922-2003 for update with 2027 studies.
3. Range in values reflects four modified scenarios of climate change: annual Table A deliveries were first interpolated between full 2050 level and no climate change scenarios, then averaged over the two scenarios of Old and Middle River flow targets.

Source: Department of Water Resources

Existing literature suggests that global warming is likely to have significant impacts on the hydrological cycle, which in turn will affect many aspects of the California water system. There is evidence that some changes will have already occurred, such as an early beginning date of spring snowmelt, an increase in winter runoff as a fraction of total runoff, and an increase in winter flooding frequency. Depending on the model implemented, total runoff is expected to change, with the most significant impact from global warming on river basins located in medium altitudes. Other studies have suggested that shifts in runoff without accompanying operational changes will challenge the system and perhaps reduce the reliability of the systems to meet

current demands. The impact on California water resources will ultimately depend on the ability of human management systems and infrastructure to cope with these changes.[26]

Following two straight years of below-average rainfall, very low snowmelt runoff, and court-ordered water transfer restrictions (Natural Resources Defense Council v. Kempthorne), on June 4, 2008, Governor Arnold Schwarzenegger signed Executive Order S-06-08 declaring the existence of a drought and ordering immediate action to address the situation. The Executive Order directed the California Department of Water Resources (DWR) to: (1) facilitate water transfers to respond to emergency shortages across the State; (2) work with local water districts and agencies to improve local coordination; (3) help local water districts and agencies improve water efficiency and conservation; (4) coordinate with other State and federal agencies and departments to assist water suppliers identify risks to water supply and help farmers suffering losses; and (5) expedite existing grant programs to help local water districts and agencies conserve. The Executive Order also seek to encourage local water districts and agencies to promote water conservation, to work cooperatively on the regional and State level to take action to reduce water consumption locally and regionally for the remainder of 2008, and to prepare for potential worsening water conditions in 2009.

Within the southern California area, the Metropolitan Water District of Southern California (MWD or Metropolitan) provides supplemental imported water from northern California (State Water Project or SWP) and the Colorado River to 26 member agencies located in Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties. MWD provides between 45 and 60 percent of the municipal, industrial, and agricultural water used within its 5,200 square mile service area.[27] On June 10, 2008, MWD issues a "ramping up the water conservation call throughout the six-county service area by declaring a Water Supply Alert in southern California." The alert called upon cities, counties, local public water agencies and retailers to achieve "extraordinary conservation by adopting and enforcing drought ordinances, accelerating public outreach and messaging, and developing additional water supplies." Measures that could be incorporated into local drought ordinances include restrictions on the hours of watering outdoors, prohibitions on landscape irrigation runoff, tiered rater structures that promote conservation, provisions for water-efficient landscapes in new construction and landscape retrofits, and hotlines and other mechanisms for the public to report wasteful water practices. As further indicated in the water alert: "Since 2003, Metropolitan's Colorado River supplies have been diminished by as much as half after California reduced its use of river water because of drought. The [Metropolitan Water] District's State Water Project supplies from northern California have been cut by nearly 30 percent this year because of dry conditions and court-ordered pumping restrictions in the Delta to protect endangered fish. To meet current demands, Metropolitan and its member agencies are withdrawing supplies from surface and groundwater storage, leaving the region's reserves vulnerable to continued low-levels of imported water and emergencies, such as a major earthquake. Over the past two years, Metropolitan has drawn down its stored dry-year reserve by nearly half."[28]

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[26]/ California Energy Commission, Climate Change and Water Supply Reliability, PEIR Project Report, CEC-500-2005-053, March 2005, p. 2.

[27]/ Within the general project area, the only member agency is the Inland Empire Utilities Agency (IEUA), which services the Cities of Chino, Chino Hills, Fontana, Montclair, Ontario, and Rancho Cucamonga. The IEUC relies on MWD water for about 30 percent of its water supply needs.

[28]/ Metropolitan Water District of Southern California, News Release: Metropolitan Board Declares Water Supply Alert Throughout Southern California to Help Sustain Reserves, June 10, 2008.

Groundwater Management

The San Bernardino Valley Water Conservation District (SBVWCD) and its predecessors have conducted groundwater recharge activities since 1912 in the Bunker Hill Basin. Artificial recharge of imported water to the San Bernardino Basin area (SBBA) began in 1972. Because of the extremely permeable sand and gravel deposits, maximum instantaneous recharge rates are high. Based on a recharge efficiency rate of 95 percent, the total quantity of artificial recharge in the basin averaged about 7,400 acre-feet per year from 1972 to 1992. Because of the size of several of the recharge basins and exceptionally permeable material, a larger quantity of water could be imported and recharged along the base of the San Bernardino Mountains, if necessary (i.e., recharge basin capacity and infiltration rates are not currently limiting the amount of imported water recharged).[29]

As indicated in Table 4.10-4 (Recharge Facilities within the Bunker Hill San Bernardino Basin Area),[30] numerous existing groundwater recharge facilities (spreading grounds or basins) are located in the SBBA and Rialto-Colton subbasin. With the exception of the Cactus Spreading and Flood Control Basins, existing turnouts serve each recharge facility. With regards to the Lytle Creek subbasin, gravel pits and spreading grounds have been used for recharge of the subbasin for over eighty years. Significant groundwater recharge occurs in those gravel pits which are located adjacent to Lytle Creek.

Wastewater

In 1968, the City developed a "Wastewater Master Plan" (Wastewater Master Plan). The Wastewater Master Plan was subsequently updated in 1994[31] and in 1996.[32] In 2005, separate assessments[33,34] of the City's wastewater system were again conducted as a precursor to the development of the City's 2009 Wastewater Master Plan update. The update included a capital improvement program to address undersized and/or deteriorated pipe in the sewer system.

Within the City, the wastewater collection system includes sewer lines, pumping stations, and force mains. The sewer lines of the collection system range in size from 8 to 48 inches in diameter and are constructed primarily of vitrified clay pipe (VCP). The wastewater collection system can be divided into the following five major drainage basins: (1) Basin I (east of Riverside Avenue and north of Valley Boulevard); (2) Basin 2 (east of Cactus to Riverside Avenue and north of Valley Boulevard); (3) Basin III (west of Cactus Avenue and north of Valley Boulevard); (4) Basin IV (south of Valley Boulevard and north of Santa Ana Avenue); and (5) Basin V (south of Santa Ana Avenue). That portion of the proposed project which is currently located in the City is situated in Basin I.

Within the City, the wastewater collection system includes sewer lines, pumping stations, and force mains. The sewer lines of the collection system range in size from 8 to 48 inches in diameter and are constructed primarily of vitrified clay pipe (VCP). The wastewater collection system can be divided into the following five major drainage basins: (1) Basin I (east of

[29]/ San Bernardino Valley Municipal Water District (GEI Consultants, Inc.), Upper Santa Ana River Integrated Regional Water Management Plan, November 2007, pp. 2-60 and 2-61.
[30]/ *Ibid*., Table 2-11, p. 2-63.
[31]/ City of Rialto, Wastewater Master Plan Update with Route 30 Revisions August 1994.
[32]/ CH2M Hill, City of Rialto Sewer System Master Plan, 1987, updated 1996.
[33]/ Pacific Advanced Civil Engineering, Inc., City of Rialto Sewer System Evaluation, July 2005.
[34]/ TRG, City of Rialto Wastewater Collection System Analysis, September 2005.

Riverside Avenue and north of Valley Boulevard); (2) Basin 2 (east of Cactus to Riverside Avenue and north of Valley Boulevard); (3) Basin III (west of Cactus Avenue and north of Valley Boulevard); (4) Basin IV (south of Valley Boulevard and north of Santa Ana Avenue); and (5) Basin V (south of Santa Ana Avenue). That portion of the proposed project which is currently located in the City is situated in Basin I.

Table 4.10-4
RECHARGE FACILITIES WITHIN THE BUNKER HILL SAN BERNARDINO BASIN AREA

Facility Name	Owner or Operator	Conveyance Used to Serve Facility	Recharge Facility Characteristics[1]			
			Active Recharge Facility Area[2] (acres)	Percolation Rate[3] (feet/day)	Monthly Capacity (acre-feet)	Groundwater Basin and Subbasin Recharged[4]
SAR Spreading Grounds	SBVWCD	Foothill Pipeline Santa Ana Low Flow Santa Ana Intake	64	3	12,000	SBBA (Bunker Hill)
Devil Canyon and Sweetwater Basins	SBCFCD	Foothill Pipeline Sweetwater	30	1.5	1,350	SBBA (Bunker Hill)
Lytle Basins	LCWCA	Fontana Power Plant Constructed Channel	Variable	1.5	Variable	SBBA (Lytle Creek)
City Creek Spreading Grounds	SBCFCD	Foothill Pipeline City Creek	75	1.5	3,375	SBBA (Bunker Hill)
Patton Basins	SBCFCD	Foothill Pipeline Patton	3	0.3	27	SBBA (Bunker Hill)
Waterman Basins	SBCFCD	Foothill Pipeline Waterman	120	0.5	1,800	SBBA (Bunker Hill)
East Twin Creek Spreading Grounds	SBCFCD	Foothill Pipeline Waterman	32	1.5	1,440	SBBA (Bunker Hill)
Badger Basins	SBCFCD	Foothill Pipeline Sweetwater	15	0.5	225	SBBA (Bunker Hill)
Mill Creek	SBVWCD	Greenspot Pipeline Mill Creek Spreading Mill Creek Intake	66	3	6,000	SBBA (Bunker Hill)
Cactus Spreading and Flood Control Basins	SBCFCD	San Gabriel Valley MWD Lytle Pipeline Lower Lytle Creek	46	1.5	2,070	Rialto-Colton

Notes:
1. Values are from tabulation on map contained in Water Right Application by Valley District and Western to appropriate water from the Santa Ana River (SAR) or by engineering evaluation of spreading grounds.
2. Recharge facility area is the geographical extend of each basin that can be inundated for recharge.
3. Estimated percolation rate. This is the estimated rate at which water can percolate into the ground through the basin, expressed in feet per day. The values used have generally been computed form annual recharge capacity. These rates are typically about one-half of the percolation rates presented by the USGS (1972). The use of the small percolation rates is reasonable in that it would involve longer-term percolation rates that are typically smaller than short-term rates.
4. Note that there may be flow out of the subbasin or basin identified. For example, Geoscience Support Services, Inc. (1992) estimated that only 36 percent of the water recharged in the upper Lytle Creek area remains in the Lytle Creek subbasin, while most of it flows to the Rialto-Colton subbasin.

Source: San Bernardino Valley Municipal Water District (GEI Consultants, Inc.)

The sewerage flows from Basins I, II, and III are combined in Valley Boulevard, turning south to cross the I-10 Freeway at South Palm Avenue. The sewerage flow from Basin IV is added to Basins I, II, and III combined flow at various locations between Valley Boulevard and the City of Rialto Wastewater Treatment Plant (501 E. Santa Ana Avenue, Rialto) (Rialto WTP).[35],[36] The sewerage generated from Basin V is pumped to the treatment plant as the basin includes areas with elevations lower than the treatment plant. The collected sewerages are transferred to the City's Rialto WTP. The plant is a conventional tertiary wastewater treatment plant with design capacity of 11.7 million gallons per day. The treated effluent is discharged to the Rialto Channel and is utilized for landscape irrigation along the I-10 Freeway. Flows in the sewer collection system and at the influent to the treatment plant display a diurnal pattern with one or more peaks during each 24-hour period.[37,38]

A future flow scenario, based on the City's estimated Year 2020 wastewater flows, was performed. Wastewater generation rates were applied to the ultimate development condition in Year 2020 and yielded an estimated future average daily dry-weather flow (ADDWF) generation of 11.6 million gallons per day (mgd).[39] The City's Department of Public Works concluded that the plant's nominal capacity should be considered the threshold level of wastewater inflow. Based on the assumptions presented in the City's analysis, although the estimated Year 2020 flow (11.6 mgd) is near the threshold value (11.7 mgd), the plant's expansion would not be necessary until Year 2020.[40] In June 2001, the SARWQCB revised the Rialto WTP's wastewater permit to formally list the plant's design and nominal capacity as 12.7 mgd and 11.7 mgd, respectively. As indicated in the SARWQCB's Order R8-2007-0006, the Rialto WTP's 2007 capacity is 11.7 mgd and about 11.5 mgd of treated wastewater effluent flow from the plant is discharged to the Santa Ana River.[41] A small percentage of the treated wastewater flow is recycled and used as irrigation along the I-10 Freeway and for use under a contract for service to a local industrial user. The operation and revenues from the recycled water system are shared between the water and wastewater systems.

The City is developing plans for the phased upgrade and expansion of the Rialto WTP and/or for the alternative provision of expanded wastewater treatment capacity within the City.

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[35]/ The Rialto WTP is a domestic wastewater treatment plant with primary, secondary, and tertiary treatment. The facility provides wastewater treatment services within the City, a portion of the City of Fontana, and an area within the City's sphere of influence south of the I-10 Freeway and east of Sierra Boulevard. About 11.5 mgd of treated wastewater effluent flow from the plant is discharged to Reach 4 of the Santa Ana River and about 0.11 mgd of effluent flow is diverted to the Caltran's irrigation area. (Source: California Regional Water Quality Control Board, Santa Ana Region, Renewal of Wastewater Discharge and Producer/User Reclamation Requirements for the City of Rialto's Municipal Treatment Plant, Order No. R8-2007-006, NPDES No. CA0105295, San Bernardino County, March 2, 2007, pp. F-4 and F-6).

[36]/ The Rialto WTP is a complex of five plants constructed over time to serve increases in population and sewage flow. Plant Nos. 2 through 5 provide wastewater treatment. Plant No. 1 has been abandoned.

[37]/ *Op. Cit.*., City of Rialto Wastewater Collection System Analysis, pp. 2-1, 4-2, and 4-3.

[38]/ Peak flows are a function of the diurnal variation characteristics of the dry-weather flow source and the wet-weather inflows. The dry-weather flow rates vary throughout the day, with the highest rates normally occurring between 8:00 and 11:00 AM. The ratio of peak 60-minute flow to total average daily flow is defined as the dry-weather peaking factor. With adjustments for wet-weather infiltration, where applicable, peaking factors have bee delineated for different diameter sewer lines (Source: TRC, City of Rialto Wastewater Collection System Analysis, September 2005, pp. 4-2 and 4-3).

[39]/ *Op. Cit*., City of Rialto Wastewater Collection System Analysis, p. 4-3.

[40]/ *Ibid*., p. 5-4.

[41]/ California Regional Water Quality Control Board, Santa Ana Region, Renewal of Wastewater Discharge and Producer/User Reclamation Requirements for the City of Rialto's Municipal Treatment Plant, Order No. R8-2007-006, NPDES No. CA0105295, San Bernardino County, March 2, 2007, pp. F-4 and F-6.

Solid Waste

The California Integrated Waste Management Board (CIWMB) maintains a website providing the current status of all closed, active, and proposed solid waste facilities in the State, known as the Solid Waste Information System (SWIS).[42] The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. Eleven solid waste County-operated landfills are listed. In addition, 52 other facilities encompassing the full complement of solid waste services are identified in the SWIS.[43] The SWMD is responsible for the operation and management of the County's solid waste disposal system which consists of six regional landfills, five community collection centers, and eight transfer stations. In addition, the CIWMB promotes recycled-content products as one sustainable feature in green building design and construction. Not only do recycled-content products create markets for materials that have been collected through the recycling process but they are also an essential component of local (AB 939) and State (AB 75) government efforts to meet and exceed the 50 percent waste diversion mandate.

In June 2001, the CIWMB commissioned a building material emissions study, which utilized the Section 01350[44] indoor air quality testing protocols to measure emissions of products common to classrooms and State construction in comparison to alternative products. For the purpose of that study, alternative products were those that not only contained recycled content but also included low-or-no VOCs and rapidly renewable materials. Prior to that study, little was known regarding emissions from such products. As a result, recycled-content products were subject to greater scrutiny than their virgin-content counterparts.

The November 2003 "Building Material Emissions Study"[45] (BMES) concludes that recycled content products performed about the same as standard products and that low-emitting building materials were readily available to the construction industry. As reported in the CIWMB's "2004 Waste Characterization Study," construction and demolition (C&D) materials account for 21.7 percent of the State's overall disposed waste stream in 2003.[46] Common C&D materials include lumber, drywall, metals, masonry, carpet, plastic, pipe, rocks, dirt, paper, cardboard, or green waste related to land development. Of these, metals are the most commonly recycled material while lumber makes up the majority of debris that still goes to a landfill.

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[42]/ California Integrated Waste Management Board, Solid Waste Information System (http://www.ciwmb.ca.gov/SWIS/).

[43]/ Including facilities operated and managed by the County of San Bernardino Department of Public Works, Solid Waste Management Division (SWMD) and facilities operated and managed by private owners/operators.

[44]/ In 2000, the California Department of Health Services (DHS), CIWMD, and the California Energy Commission (CEC), with input from other State agencies, the office furniture industry, and consultants issued a benchmark environmental specification for procuring office furniture systems. This specification included criteria for indoor air quality (IAQ), recycled content, and energy-efficient lighting and was included in the California Department of General Services' (DGS) open-bidding process. The specifications developed for office furniture was subsequently used for developing "Special Environmental Requirements (Section 01350)," an environmental specification for screening building materials. These specifications include emission-testing procedures and require certification of recycled materials meeting the State Agency Buy Recycled Campaign (SABRC) requirements. Section 01350 has been rewritten, expanded, and included in two State publications: "Reference Specifications for Energy and Resource Efficiency" (CEC, 2001); and (2) "Collaborative for High Performance Schools: Best Practices Manual, Material Specifications" (Collaborative for High Performance Schools, 2002).

[45]/ California Integrated Waste Management Board, Building Material Emissions Study, CIWMB Publication No. 433-03-015, November 2003.

[46]/ California Integrated Waste Management Board (Cascadia Consulting Group), Contractor's Report to the Board – Statewide Waste Characterization Study, December 2004, Figure ES-A and Table ES-3, pp. 4 and 6.

As indicated in Table 4.10-5 (San Bernardino County Landfill Status), there are seven public landfills in the County with a combined permitted capacity of 12,429 tons per day. The County is not presently planning any new or the expansion of any existing landfills.[47] Three additional landfills are privately operated or operated by the federal government, including the USMC – 29 Palms Disposal Facility (36-AA-006), Fort Irwin Sanitary Landfill (36-AA-0068), and Mitsubishi Cement Plant Cushenberry Landfill (36-AA-0074). The nearest hazardous waste disposal facilities are Chemical Waste Management Inc.'s Kettleman Hills facility (Kettleman City, Kings County) and Clean Harbors Buttonwillow Landfill (Buttonwillow, Kern County).

4.10.3.2 Local Setting

Water Supply

The City of Rialto Department of Public Works, Water Department provides potable water to 11,897 domestic, commercial, institutional, and irrigation customers, supplying water to almost 50,000 people. The City's service area encompasses about 8.5 square miles in the central portion of the City. As illustrated in Figure 4.10-1 (Water Agencies within the Upper Santa Ana River Watershed)[48] and Figure 4.10-2 (City of Rialto – Existing Water Purveyors), the remainder of the City's population, north of Baseline Avenue and south of the I-10 Freeway, is served water either by the WVWD[49] or the Fontana Water Company.[50]

In 2006, 67 percent of the total production (9,548 acre-feet of water) was pumped out of four groundwater basins. Of that, 28 percent was pumped out of the Lytle Creek Basin, 30 percent out of the Rialto Basin, 29 percent out of the Bunker Hill Basin, and 13 percent out of the Chino Basin. The San Bernardino Valley Municipal Water District supplied the City with 26 percent of the total water via the Baseline Feeder pipeline. The City also received seven percent from the West Valley Water District of its surface water entitlement.[51]

Two existing water districts presently operate in the general project area: San Bernardino Valley Municipal Water District (SBVMWD) and the West Valley Water District (WVWD or District).

[47]/ South Coast Air Quality Management District, Final Program Environmental Impact Report for the 2007 Air Quality Management Plan, SCH No. 2006111064, certified June 1, 2007, p. 3.5-7.

[48]/ Local Agency Formation Commission (RBF Consulting) Draft Environmental Impact Report: LAFCO 3076 – Environmental Analysis, June 4, 2008, Exhibit 4.6-1, p. 4-57.

[49]/ The West Valley Water District (WVWD) is located mainly within southwestern San Bernardino County and, to a lesser amount, within northern Riverside County. The principal service area of the WVWD is approximately 29.5 square miles, with an additional 5.2 square miles within its sphere of influence. The WVWD currently has about 18,000 water service connections (Source: San Bernardino Valley Water Conservation District [GEI Consultants, Inc.], Upper Santa Ana Watershed Integrated Water Management Plan, November 2007, p. 1-40).

[50]/ The Fontana Water Company (FWC), a division of the San Gabriel Valley Water Company, is a public utility regulated by the California Public Utilities Commission. The FWC's service area covers approximately 52 square miles with boundaries including the San Gabriel Mountains to the north and the Riverside County line to the south. The FWC serves most of the City of Fontana and parts of Rancho Cucamonga, Ontario, and Rialto. The FWC serves a population of approximately 158,000, with over 45,000 active service connections. Each year the FWC produces between 45,000 and 50,000 acre-feet of water from water supply sources that include surface water from Lytle Creek and State Water Project water and groundwater from Lytle, Rialto, No-Man's Land, and Chino Basins. The FWC diverts and receives Lytle Creek surface water and produces groundwater in the Lytle, Rialto, and No-Man's Land Basins as an agent for the Fontana Union Water Company, which holds extensive water rights to these sources of supply pursuant to long-standing court judgments (Source: San Bernardino Valley Water Conservation District [GEI Consultants, Inc.], Upper Santa Ana Watershed Integrated Water Management Plan, November 2007, p. 1-48).

[51]/ City of Rialto, Department of Public Works, Water Division, Consumer Confidence Report 2006, undated, p. 2.

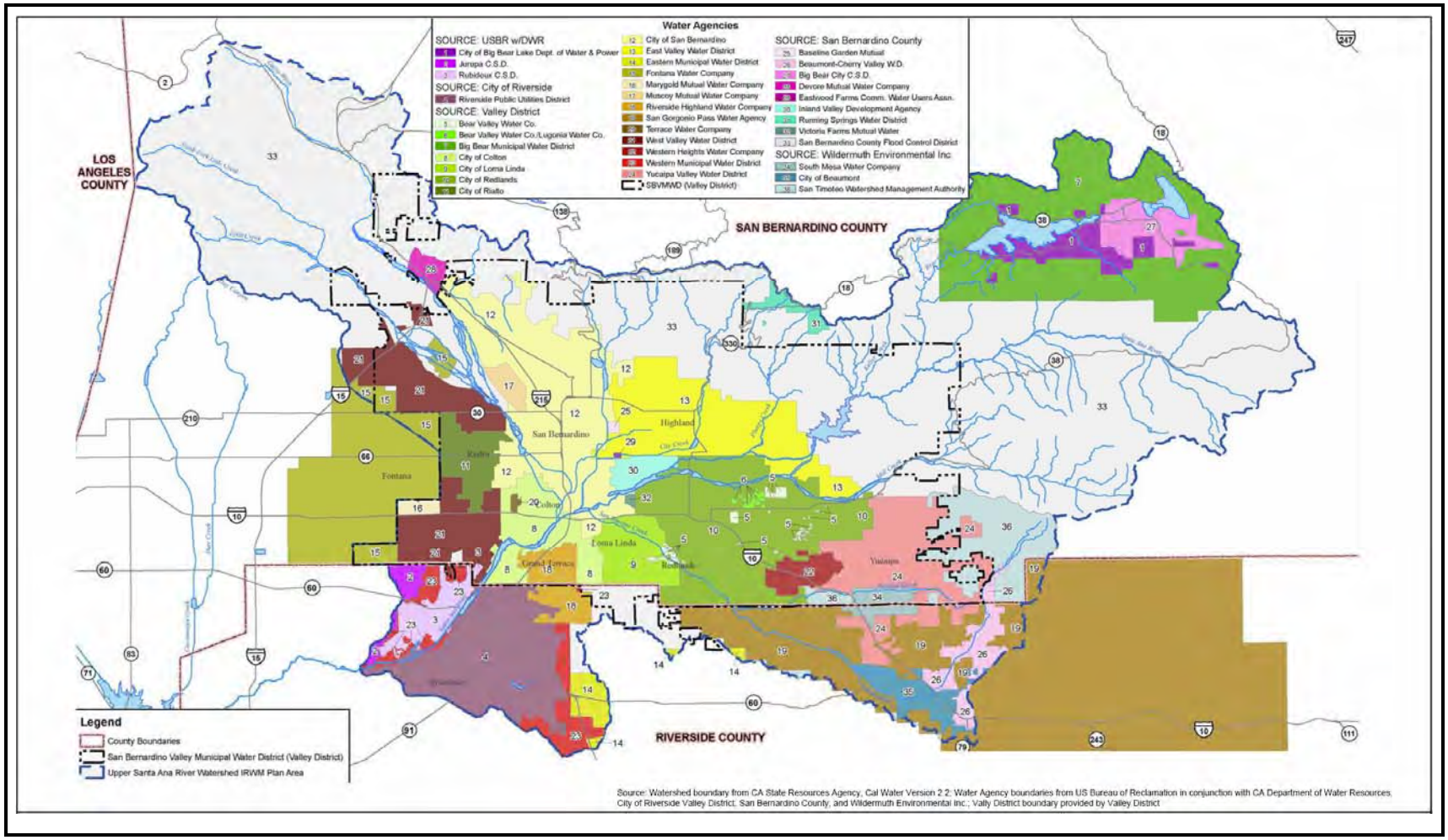

Figure 4.10-1
WATER AGENCIES WITHIN THE UPPER SANTA ANA RIVER WATERSHED
Source: Local Agency Formation Commission (RBF Consulting)

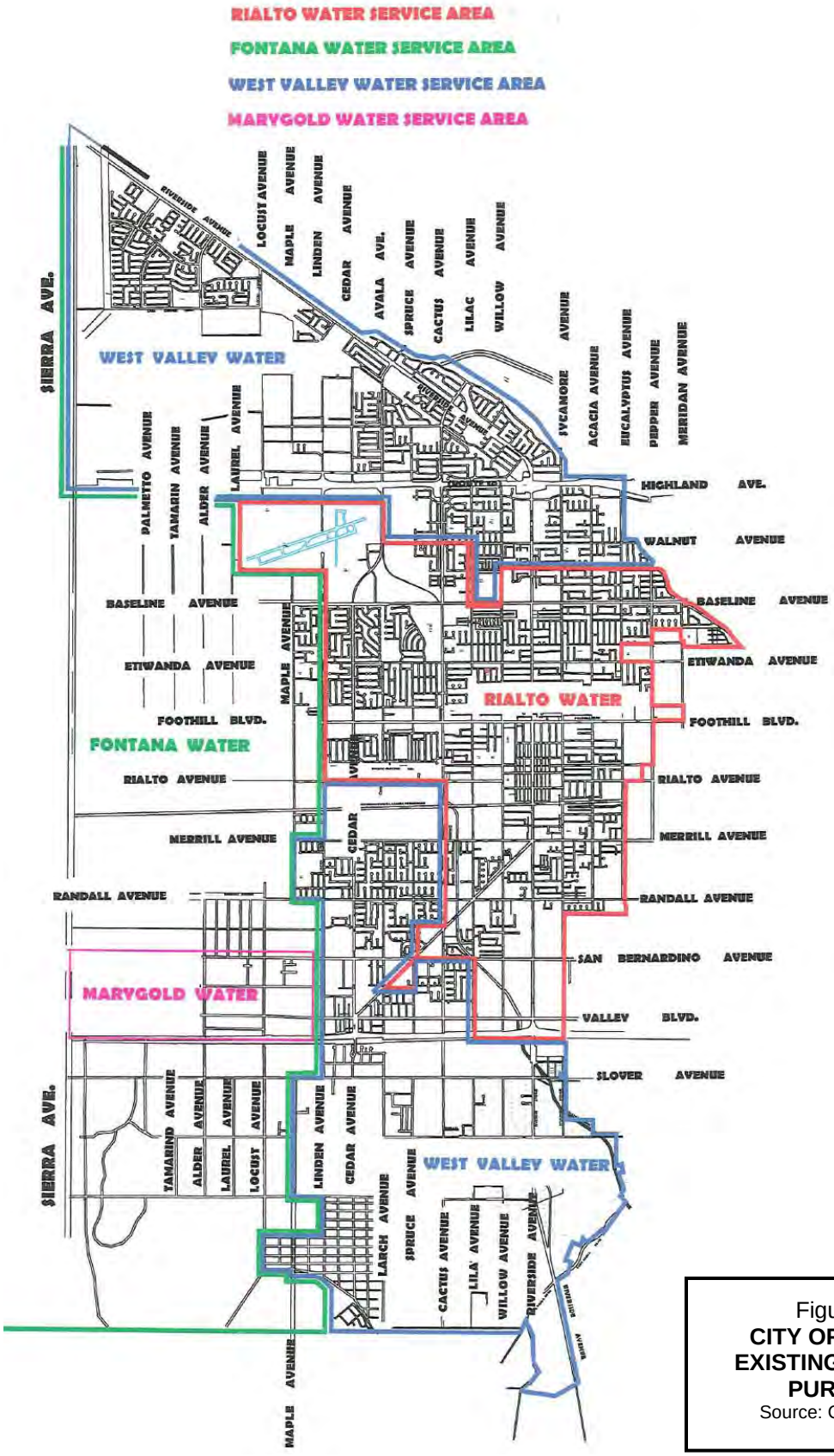

Figure 4.10-2
CITY OF RIALTO EXISTING WATER PURVEYORS
Source: City of Rialto

Table 4.10-5
SAN BERNARDINO COUNTY LANDFILL STATUS

Landfill	Total Tons Received (2005)	Permitted Tons/Day	Permitted Capacity (cubic yards)	Remaining Permitted Capacity (cubic yards)	Estimated Year of Closure	Rialto Sent Waste in 2000 (tons/year)
Barstow	81,377	750	3,584,500	924,401	05/01/2012	0
California Street	61,584	829	10,000,000	6,800,000	01/01/2031	0
Colton	261,387	3,100	13,297,000	610,000	10/20/2014	2,152
Landers	80,363	1,200	3,080,000	1,100,000	01/01/2013	0
Mid-Valley	855,167	7,500	62,000,000	35,270,000	04/01/2033	75,227
San Timoteo	202,793	1,000	20,400,000	9,491,163	05/01/2016	63
Victorville	361,762	3,000	83,200,000	82,200,000	10/1/2047	4
Total	1,904,433	17,379	195,561,500	136,395,564	-	77,446

Source: California Integrated Waste Management Board
(http://www.ciwmb.ca.gov/Profiles/Facility/Landfill/default.asp?VW=JLIST&MTYPE=Landfill&CNTY=36)

The project site is located in the WVWD's service area boundary and SOI. With the exception of the Sycamore Canyon and Sycamore Flat areas and the El Rancho Verde Royal Vista Golf Course, however, the project site has not been previously annexed into the boundaries of an existing water district. Information concerning both water districts is presented below.

- **San Bernardino Valley Municipal Water District**. The SBVMWD, incorporated under the Municipal Water District Act of 1911 (Section 71000 *et seq*., CWC), was formed in 1954 as a regional agency to plan a long-range water supply for the San Bernardino Valley. The SBVMWD imports water into its service area through participation in the SWP and manages groundwater storage within its boundaries. The district's enabling legislation includes a broad range of powers to provide water, wastewater and storm water disposal, recreation, and fire protection services. The SBVMWD does not deliver water directly to retail water customers.

  The SBVMWD covers about 352 square miles in southwestern San Bernardino County, including the eastern two-thirds of the San Bernardino Valley, the Crafton Hills, a portion of the Yucaipa Valley, and the cities and communities of Bloomington, Colton, Grand Terrace, Highland, Loma Linda, Mentone, Redlands, Rialto, San Bernardino, and Yucaipa. Serving a population of about 600,000 persons, the SBVMWD is responsible for long-range water supply management (including importing supplemental water) and is responsible for most of the groundwater basins within its boundaries and for groundwater extraction over the amount specified in the judgments.[52,53] The district has

[52]/ Santa Ana Watershed Project Authority, Santa Ana Integrated Watershed Plan, 2005 Update, An Integrated Regional Water Management Plan, June 2005, Part 1, p. 2.

[53]/ In the 1960's, the over commitment of water in the SAR watershed led to lawsuits between water users in the upper and lower watersheds regarding the use of both surface flows and groundwater. The lawsuits culminated in 1969 in Orange County and Western judgments. Under the terms of the settlements, the SBVMWD became responsible for providing a specified SAR base flow to Orange County and maintaining the safe yield in the San Bernardino Basin area and water levels in certain specified key wells in the Colton and Riverside Basin areas in San Bernardino County. If the conditions of either judgment are not met by the natural water supply, the SBVMWD is required to deliver supplemental water to offset the deficiency. The judgments resolved the major water rights issues that had prevented the development of long-term, region-wide water supply plans and established specific objectives for the management of the groundwater basins (Source: San Bernardino Valley Municipal Water District website).

specific responsibilities for monitoring groundwater supplies in the San Bernardino and Colton-Rialto Basins and maintaining flows at the Riverside Narrows on the SAR.[54]

The County's "domestic water sources are supplied through both local and imported water. . .For the entire County it is estimated that, on average, 85 percent of the domestic water is supplied by local sources with the balance of 15 percent as imported purchased water."[55] Groundwater is the principal source of supply in the SBVMWD service area, accounting for 58 percent of the total water demands. Surface water is the second largest supply source to the SBVMWD, accounting for about 23 percent of the total demand.[56] The SBVMWD, a SWP contractor with an annual entitlement to 102,600 AF,[57] is responsible for the maintenance of the groundwater level in certain wells in the Colton-Rialto Basin at an average of 822 feet AMSL.

- **West Valley Water District**.[58] The WVWD is a County water district, organized and existing under the provisions of County Water District Law (Section 30000, Division 12, CWC).[59] The District obtains water from canyon surface flows on the east side of the San Gabriel Mountains, including North Fork Lytle Creek, Middle Fork Lytle Creek, and South Fork Lytle Creek. It also receives imported water supplies from the SWP and from 25 wells in five different groundwater basins (Lytle Creek, Rialto-Colton, Chino, Rialto, Bunker Hill Basin, and North Riverside Basins). The District's production wells have a total pumping capacity of 29,541 gpm and a production capacity of 26.5 mgd.[60] Of the water supplied within the WVWD's distribution system, the current mix is 69 percent groundwater, 20 percent surface water, and 11 percent purchased water.[61]

  The WVWD receives wholesale water from two sources. The SBVMWD provides the District with groundwater from the Bunker Hill Basin through the Baseline Feeder and SWP water through the Lytle Creek Turnout of the San Gabriel Feeder Pipeline. The District receives water through the Baseline Feeder under a 20-year agreement with the SBVMWD, with provisions to extend up to an additional 30 years on a cost proportionate basis with the SBVMWD. The agreement provides up to 5,000 AFY of supplemental water from the Bunker Hill Basin. SWP waters are used for groundwater recharge in the Lytle Creek Basin, to produce potable water from the District's Oliver P. Roemer Water

[54]/ The SBVMWD is legally required to maintain a flow equivalent to about 15,250 AFY at the Riverside Narrows on the SAR. This requirement is currently met with about 25,000 AFY of treated wastewater from the Cities of Colton, Rialto, and San Bernardino that is discharged to the SAR. The SBVMWD contracts with the Cities of Colton and San Bernardino that obligate their treated wastewater flows to meet this requirement. Historically, the SBVMWD has provided water at Riverside Narrows in amounts greater than its obligation and has accumulated a credit for the excess amounts. These credits are available to meet a portion of the SBVMWD's obligation during dry years, subject to the minimum annual flow of 12,420 AF at Riverside Narrows (Source: SBVMWD website).

[55]/ *Op. Cit.,* Circulation and Infrastructure Background Report, p. 2-183.

[56]/ *Ibid.,* p.2-189.

[57]/ West Valley Water District (Engineering Resources of Southern California, Inc.), West Valley Water District - Urban Water Management Plan, January 2006, Appendix I, p, 2.

[58]/ The Sycamore Canyon and Sycamore Flat areas (within Neighborhood), the El Rancho Verde Royal Vista Golf Course (Neighborhood II), as well as that portion of the project site located to the north of Riverside Avenue and within the City's corporate boundaries (Neighborhoods II and III), are located within the West Valley Water District (WVWD or District). The remaining portions of the project site are located within the District's adopted sphere of influence. As proposed, it is anticipated that those portions of the project site not presently within District boundaries will be annexed into the District.

[59]/ The District was formed in 1952 under the name Bloomington County Water Company, which was changed to Semi-Tropic County Water District in 1959, then to West San Bernardino County Water District in 1961, and then to West Valley Water District in 2003.

[60]/ *Op. Cit*., West Valley Water District - Urban Water Management Plan, p. 9.

[61]/ *Ibid*., p. 15.

Filtration Facility (Oliver P. Roemer WFF), and to supply non-potable water customers. The Baseline Feeder supply is a back-up in the event the SWP feeder line or the Oliver P. Roemer WFF is out of service.[62]

As indicated in the "West Valley Water District - Urban Water Management Plan" (WVWD-UWMP): "The District supplies water to over 60,000 people within the Cities of Rialto, Fontana and Colton and the Counties of San Bernardino and Riverside. The distribution system covers an area of approximately 32 square miles with an additional 3,300 acres within the District's sphere of influence. Almost 50% of the District's service area is zoned residential, 29% is zoned commercial/industrial, with the remaining 21% classified as public facilities, open space, landfill, flood control/utility corridor, railway corridor, parks, schools and highways. The water service area for the City of Rialto is located in the middle of the District, where limited growth will occur. The bulk of the population growth within the City of Rialto will be within the District's service area. The projected population numbers in the following table are the latest Southern California Association of Governments projects and do not reflect the unincorporated land to the north of Rialto that is anticipated to be within the District's service area when development in this area commences (Lytle Creek North Planned Development)."[63]

SCAG Population Projections
Current and Projected for the City of Rialto

Year				
2005	2010	2015	2020	2025
97,848	99,936	102,851	105,727	108,486

The WVWD has four interconnections within the City. The City can take water from two locations and the District can take water from the City's water system at two locations. The Cedar Avenue connection is the delivery point for the City's Lytle Creek surface water entitlement. Water from Lytle Creek is treated by the WVWD for domestic water use at the Oliver P. Roemer WFF.[64] As indicated in the WVSD-UWMP: "The District supplies non-potable water to the El Rancho Verde Golf Course with raw water from the State Water Project, surface water from Lytle Creek, and backwash water from the Oliver P. Roemer WFF. Backwash water accounts for 40% of the golf course's supply in the summer and as much as 60% in the winter, with the remaining water being supplied by Lytle Creek or State Project Water. The District's 2004 Water Master Plan reports that the golf course used 1,357 AF in fiscal year 2002/03."[65]

As illustrated in Figure 2-19 (West Valley Water District – Water Pressure Zones), the District is divided into eight pressure zones and is divided into North and South Systems. These pressure zones are generally expressed by the appropriate elevations of various reservoirs from which each pressure zone derives its storage. Reservoirs (Rs) are established at approximately 100 feet above the upper range of each pressure zone to provide a minimum allowable service pressure of 40 pounds per square inch (psi). The WVWD has 23 existing reservoirs with a total storage capacity of 65.61 million gallons (mg).[66]

[62]/ *Ibid*., p. 36.
[63]/ *Ibid*., p. 11.
[64]/ *Ibid*., pp. 22 and 25.
[65]/ *Ibid*., p. 8.
[66]/ West Valley Water District (Engineering Resources of Southern California, Inc.), Water Master Plan, November 2004, p. 3-5.

Neighborhoods I and IV are located in Pressure Zone (PZ) 8.[67] Neighborhood II is located in PZ 5 and PZ 6. Neighborhood III is located in PZ 6 and PZ 7. All neighborhoods are located in the North System. Each of the District's applicable pressure zones is briefly described below.

- **Pressure Zone 5**. PZ 5 is bounded by Highland Avenue on the south and the divide between the Lyle and Cajon Creek washes on the north and east. The westerly boundary runs along Alder Avenue, Locust, Linden, and cuts across Lytle Creek near the SCE power plant. Storage is provided by the R5-1, R5-2, and R5-3 reservoirs. These reservoirs also provide pumping storage for PZs 6, 7, and 8. The Oliver P. Roemer Water Filtration Facility provides additional water supply for PZs 5, 6, 7, and 8. Major transmission lines are located in Riverside, Apple, Linden, and Cedar Avenues.

- **Pressure Zone 6**. PZ 6 is located north and northwest of PZ5 and is bounded on the southwest by PZ 5. Highland and Summit Avenues form the southerly boundary and Sierra Avenue forms the western boundary. The northern line runs from Duncan Canyon Road southeasterly in Lytle Creek Road to Citrus Avenue, east to Alder Avenue, northeast across Lytle Creek, and then southeast. Water storage is provided by the R6-1, R6-2, R6-3, and R6-4 reservoirs. Major transmission lines are in Riverside, Alder, Maple, and Casa Grande Avenues.

- **Pressure Zone 7**. PZ 6 is located north of PZ 5 and forms the southerly boundary. The northerly line is the San Bernardino National Forest, then along the I-15 Freeway to Glen Helen Regional Park. Storage is provided by the R7-1 and R7-2 reservoirs. Major transmission lines are in Riverside Avenue and Lytle Creek Road.

- **Pressure Zone 8**. PZ 8 is the highest elevation pressure zone, occupying the northernmost area of Lytle Creek outside the SBNF. It also occupies a small area north of the I-15 Freeway and all of Sycamore Canyon. Water storage is provided by the R8-1 and R8-2 reservoirs. The main transmission line is in Lytle Creek Road.[68]

As illustrated in Figure 2-19 (West Valley Water District – Water Pressure Zones) and Figure 4.10-3 (West Valley Water District – Portion of Water Facilities Base Map [North System] [November 2004]), only a portion of the proposed LCRSP is located within the District's existing boundaries and only minimal water infrastructure presently serves the project site. The remaining portion of the project site is located with the District's "sphere of influence." As indicated in the WVWD's 2004 "Water Master Plan" (Water Master Plan), excluding the LCNPD (Tract 15900), lands located within the "sphere of influence," but not within District boundaries, were not included in the calculation of future water demands and facilities.[69]

Within the LCNPD (Tract 15900), the WVWD is planning to construct a 4.0-mgd water filtration facility, designed to accommodate an ultimate capacity of 6.0 mgd.[70] As specified under the County-approved LCNPD, this 4.0-mgd water filtration facility shall be operational prior to the 2,218 equivalent dwelling unit[71] (EDU) located within Rosena Ranch (Tract No. 15900).

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[67]/ The 3.6-acre off-site utility easement is located in PZ 7.
[68]/ *Ibid*., pp. 3-3 and 3-4.
[69]/ *Ibid*., p. 5-9, 5-10, 5-11, and 5-12.
[70]/ *Op. Cit*., West Valley Water District - Urban Water Management Plan, p. 22.
[71]/ "Equivalent dwelling unit" is a measure where one unit is equivalent to wastewater effluent from one dwelling unit.

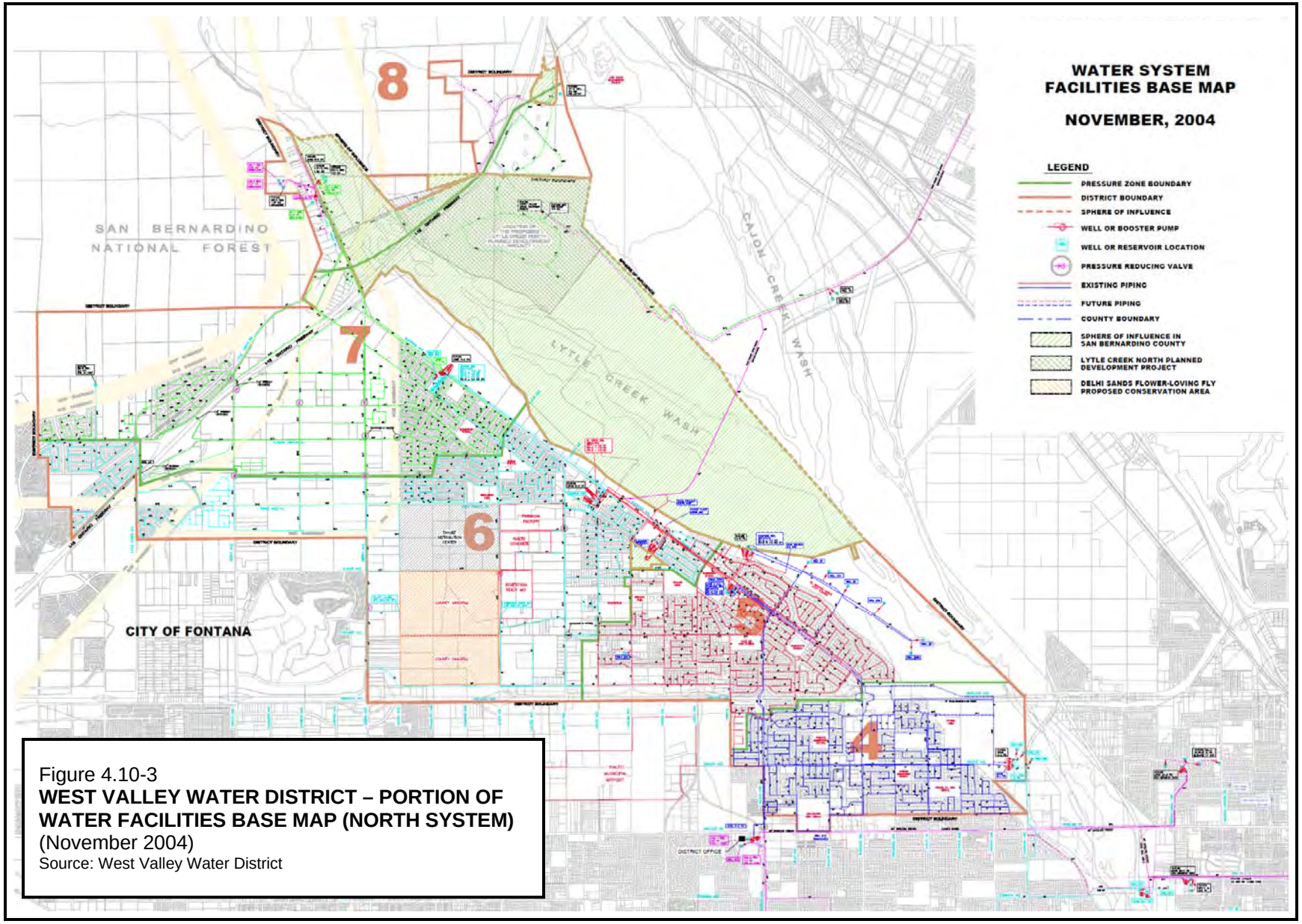

Figure 4.10-3
WEST VALLEY WATER DISTRICT – PORTION OF WATER FACILITIES BASE MAP (NORTH SYSTEM)
(November 2004)
Source: West Valley Water District

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As indicated in "Roadmap to Remedy," the City has "begun exploring whether it should take delivery of SWP imported water at locations other than or in addition to the Baseline Feeder. The SWP importer, SBVMWD, has constructed from the Devil Canyon Power Plant Afterbay on the California Aqueduct the southwestward feeder known as the 'Lytle Creek Pipeline' as part of its San Gabriel Valley Municipal Water District pipeline facilities. At least two turnouts on this line, the Linden Ponds Turnout and the Gravel Pit Turnout, were provided by SBMVMWD in Lytle Creek Wash upstream of the juncture of Lytle Creek with Cajon Wash. The purpose of these turnouts is to deliver SWP imported water to local water providers having purchase agreements with SBVMWD. SBVMWD has stubbed out a connection for Rialto. . .Required facilities include the intake works, a water treatment plant, and the outlet works necessary to tie into Rialto's existing system. . .SBVMWD has confirmed that, upon construction of the necessary facilities, SWP water will be delivered at the Lytle Creek Pipeline turnout for Rialto."[72]

As indicated in the "City of Rialto Urban Water Management Plan," the City, like other cities in the area, depend on groundwater for most of its supply. This water resource is impaired by perchlorate contamination. Recycled water is the most obvious alternative water source."[73] The City has received funding under Proposition 50 (Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002), as passed by the voters on November 5, 2002, to undertake remediation of perchlorate-contaminated groundwater.[74] During Phase 1 of the City's Reclamation of Aquifer Water Supply Project, water pumped from wells identified as Chino-02 and Rialto-02 will be treated with an ionic exchange system to remove the perchlorate. Once treated, this reclaimed water will be distributed to the customers served by the City, resulting in an increase of potable water distribution of 10,525 gallons per minute (gpm), or 16,975 AF/Y.

On November 20, 2007, the City Council ratified a declaration of the City Administrator, acting under the provisions of the California Emergency Services Act (Section 8550 *et seq*., CGC) and the California Disaster Assistance Act (Section 8680 *et seq*., CGC), that a local emergency exists with regards to the continuing migration of a contaminated groundwater plume affecting the City's ability to continue to provide a safe, affordable, and reliable water supply, including flows sufficient for fire protection or water service during a catastrophic event or to provide adequate peak flows to both current and future residential, commercial, industrial, and governmental users served by the City. The declaration of local emergency requested that the Governor use the powers granted under the California Emergency Services Act and the California Distance Assistance Act to provide assistance to the City in order to abate the local emergency.[75] As indicated in the accompanying documentation:

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[72]/ *Op. Cit.*, Roadmap to Remedy Selection Rialto-Colton Basin, California, p. 44.

[73]/ *Op. Cit*., Urban Water Management Plan, p. 61.

[74]/ On May 1, 2007, the USEPA noted "At this time, the Agency is not making a preliminary determination as to whether a national primary drinking water regulation is needed for perchlorate. However, the Agency has placed a high priority on making a regulatory determination for perchlorate and will publish a preliminary determination as soon as possible. EPA is not able to make a preliminary determination at this time because, in order to evaluate perchlorate against the three SDWA statutory criteria, the Agency believes additional information may be needed to more fully characterize perchlorate exposure and determine whether regulating perchlorate in drinking water presents a meaningful opportunity for health risk reduction" (72 FR 24038).

[75]/ City of Rialto, Proclamation of Local Emergency Pursuant to Article 14 of the California Emergency Services Act, Government Code Section 8550, Et Seq., The California Distance Assistance Act, Government Code Section 8680 Et Seq., and Chapter 9.30 of the Rialto Municipal Code, Declaring a State of Emergency and Requesting the Governor to Provide Emergency Funding to Halt the Further Migration of a Contaminated Groundwater Plume, to Initiate a Groundwater Cleanup to Improve Drinking Water Reliability, to Connect to Back-Up Water Supply Sources, to Improve Water System Redundancy, and to Suspend the Requirements of the California Environmental Quality Act, November 20, 2007.

> Rialto is facing a current local emergency as a result of the following factors: (a) the discharge of perchlorate to groundwater that percolates to the Rialto/Colton Groundwater Basin from land now owned by the County of San Bernardino as part of the Mid-Valley Sanitary Landfill, as found by the Regional Water Quality Control Board, Santa Ana Region (RWQCB); (b) the likely discharge of perchlorate to the Basin from a 160-acre site northeast of the landfill by many corporations, including Goodrich Corporation, Pyro Spectaculars, Inc., Kwikset Locks, Inc., Emhart Industries, Inc., Kwikset Corporation, and Black & Decker Inc. (collectively Dischargers); (c) the plume of contaminated groundwater is now six miles long, advances at least 20 inches a day, and contaminates an additional estimated 360 million gallons of drinking water per month; (d) the failure of the RWQCB and the State Water Resources Control Board (SWRCB) to hold a hearing, issue an enforceable Cleanup and Abatement Order and enforce that order against the Dischargers; (e) the Dischargers have obtained a stay of the SWRCB hearing from a Los Angeles County Superior Court judge; (f) currently, there is no date for restarting the SWRCB hearing, and no assurance that the hearing will ever be allowed to proceed; (g) an unprecedented regional drought, resulting in significant pumping restrictions in the Basin imposed by the 1961 decree which adjudicated pumping rights in the Basin; (h) the Inability of the San Bernardino Valley Municipal Water District to provide a reliable water supply through the Baseline Feeder; and (i) that a federal district court judge, issued a preliminary ruling on interim remedies to protect the delta smelt, the impact of which will be to reduce dramatically the reliability of State Water Project deliveries throughout California. Additionally, and within the last ten days prior to the City Administrator's declaration of emergency, the City has been advised that the State of California has not yet completed an analysis of the available resources to assure a prompt cleanup of the Rialto Colton Groundwater Basin, and the results of an investigation conduced November 10-12, 2007 to evaluate the City of Rialto's water system in light of the recommendations of the San Bernardino Valley Municipal Water District made in its 'Upper Santa Ana Integrated Regional Water Management Plan,' in which it was determined that Rialto is unable to meet the recommendations of the plan and is extremely vulnerable as to providing water following a catastrophic interruption; an, further that unless additional water supplies are not made available by the time new State regulations implementing Title 22 become effective, the City of Rialto will be unable to meet peak demands for its existing customers. These factors have all combined to create a local emergency necessitating the prompt funding and implementation of a plan to investigate, assess appropriate options and install capital equipment to stop the migration of the plume of contaminants.[76]

As illustrated in Figure 4.1-29 (Approximate Extent of Perchlorate and/or Trichloroethene Contamination in the Rialto-Colton Groundwater Basin), the perchlorate and TCE groundwater plume has resulted in the closure of a number of City's wells in the Rialto-Colton Basin (Rialto Groundwater Management Zone).[77] There has, however, not been significant remediation of

[76]/ City of Rialto, Agenda Report for City Council Meeting of November 20, 2007, Tab 8: Ratification of Declaration of Local Emergency, November 15, 2007, unpaginated.

[77]/ The USEPA reports that the Rialto-Colton Basin (RCB) "yield has not been formally determined in any legal documents. However, USGS studies suggest that from the early 1950s through the late 1990s the RCB yielded no more than 9,000 to 10,000 acre-feet per year (AFY), on average. Recent pumping in the portion of the RCB upgradient (northwest) of Colton Avenue has approached 18,000 AFY, suggesting that current groundwater

groundwater on or downgradient of the 160-acre area. In 2006, as a first phase of remediation, the County installed a remediation system downgradient of the former bunker area. The remediation system included the installation of an ion exchange treatment plant at the Rialto-03 well site, resumption of pumping of the Rialto-03 well, and supply of the treated water to the City. In 2008, additional extraction wells were installed to supplement pumping in the Rialto-03 well. Treatment plant upgrades, including the addition of VOC treatment, were completed in September 2009. Planning remains ongoing. The currently proposed plan is to construct a bioreactor that would treat water extracted from the Rialto-06 well. The treated water would initially be recharged to the aquifer and then, after permitting by California Department of Public Health (CDPH), used as a drinking water supply. Ion exchange treatment installed by the Cities of Rialto and Colton and by the WVWD at several water supply wells used for drinking water supply may contribute to the remediation of the site.[78]

On September 23, 2009, the USEPA added the B.F. Goodrich Superfund Site (CAN000905945) to its Superfund National Priorities List. The B.F. Goodrich Superfund Site includes a 160-acre area where VOCs and perchlorate have contaminated soil and groundwater and downgradient areas of groundwater contamination. The USEPA completed a remedial investigation and feasibility study (RI/FS) in which it evaluated options for an initial groundwater cleanup project at the site. On February 3, 2010, the USEPA released a proposed groundwater cleanup plan (January 2010), RI/FS (January 25, 2010), and administrative record (February 2, 2010).

The USEPA has evaluated five cleanup options, including a no-action option, designed to satisfy the stated remedial action objectives (i.e., protect water supply wells and groundwater resources by limiting the spread of contaminated groundwater from the 160-acre site; remove the contaminants from the groundwater) and other requirements. The four action-oriented alternatives for groundwater "pump-and-treat" systems include the extraction of contaminated groundwater, treatment of groundwater to remove contaminants, use of groundwater after the removal of the contaminants, construction of conveyance systems to transport the groundwater from the extraction wells to the treatment plant, and groundwater monitoring. The four action alternatives include: (1) pump and treat 1,500 to 1,650 gpm of contaminated groundwater and use treated water as drinking water supply (Alternative 1); (2) pump and treat 1,500 to 3,200 gpm of contaminated groundwater and use treated water as drinking water supply (Alternative 2a); (3) pump and treat 1,500 to 3,200 gpm of contaminated groundwater and reinject the treated groundwater into the aquifer (Alternative 2b); and (3) pump and treat 1,500 to 5,000 gpm of contaminated groundwater and use treated water as drinking water supply (Alternative 3).[79]

As noted in the RI/FS: "It is anticipated that the treated water can be supplied into the potable water delivery system of one or more of the four major water purveyors in the RCB [Rialto-Colton Groundwater Basin]. The water purveyors with large, distribution facilities (for example, pipelines and tanks) located closest to the assumed treatment plant location are WVWD and Fontana Water Company. The City of Rialto also has some pipelines in the area but, based on preliminary discussions with City representatives, has a limited capacity to distribute additional water in the project area."[80]

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production is not sustainable" (Source: United States Environmental Protection Agency [CH2MHill], Final Remedial Investigation/Feasibility Study Report – B.F. Goodrich Superfund Site, Rialto, California, January 25, 2010, p. 1-9).

[78]/ United States Environmental Protection Agency (CH2MHill), Final Remedial Investigation/Feasibility Study Report – B.F. Goodrich Superfund Site, Rialto, California, January 25, 2010, pp. 1-6 and 1-7.

[79]/ *Op. Cit*., B.F. Goodrich Superfund Site, EPA Seeks Public Comment on Groundwater Cleanup Plan, pp. 5-8.

[80]/ *Ibid*., p. 3-18.

The City has prepared and approved the "Engineer's Report for the Production, Distribution and Use of Recycled Water" (City of Rialto, April 17, 2002) which defines, encourages, and serves to facilitate the development and use of recycled water within the City's service area. The report includes both recycled water projects (evaluation of the location and size of present and future recycling facilities, distribution pipelines, pump stations, reservoirs, and other related facilities) and the identification of use areas (description of use areas within the City boundaries that can or may in the future use recycled water in lieu of potable water).

Wastewater

In August 2004, the County, the Lytle Development Company, and Pulte Home Corporation executed a "Wastewater System Agreement" addressing the construction and operation of the then proposed wastewater treatment plant approved by the County as part of the LCNPD (Tract 15900). As indicated in the recitals to that agreement: "(A) On December 18, 2001, Lytle [Development Company] or an affiliate thereof received conditional approval from the County Board of Supervisors for the Preliminary Development Plan and Tentative Tract 15900, commonly referred to as Lytle Creek North Planned Development (the 'Project'). An environmental impact report for the [Lytle Creek North] Project was certified on December 4, 2001. . .(C) The [Lytle Creek North] Project provides for the construction of the waste water treatment plant (the "Treatment Plant') on certain County real property. . .(E) The parties intend the Treatment Plant to be constructed with sufficient capacity to serve the [Lytle Creek North] Project, certain other property owned by Lytle [Development Company] or its affiliates in the vicinity of the [Lytle Creek North] Project, the Glen Helen Sheriff's detention facility, and future expansion of the County-owned facility." The agreement states that the parties to the agreement "are entitled to hook-ups and a reservation of service capacity of the Treatment Plant, for a period of ten years, as set forth in Exhibit 1, which is included below."[81]

Exhibit 1
Reservation of Capacity
Wastewater Treatment Plant (WWTP) Capacity Allocation

Reserved Capacity User	WWTP Capacity Average Daily Million Gallons per Day (mgd) Reserved	Percent WWTP Capacity
County Sheriff's Department	0.210	12
Pulte Homes/Del Webb	0.750	43
Lytle Development Company	0.790	45
Capacity Totals	1.75	100

As further indicated, in pertinent part, therein: "In consideration of the funding and construction of the Treatment Plant, the County hereby agrees to reserve the capacity of the Treatment Plant and allow a corresponding number of hook-ups to each of the parties in the capacity and ratios set forth above. The capacity and hook-up rights. . .for Lytle (the 'Lytle Hook-Up Rights'). . .shall have excusive ownership, use and control of the Lytle Hook-Up Rights.. . .Lytle Hook-Up Rights may be used and applied in lieu of Hook-Up Fees to obtain sewer service from County for

[81]/ In the context of the above described agreement, "Pulte Homes/Del Webb" was the subsequent purchasers of most of the County-approved LCNPD (Tract 15900). The retained WWTP capacity by the "Lytle Development Company" was intended to provide treatment capacity for retained portions of Tract 15900 and for the subsequent development of tributary properties owned by that entity, other subsidiaries thereof, and/or subsequent holders of real property interests to those properties.

development within the [LCNPD] Project and/or certain other property currently owned by Lytle or its affiliates in the vicinity of the [LCNPD] Project, including the Sycamore Flats project (the 'Other Lytle Properties'). County agrees that no additional hook-up fees, capacity, annexation, facility or other hook-up charges or any kind shall be charged with respect to such service."

The San Bernardino County Special Districts Department's (SBCSDD) Lytle Creek North Wastewater Recycling Plant (18101 Institution Road, San Bernardino) is designed to treat domestic wastewater at an average daily flow of about 1.75 mgd (3.5 mgd peak flow).[82] The treatment system consists of preliminary treatment (screening and grit removal), secondary treatment (oxidation ditch and secondary clarifiers), tertiary treatment (denitrification, tertiary filters, UV disinfection), sludge dewatering and solids handling, and chlorination. UV disinfected tertiary effluent is discharged to two lined storage ponds, each with a capacity of one million gallons. Any overflow from these ponds gravity flows to four adjacent percolation ponds.[83]

Solid Waste

As reported by the CIWMB, for the most recently accepted reporting year (2000), the City's landfill diversion rate was 51 percent. Although diversion rates appear to have dropped since that time, CIWMB-approved good-faith efforts were reported in 2001 (49 percent) and in 2002 (47 percent). The CIWMB's biennial review for 2006 has not yet been completed; however, preliminary data suggests that the City's 2006 diversion rate was 45 percent.

Table 4.10-6 (City of Rialto - Jurisdictional Disposal and Alternative Daily Cover Tons by Facility [2006]) presents a summary of those solid waste facilities that received City-generated wastes in 2006. As noted, of the approximately 108,517 total tons of municipal solid waste (MSW) generated in the City in 2006, 92,782 tons (85.5 percent), including 6,329 tons of average daily cover[84] (ADC), was transported to the Mid-Valley Sanitary Landfill/Fontana Disposal Site (2390 N. Alder Avenue/30 Bohnert Avenue, Rialto). The Mid-Valley Sanitary Landfill/Fontana Refuse Disposal Site (MVSL) is located on a 498-acre site and has a permitted disposal capacity of 7,500 tons/day. The landfill's total estimated permitted capacity is 62 million cubic yards. In 2008, the total estimated consumed capacity of the MVSL is 26.73 million cubic yards (43.1 percent) and the estimated remaining capacity is 35.270 million cubic yards (56.9 percent).[85]

MVSL is an active Class III landfill owned by the County's Solid Waste Management Division (SWMD). From 1958 to 1995, the facility was operated by the SWMD. Since 1995, day-to-day operations at MVSL have been conducted by Norcal/San Bernardino, Inc. (Norcal), a subsidiary

[82]/ As indicated by the SARWQCB: "The San Bernardino County Special Districts Department is currently discharging pursuant to Order No. 82-218 from its San Bernardino County Sheriff's Department Glen Helen Rehabilitation Center sewerage treatment plant. The Discharger is proposing to upgrade its existing Glen Helen Rehabilitation Center sewerage treatment plant to a new Regional Wastewater Treatment and Recycling Facility to serve the Lytle Creek North planned development project, the San Bernardino Sheriff's Glen Helen rehabilitation facilities, the future Sycamore flats development and other tributary areas within the Glen Helen Specific Plan. . .The upgraded treatment plant will treat domestic wastewater at an average daily flow of about 1.75 mgd (3.5 mgd peak flow)" (Source: California Regional Water Quality Control Board, Santa Ana Region, Waste Discharge and Producer/User Water Recycling Requirements for the San Bernardino County Special Districts Department – Lytle Creek North Wastewater Recycling Plant, Order No. R8-2007-0004, April 20, 2007, p. 2).

[83]/ California Regional Water Quality Control Board, Santa Ana Region, Lytle Creek North Wastewater Recycling Plant Order No. R8-2007-0004, April 20, 2007.

[84]/ CIWMB-approved materials other than soil used as a temporary overlay on an exposed landfill face. Generally, these materials must be processed so that they do not allow gaps in the face surface which would provide breeding grounds for insects and vermin.

[85]/ CIWMB website (http://www.ciwmb.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=1&FACID=36-AA-0055).

of Norcal Solid Waste Systems, Inc. under contract to the SWMD. The MVSL operates under Solid Waste Facilities Permit No. 36-AA-0055, issued by the County's Department of Environmental Health Services (DEHS) in October 1988. MVSL accepts Class III wastes, including residential and commercial refuse, demolition and construction debris, non-decomposable inert solids, and treated-wood wastes. The facility is not licensed to accept hazardous wastes, infectious wastes, or liquid wastes.[86] In 2001, the waste stream to the landfill was estimated to be about 31 percent residential, 42 percent commercial, and 27 percent industrial wastes.[87] The estimated closure date is April 2033.

Table 4.10-6
CITY OF RIALTO
JURISDICTIONAL DISPOSAL AND ALTERNATIVE DAILY COVER TONS BY FACILITY
(2006)

Facility Name (County)	**SWIS Number**	**In-State Disposal**	**Exported Out-of-State**	**Total Disposal**	**ADC Amount**
Bakersfield Sanitary Landfill (Kern)	15-AA-0273	14	0	14	0
Azusa Land Reclamation Co. Inc. (Los Angeles)	19-AA-0013	150	0	150	0
Puente Hills Landfill #6 (Los Angeles)	19-AA-0053	232	0	232	0
Commerce Refuse-to-Energy Facility (Los Angeles)	19-AA-0506	17	0	17	0
Olinda Alpha Sanitary Landfill (Orange)	30-AB-0035	8,153	0	8,153	0
Badlands Disposal Site (Riverside)	33-AA-0006	0	0	0	338
Lamb Canyon Disposal Site (Riverside)	33-AA-0007	0	0	0	1
El Sobrante Sanitary Landfill (Riverside)	33-AA-0217	53	0	53	0
Victorville Refuse Disposal Site (San Bernardino)	36-AA-0045	7	0	7	514
Colton Refuse Disposal Site (San Bernardino)	36-AA-0051	6,359	0	6,359	6,626
Fontana Refuge Disposal Site (San Bernardino)	36-AA-0055	92,782	0	92,782	6,329
San Timoteo Waste Disposal Site (San Bernardino)	36-AA-0097	719	0	719	0
Simi Valley Landfill Recycling Center (Ventura)	56-AA-0007	31	0	31	0
Total (tons)		108,517	0	108,517	13,807

Source: California Integrated Waste Management Board
(http://www.ciwmb.ca.gov/LGCentral/DRS/Reports/JurDspFa.asp?VW=Out)

Ener Tech Environmental, Inc. operates a biosolids facility (501 E. Santa Ana Avenue, Rialto) in the City that accepts biosolids from various municipal wastewater treatment plants. The facility is designed to accept an average of 900 wet tons of biosolids per day (tpd).

[86]/ *Op. Cit.*, Roadmap to Remedy Selection Rialto-Colton Basin, California, pp. 62-63.
[87]/ *Ibid.*, p. B-1.

4.10.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant utilities and/or service systems impact if the project or if project-related activities were to:

- Exceed wastewater treatment requirements of the RWQCB.
- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require new or expanded water supply entitlements and resources.
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Fail to comply with federal, State, and local statutes and regulations related to solid waste.[88]

Other thresholds of significance have been formulated by other agencies, published in source documents presently in use by the Lead Agency, or reflect acceptable industry standards. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant utilities and/or public services impact if the project or project activities were to:

- Generate a quantity of wastewater that would cause or contribute to an exceedance of the current or projected capacity of existing or proposed wastewater treatment plants.
- Result in conditions where the existing sewer lines could not accommodate the proposed project's anticipated wastewater volumes.
- Create demands for water that exceeds the available supply of the water service district serving the project site.
- Create demand that exceeds available supply.
- Deplete water resources in such a manner that sensitive ecological habitats cannot be maintained.
- Produce groundwater recharge that saturates loosely consolidated sediments making them susceptible to liquefaction in the event of an earthquake.
- Produce groundwater withdrawal that results in soil settlement.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable

[88]/ *Op. Cit.*, State CEQA Guidelines, Section XVI (Utilities and Service Systems).

standards that can appropriately be extracted from other related policy or environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative impacts on utilities and service systems.

4.10.5 Impact Analysis

4.10.5.1 Construction Impacts

Water Supply

Environmental Impact 10-1*. Water Supply. During construction, water is required for a variety of purposes (e.g., dust palliation, fire suppression, human consumption). The on-site need for water may predate its availability and the provision of infrastructure systems necessary to supply those location-specific water needs.*

Preliminary Determination 10-1*. Potentially significant unless mitigation incorporated.*[89]

During construction, substantial quantities of water are required both to control fugitive dust and to facilitate the compaction of soil materials to obtain adequate load-bearing capacity. During soil compaction operations, water is added to soils to ensure that those soils reach their desired densities. Typically, during construction, water (either potable or non-potable) is brought onto the site in water trucks. Those trucks accompany heavy equipment around the site and spray water, as required, for dust palliation and soils compaction.

Active grading areas shall be watered a minimum of three times per day (Mitigation Measure 7-1) herein. As a means of promoting dust control, the Applicant may elect to install temporary water storage tank(s) to ensure the availability of sufficient on-site water to address specific construction needs, to reduce potential construction delays associated with the off-site filling of water trucks, and to reduce the number of construction-related truck trips. Although recycled water is not readily available in the general project area, due to the absence of distribution facilities, recycled water could be imported onto the site, stored in portable facilities, and utilized for non-consumptive construction-related needs.

In addition, construction water is often required for removing dirt from the wheel wells of construction vehicles departing the project site and for the clearing of streets of the dirt and debris that may be deposited by exiting construction vehicles. Wash water (either potable or non-potable) can be dispensed either from water trucks or from temporary water tanks brought onto the site specifically for construction use. Street sweepers, often equipped with non-potable water, will routinely clean the streets around the project site of spilled materials.

Since construction operations introduce flammable materials on the project site and introduce workers and equipment in close proximity to native and non-native vegetation, access to sufficient water supplies is required for fire suppression. As required by OSHA standards, the "employer shall be responsible for the development of a fire protection program to be followed throughout all phases of the construction and demolition work, and he shall provide for the

[89]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) create demand that exceeds available supply; and (2) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

firefighting equipment as specified in this subpart. As fire hazards occur, there shall be no delay in providing the necessary equipment" (29 CFR 1926.150[a][1]) and a "temporary or permanent water supply, of sufficient volume, duration, and pressure, required to properly operate the firefighting equipment shall be made available as soon as combustible materials accumulate" (29 CFR 1926.150[b][1]).

Cal/OSHA has adopted similar fire safety standards (Section 1920, CCR).

As specified in Section 508.5.1 (Where Required) in Chapter 15.28 (Fire Code) in Title 15 (Building and Construction) of the City Municipal Code" "Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 150 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building on-site fire hydrants and mains shall be provided where required by the fire code official."

As further specified in Section 4.108(m) in Chapter 1 (Uniform Fire Code) in Division 3 (Fire Protection and Explosives and Hazardous Materials) in Title 2 (Public Morals, Safety and Welfare) of the County Development Code, Subsection 10.301(c) of the Uniform Fire Code is hereby amended, in part, to read as follows:

> Water Supply. An approved water supply capable of supplying required fire flow for fire protection shall be provided by the developer prior to the commencement of construction to all premises upon which buildings or portions of buildings are hereafter constructed unless the Chief [of the Fire Department] authorizes mitigation measures in writing. When any portion of the building, other than a single family dwelling, is in excess of one hundred fifty (150) feet from a public fire hydrant connected to a water supply on a public street, there shall be provided by the developer, unless otherwise designed by the Chief in writing, on-site fire hydrants capable of supplying the required fire flow. Water supply may consist of reservoirs, pressure tanks, elevated tans, water mains or other fixed system capable of supplying the required fire flow. In setting the requirement for fire flow, the Chief shall apply the San Bernardino "Guide for determination of required fire flow." This guide shall be used to establish both a minimum and maximum flow for projects served by organized water companies or water districts. In areas without service water companies, National Fire Protection Association Pamphlet 1231 [now NFPA 1142[90]] shall be used to establish on-site storage capabilities, with a minimum storage capacity of 5,000 gallons. On site residential water storage for fire protection may be reduced to an approved ten (10 minute sprinkler demand with the installation of an approved sprinkler system.

Fire hydrants must be constructed and charged within proximity to each construction site before large quantities of flammable materials can be brought onto the property. In the event of a construction or wildland fire, water supplies are then available for fire suppression.

Based on the need to ensure appropriate on-site or near-site water resources during project construction, a mitigation measure (Mitigation Measure 10-1) has been formulated requiring the

[90]/ NFPA 1142 (Standard on Water Supplies for Suburban and Rural Fire Fighting, 2001 Edition) identifies minimum standards to assist rural and suburban fire departments in developing sufficient water supplies where no in-ground hydrant system (or an inadequate) one exists and provides methods for determining water supply requirements based on occupancy and construction classifications. This NFPA standard also provides information regarding apparatus construction for water tankers.

review and approval of final water improvement plans by the RFD. In addition, a mitigation measure (Mitigation Measure 10-2) has been formulated specifying that fire hydrants be installed in compliance with applicable code requirements (e.g., Section 10.301 of the Uniform Fire Code) or that alternative measures acceptable to the Chief Officer of the Fire Department serving the jurisdiction be submitted prior to the issuance of grading permits.

Although the WVWD had demonstrated the availability of sufficient of potable water resources to serve the proposed development, a mitigation measure (Mitigation Measure 1-9) has been formulated to ensure that the sequencing of authorized land uses occurs in a manner and in a time period integrally linked to those infrastructure improvements and municipal serves required to adequately support the proposed land uses. Also, as a mitigation measure (Mitigation Measure 10-3) has been formulated stipulating that, prior to the issuance of any building permits, the Applicant shall deliver to the City a will-serve letter or similar documentation, as may be acceptable to the City Engineer, from the project's water purveyor documenting the availability and sufficiency of water supplies to serve the proposed development. As mitigated, construction-term water supply impacts can be mitigated to a less-than-significant level.

Wastewater

Environmental Impact 10-2*. Sewerage Disposal. During construction, the project's wastewater collection system may not be operational or accessible to workers. Temporary facilities may be required to ensure that construction sites are operated and maintained in a sanitary fashion.*

Preliminary Determination 10-2*. Less-than-significant impact.*

The provision of potable water and toilet facilities is required under OSHA (29 CFR 1926.51) and Cal/OSHA (Section 1524-1526, CCR) standards. As required by OSHA, during construction, toilets shall be provided for employees according to the following ratio: (1) twenty or fewer employees – one toilet; (2) 20 to 200 employees – one toilet seat and one urinal for each 40 employees; and (3) more than 200 employees – one toilet seat and one urinal for each 50 employees. Typically, "port-a-potties" are brought onto the project site and are maintained by the firm providing those temporary facilities. Using a vacuum truck, waste materials are then disposed of off the project site in accordance with the permits held by those vendors. As such, throughout the construction period, project-related impacts on existing sewerage disposal facilities are considered to be de minimus.

Solid Waste

Environmental Impact 10-3*. Solid Waste. Construction wastes will be generated during site clearing and grading, through the development of required infrastructure, during building construction, and through the installation of landscaping. These wastes can consume inordinate amounts of landfill capacity unless efforts are taken to reduce the quantity and volume of materials being landfilled.*

Preliminary Determination 10-3*. Less-than-significant impact.*

Construction and demolition (C&D) inert debris is generally a non-hazardous waste material that is produced in the process of construction. Construction debris from building sites typically consists of trim scraps of construction materials, such as wood, sheetrock, masonry, and roofing

materials. Scrap from residential construction sites typically represent between 6 and 8 percent of the total weight of the building materials delivered to the site, excluding the foundation, concrete floors, driveways, patios, and the like.[91]

C&D wastes will be generated during site clearance, grading, street and utilities installation, building construction, and installation of landscaping and irrigation systems and can include vegetation, earth materials, wood, metal, plastic, cardboard and paper products, miscellaneous wastes, and food wastes. Since site preparation will require the removal of existing vegetation within the areas to be graded, associated organic materials will also be generated.

The precise quantity and composition of construction wastes is difficult to predict. According to the CIWMB's "Statewide Waster Characterization Study," C&D materials account for almost 21.7 percent of the waste stream.[92] The USEPA (Franklin Associates) estimates that generation rates for C&D debris range from 2.41 to 11.3 pounds per square foot of floor space.[93] As reported by the National Association of Home Builders (NAHB), the average single-family home in the United States, at 2,320 square feet, is estimated to generate between 6,960 and 12,064 pounds of construction waste.[94] Assuming that rate can be translated into a C&D waste per square foot average, each square foot of new residential construction would generate between 3.0 and 5.2 pounds of construction waste.

The RUSD's "School Facilities Needs Analysis" notes that, based on a review of fee collection data comprising a total of 499 detached and 204 attached dwelling units between 2002 and 2007, the average size of a newly constructed "detached" unit within the district was 2,088 square feet and the average size of a newly constructed "attached" unit was 1,063 square feet.[95] Assuming, for the purpose of approximation, that "detached" is synonymous with "single-family detached" and "attached" is synonymous with all other housing types listed in Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary), the 3,443 detached units and 4,964 other units which would be authorized under the proposed LCRSP would yield a total of 12,465,716 square feet of residential use. Assuming the RUSD's unit size averages and the NAHB's generation rate, it is estimated that between 18,700 and 32,410 tons of C&D waste will be generated by the proposed 8,407 dwelling units or between 2.22 and 3.86 tons per unit.

As reported by the USEPA: "The methodology for nonresidential construction debris is similar to that for residential construction debris. However, nonresidential buildings are much more varied than residential buildings and fewer waste assessments have been done, making the quantity estimates more uncertain. Nonresidential buildings include private industrial, office, hotel/ motels, other commercial, religious, educational, hospital and institutional, and miscellaneous buildings plus public industrial, educational, hospital, and other categories." The USEPA examined six non-residential waste assessments and found that "the average generation rate of the individual sampling studies is 3.89 pounds per square foot. These buildings include a retail store, restaurant, institutional building, and two office buildings."[96]

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[91]/ Franklin Associates, Characterization of Building-Related Construction and Demolition Debris in the United States, United States Environmental Protection Agency, June 1998, p. 1-8.

[92]/ California Integrated Waste Management Board (Cascadia Consulting Group, Inc.), Statewide Waste Characterization Study, December 2004, p. 17.

[93]/ *Op. Cit.*, Characterization of Building-Related Construction and Demolition Debris in the United States, p. 2-2.

[94]/ National Association of Home Builders, NAHB Model Green Home Building Guidelines, 2006 Edition, p. 2.

[95]/ *Op. Cit.*, p. 20.

[96]/ *Op. Cit.*, Characterization of Building-Related Construction and Demolition Debris in the United States, pp. 2-2 and 2-3..

Based on 849,420 square feet of non-residential land use,[97] an additional approximately 1,650 tons of C&D wastes would be generated during project construction. Excluding inert and other green wastes produced during grading operations, total C&D wastes from both residential and non-residential construction is estimated to range from about 19,350 to 34,060 tons.

Many of the materials contained in the construction waste stream, such as wood, sheetrock, cardboard, and metals, are economically recyclable. As such, in order to reduce costs, builders and other construction contractors typically promote efforts to salvage these materials during construction. Recycling of C&D wastes at construction sites is typically undertaken either directly by each builder or under contract to other parties. If no effort is made to promote the recycling of construction wastes, such as through job site segregation, a greater tonnage and volume of wastes will require off-site disposal. Since the Applicant and other building contractors have an economic interest to reduce construction costs, maximum feasible recycling efforts will occur absent governmental intervention. Should the City subsequently adopt a C&D waste reduction ordinance, individual development projects undertaken within the proposed LCRSP boundaries will be subject to regulatory compliance.

4.10.5.2 Operational Impacts

Water Supply

Environmental Impact 10-4*. Water Supply. At build-out, residential and non-residential uses will generate a peak daily demand of about 18.17 million gallons of potable water, thus placing a long-term demand on available water resources.*

Preliminary Determination 10-4*. Less-than-significant impact.*

Figure 4.10-4 (City of Rialto and West Valley Water District Boundaries and Sphere of Influence) presents an overlay of the City's and WVWD's existing corporate boundaries and sphere of influence. As illustrated in Figure 4.10-5 (West Valley Water District Annexation Area), that portion of the area encompassed by the proposed LCRSP which is not already included within the WVWD's existing service area would be annexed therein.

Sections 10910, 10911 and 10912 in Division 6, Part 2.10 (Water Supply Planning to Support Existing and Planned Future Uses) of the CWC requires cities and counties to include in their environmental impact reports a "water supply assessment," "identification of water supplies," and "projected demand" for proposed projects, as defined in Section 10912. As defined in Section 10912(a)(1) of the CWC, a proposed residential development of more than 500 dwelling units, must have a water supply assessment included in their EIR. In accordance therewith and as requested by the City, the WVWD prepared a WSA for the proposed project.[98]

The project's WSA is included in Appendix III-J (Water Supply Assessment) herein. Information from that project-specific WSA is summarized below. This following section discusses the existing potable water supply condition: (1) excluding the proposed project; (2) inclusive of the proposed project; and (3) relative to impacts on the District's available water supplies.

[97]/ The 849,420 square footage of non-residential uses identified herein is not inclusive of additional non-residential development and other improvements that may be associated with other community-based and institutional uses, public facilities, infrastructure systems, and other public, semi-public, and private recreational facilities that would be authorized on the project site in accordance with the LCRSP.

[98]/ West Valley Water District (Engineering Resources of Southern California Inc.), Water Supply Assessment for the Lytle Creek Ranch Development, March 2008.

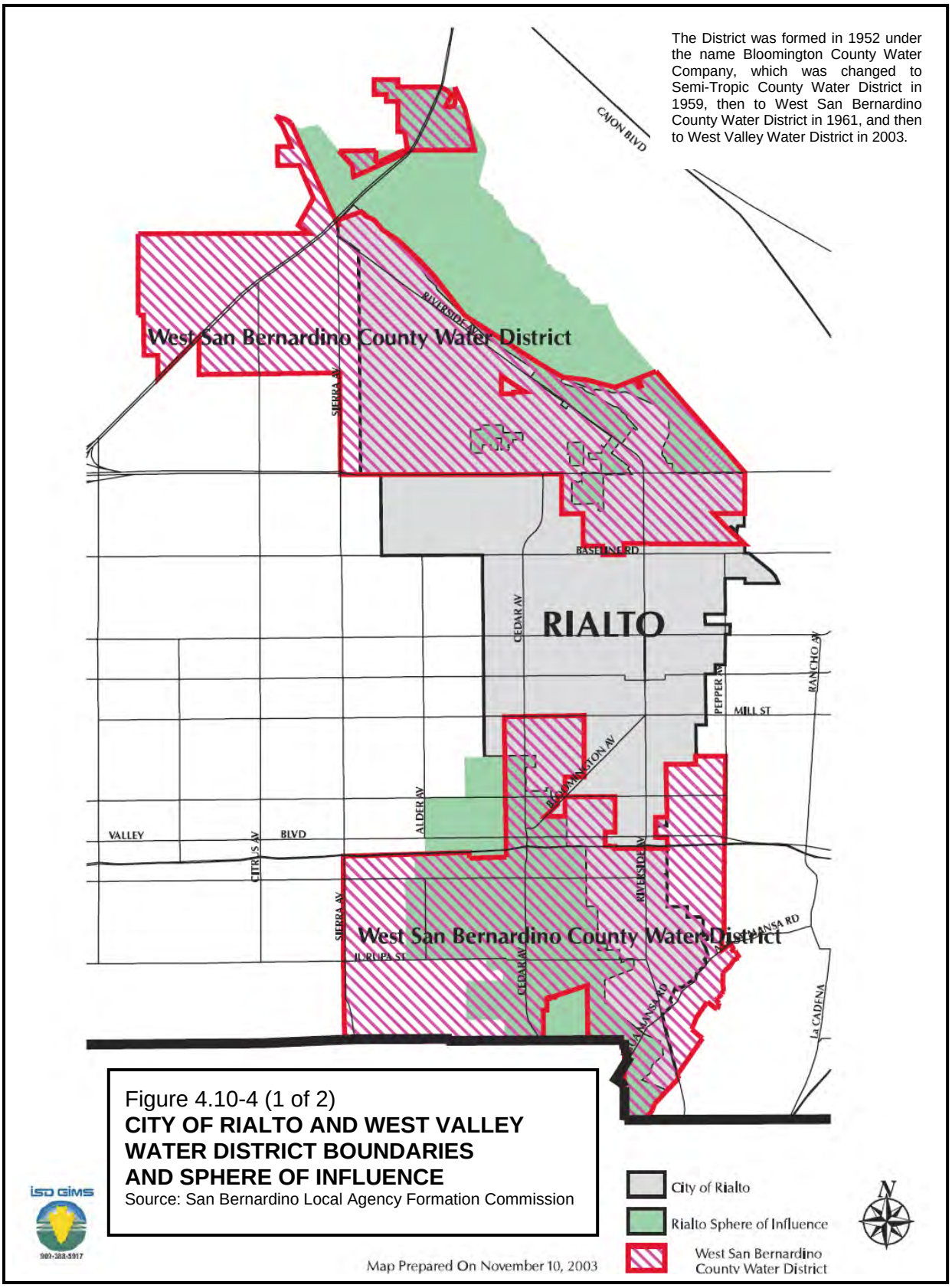

Figure 4.10-4 (1 of 2)
CITY OF RIALTO AND WEST VALLEY WATER DISTRICT BOUNDARIES AND SPHERE OF INFLUENCE
Source: San Bernardino Local Agency Formation Commission

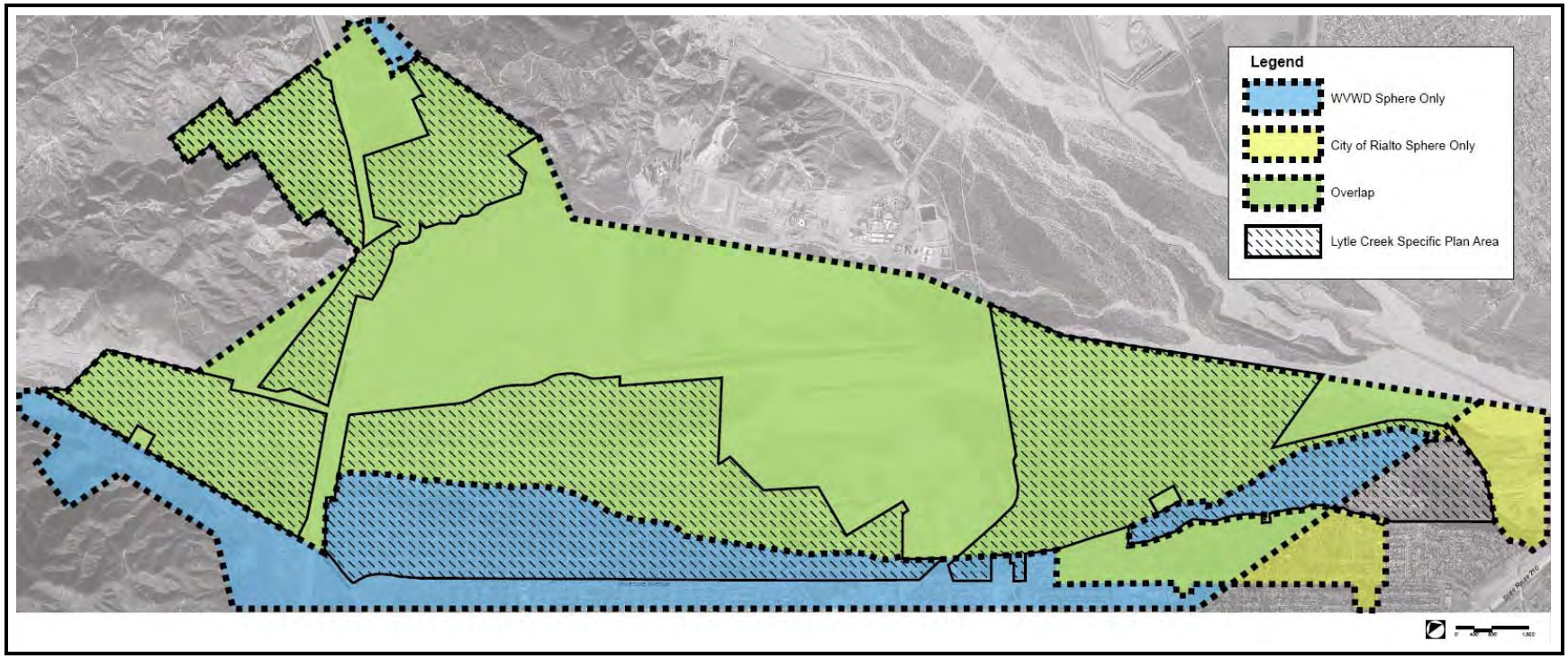

Figure 4.10-4 (2 of 2)
CITY OF RIALTO AND WEST VALLEY WATER DISTRICT BOUNDARIES AND SPHERE OF INFLUENCE
Source: San Bernardino Local Agency Formation Commission

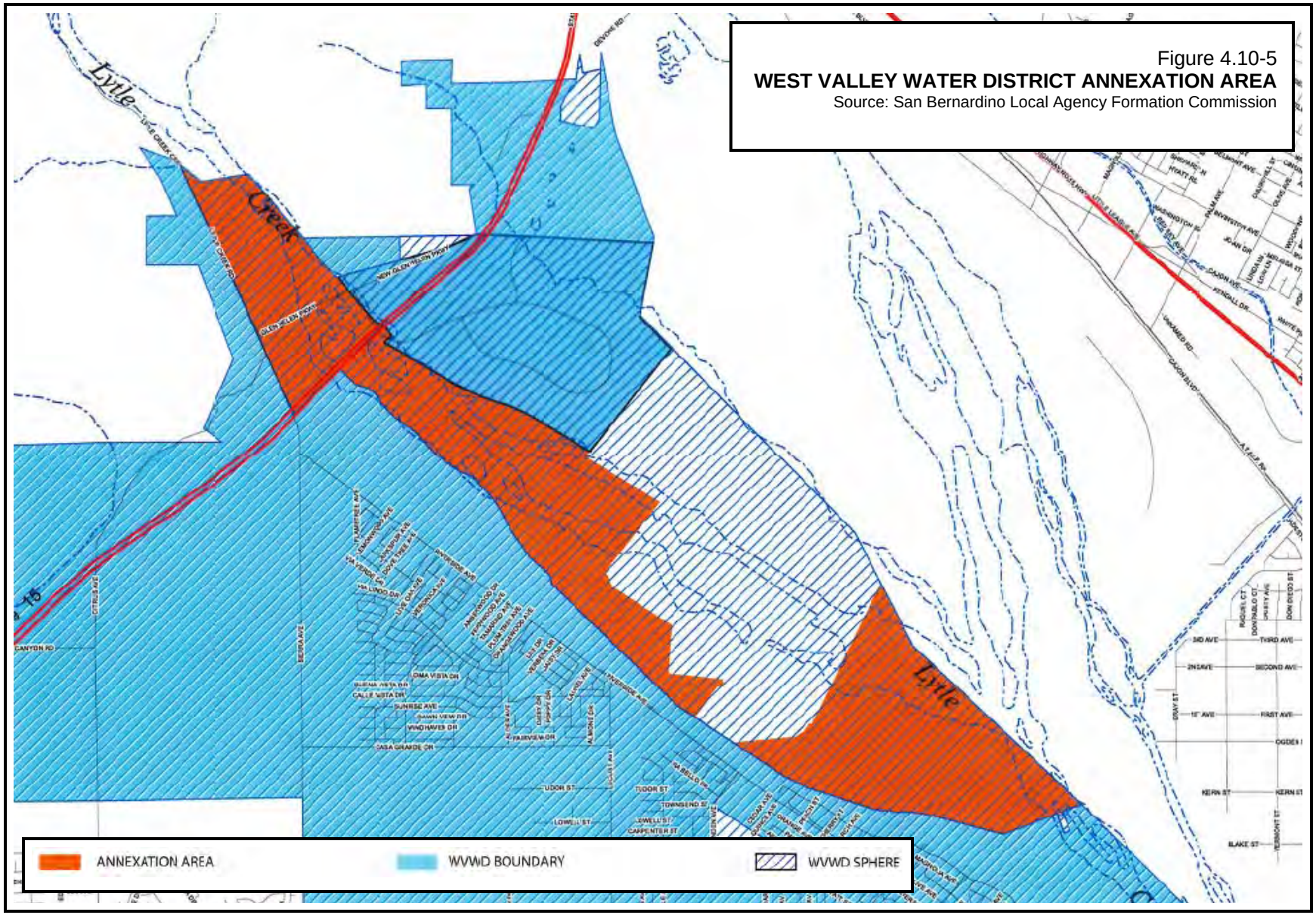

Figure 4.10-5
WEST VALLEY WATER DISTRICT ANNEXATION AREA
Source: San Bernardino Local Agency Formation Commission

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- **Existing Demands and Projected Demands**. From the District's 2004 Water Master Plan, which excluded those portions of the project site not presently within the WVWD's then existing service area, the District's average daily water demand for Year 2004/2005 was estimated to be 19.2 mgd for potable water plus 1.2 mgd for non-potable irrigation water, for a total of 20.4 mgd average daily water demand. The estimated peak-day demand was approximately twice the average day demand or 38.4 mgd for potable water and 1.9 mgd for non-potable[99] irrigation water, for a total peak-day water demand of 40.3 mgd. The District's 2004 Water Master Plan projected a peak-day demand for Year 2006/2007 to be 42.4 mgd.

  As of 2008, the District prepared WSAs or issued "will-serve letters" for eleven projected developments within its service area and "sphere of influence."[100] The peak-day demands projected in those WSAs and will-serve letters totaled 15.0 mgd. When this projection is added to the Year 2006/2007 demand presented in the District's Water Master Plan (42.4 mgd), a projected peak-day potable water demand of 57.4 mgd was derived. For Year 2006/2007, the WVWD calculated a potable water supply of 70.0 mgd, as supplied from the District's groundwater wells and from its existing water filtration facilities.

- **Projected Demands**. The projected water demand (including the proposed project) for the development was based on a January 2008 version of the proposed LCRSP land-use plan map (which outlines the number and type of dwelling unit and the acreage allocated for non-residential development, school sites, open space and the golf course) and data provided by the Applicant.[101] The District's 2004 Water Master Plan calculated that the average daily demand per EDU is 840 gallons per day (gpd). Commercial and irrigation usage is based on 2.43 gpm/acre. The project's estimated water demand is calculated in Table 4.10-7 (Estimated Water Demand for the Lytle Creek Ranch Specific Plan)[102] by using the District's water demand factors. For the purpose of this analysis, "SFR-1" residential units are calculated to be on lots greater than 10,000 square feet and, therefore, would require a 1-inch meter (1.7 times per EDU) or 1,428 gpd/EDU.

  The average daily water demand for the proposed project was estimated to be about 9.08 mgd. According to the District's 2004 Water Master Plan, peak-day demand within the District's service area for the years 2002-2008 was twice the average day demand.

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[99]/ The District supplies its non-potable irrigation demand with raw SWP and backwash water from its filtration facilities.

[100]/ These developments include: Coyote Canyon Estates (0.9 mgd peak-day demand), Lytle Creek North (3.5 mgd for peak-day demand), Citrus Heights North (0.92 mgd peak-day demand), Empire Land LLC (0.7 mgd peak-day demand), Summit at Rosena (0.75 mgd peak-day demand), Kline Ranch (0.3 mgd peak-day demand), Cactus Specific Plan (1.46 mgd peak-day demand), Valley Trails (1.4 mgd peak-day demand), Ventana (0.91 mgd peak-day demand), Arboretum (3.24 mgd peak-day demand), and Pepper Avenue (0.93 mgd peak-day demand).

[100]/ *Op. Cit.*, Water Supply Assessment for the Lytle Creek Ranch Development, Table 2

[101]/ The WVWD's SB 221 water supply assessment was based on a January 2008 version of the proposed LCRSP. The Lead Agency acknowledges that the proposed LCRSP has been modified since that date and some of the land-use designations have been subsequently modified. The key parameters of the proposed LCRSP, including the site acreage and the maximum authorized development (i.e., 8,407 dwelling units and 849,420 square feet of non-residential development), however, have not been changed. As a result, the Lead Agency reasonably concludes that the "Water Supply Assessment for the Lytle Creek Ranch Development" (West Valley Water District [Engineering Resources of Southern California Inc.], March 4, 2008), as and based on the January 2008 version of the proposed LCRSP, continue to reflect the current development proposal.

[102]/ West Valley Water District (Engineering Resources of Southern California Inc.), Water Supply Assessment for the Lytle Creek Ranch Development, March 4, 2008, Table 5, p. 19.

Table 4.10-7
ESTIMATED WATER DEMAND FOR THE LYTLE CREEK RANCH SPECIFIC PLAN

Neighbor.	Type Land Use[1]	Total Acres	Dwelling Units	Residential Demand (gpd/EDU)	Water Use (gpm/A)	Average Day Demand (mgd)	Peak Day Demand (mgd)	Average Day Demand (AF/Y)
I	SFR-1	131	476	1,428	-	0.68	1.36	761
	SFR-3	41	466	840	-	0.39	0.78	438
	Mixed Use[2]	12	336	840	-	0.28	0.56	316
	OS/Rec	11	-	-	2.43	0.04	0.08	43
	OS	222.2	-	-	0	-	-	-
	Total	417.2	1,278	-	-	1.39	2.78	1,559
II	SFR-1	11	40	1,428	-	0.06	0.11	64
	SFR-2	202	1,265	840	-	1.06	2.13	1,190
	SFR-3	121	1,262	840	-	1.06	2.12	1,188
	Mixed Use[2]	13	364	840	-	0.31	0.61	343
	Mixed Use[2]	11.2	-	-	2.43	0.04	0.08	44
	OS/Rec	216	-	-	2.43	0.76	1.51	847
	OS/Rec[3]	10	-	-	0	-	-	-
	OS	217.6	-	-	9	-	-	-
	Total	801.8	29,31	-	-	3.28	6.56	3,675
III	SFR-1	121.2	427	1,428	-	0.61	1.22	683
	SFR-2	102.5	643	840	-	0.54	1.08	605
	SFR-3	58	675	840	-	0.57	1.13	635
	MFR	52.3	959	840	-	0.81	1.61	902
	Mixed Use[2]	47.8	625	840	-	0.53	1.05	588
	Mixed Use[2]	40	-	-	2.43	0.14	0.28	157
	School	41	-	-	2.43	0.14	0.29	161
	OS/Rec.	65.8	-	-	2.43	0.23	0.46	258
	OS/Rec.[3]	5	-	-	0	-	-	-
	OS	435.2	-	-	0	-	-	-
	Total	968.8	3,329	-	-	3.56	7.12	3,989
IV	MFR	54	869	840	-	0.73	1.46	818
	Mixed Use[2]	17	-	-	2.43	0.06	0.12	67
	OS/Rec.	17	-	-	2.43	0.06	0.12	67
	OS/Rec.	4	-	-	0	-	-	-
	OS	167.5	-	-	0	-	-	-
	Total	259.5	869	-		0.85	1.70	951
Total	-	2,447.3	8,407	-	-	9.08	18.17	10,714

Notes:
1. SFR – Single Family Residential MFR – Multi-Family Residential OS – Open Space
   OS/Rec - Open Space/Recreation School – Elementary/Middle School
2. Although "mixed-use" development is not included in the current version of the proposed LCRSP, the higher density residential and non-residential land uses associated therein are accommodated in the proposed project's residential land-use districts and in the proposed "Village Center Commercial (VC)" district and "General Warehousing Overlay." As such, the land-use categorization presented herein continues to reasonably reflect the current development proposal.
3. Open Space/Recreation in PAs 19, 24, 29, 81, and 97 are planned for paved trails and will not require irrigation.

Source: West Valley Water District

Peak-day demand for the proposed project was, therefore, estimated to be about 18.17 mgd. The 18.17 mgd peak-day demand added to the existing (2006-2007) peak-day demand of 42.4 mgd plus the demands projected in the WSAs and "will-serve" letters of 15.0 mgd, totals 75.57 mgd for peak-day demand. Based on those capital improvement projects planned by the District for 2007-2011, that demand is within the District's projected production capacity. These future projects include drilling new groundwater wells, the rehabilitation and equipping of existing wells, the Phase III expansion of the Oliver P. Roemer WFF,[103] and the construction of a new water filtration facility.[104]

- **Impacts by the Proposed Development on the District's Water Supplies**. Water demand projections used in the WVWD-UWMP were generated from information within the WVWD's 2004 Water Master Plan and from known developments. Demands within the Water Master Plan were based on those lands within the District's service area and their anticipated land uses.

  The project site is located, in part, in the District's service area and, in part, within its adopted sphere of influence. When the Water Master Plan's projections were prepared, it was calculated that about 961 acres (39 percent of the proposed project) was located within the District's service area and about 1,486 acres (61 percent) was located within its sphere of influence. The future demands projected in the WVWD-UWMP include demands for that portion of the proposed project located within the District's service area but not for those areas located within its sphere of influence. An analysis of the area revealed that the 961 acres now in the District's service area boundary contained various land uses and was assigned a demand of 2,202 AF/Y in the Water Master Plan. Based upon the proposed land uses included in the proposed LCRSP, that same 961 acres will be developed with uses requiring additional water supply beyond the among included in the District's 2004 projections. The demand associated with the 1,486 acres of land in the District's Sphere of Influence was not included in the WVWD-UWMP and will also require additional supply.

  As shown in Table 4.10-7 (Estimated Water Demand for the Lytle Creek Ranch Specific Plan), the total water demand projected for the proposed LCRSP is estimated to be 10,174 AF/Y. Table 4.10-8 (Water Demand Not Accounted for in the West Valley Water District Urban Water Management Plan) lists the additional water required to supply the proposed development. The 7,972 AF/Y of additional water required, above those projected in the WVWD-UWMP, could be obtained by a combination of wells constructed in the Bunker Hill and Chino Groundwater Basins. The District will be required to pay replenishment charges above their extraction rights in the Chino Basin to the Chino Basin Watermaster. In addition to the groundwater supply, the proposed project may be able to use reclaimed water when that source of supply becomes increasingly available and meets applicable water quality standards. The Chino Basin does not appear to be affected by drought cycles due to the extensive capacity of the basin and the proactive basin management programs and, therefore, would be a reliable source of supply.[105]

[103]/ Installation of a 6.0 mgd membrane plant is expand the Oliver P. Roemer WFF from 14.4 to 20.4 mgd.

[104]/ The actual total peak-day demand for the proposed project will likely be less since a portion of the projected demand from the LCRSP was previously accounted for as part of the LCNPD.

[105]/ The Chino Basin Watermaster has been developing new water supplies for the basin, including the expansion of their recharge basins, which will allow them to capture 50,000 AF/Y of storm water. Additional projects will increase the recharge capacity to about 90,000 AF/Y. Newly treated water from desalters will add an additional 15,000 AF/Y and a large-scale reclaimed water project that will ultimately provide 22,000 AF/Y of additional supply. The conjunctive use program for the basin has a long-range plan to store over half a million acre-feet of water.

Table 4.10-8
WATER DEMAND NOT ACCOUNTED FOR IN THE WEST VALLEY WATER DISTRICT URBAN WATER MANAGEMENT PLAN

	Average Day Demand (AF/Y)
Lytle Creek Ranch Specific Plan projected demand	10,174
Demand accounted for in the WVWD-UWMP	2,202
Total Demand required for LCRSP above WVWD-UWMP Projections	7,972

Source: West Valley Water District

It is estimated that there is as much as 1.6 trillion gallons of water in the Bunker Hill Basin. Groundwater pumping has, however, been partially controlled by court judgment. That judgment determined that the safe yield for the basin was 232,100 AF/Y. It is believed that this control on pumping, combined with SWP deliveries and annual rainfall is sufficient to replenish the basin storage level for all potential future demands.

The District is preparing to enter into an agreement with multiple agencies to develop 20,000 AF/Y of additional supply from the Bunker Hill Groundwater Basin. Regional facilities, including wellhead treatment constructed within the basin, will allow the coordinated management of the water supplies in the Bunker Hill Groundwater Basin, which will increase the reliability and quality of this water source. Additional supplies from the Bunker Hill Groundwater Basin will allow the District adequate water availability to serve the proposed project. If an agreement cannot be reached, the District has identified projects to develop this supply in the Bunker Hill Groundwater Basin.

- **Future Water Supply Assessment**. This WSA analyzed whether the District will have sufficient resources to supply the additional 7,972 AF/Y required by the proposed project that was not included in the WVWD-UWMP. The District's planned future supply projects are designed to provide a more than adequate supply, thus giving the District flexibility in system operation and enough supply in the event a water supply source is not able to be utilized. Efforts by the District to obtain additional sources of water above projections in the WVWD-UWMP will improve supply reliability.

  The District purchases SWP water to augment its supplies to the Oliver P. Roemer WFF and for groundwater recharge when it is available. The use of SWP water has been used as a supplemental source for the District due to the SWP water quality, cost, and availability. The estimates of future SWP water deliveries for the District have been based on the estimates given in the "Draft State Water Project Delivery Reliability Report 2007" (SWPDRR). SWP water delivery projections are based on 82 years (1922-2003) of data and computer model simulations. The SWPDRR utilizes the average SWP water delivery from 1922-2003 for its future average year delivery projection. It uses the multi-year drought of 1929-1934 for one of its future multi-year drought delivery projections and 1977 for its single-dry year delivery projection. Table 4.10-9 (Average and Dry Period SWP Deliveries from the Sacramento Delta under Current and Future Conditions) shows the delivery projections of SWP water based on the draft SWPDRR 2007. Projections are shown as a percentage of maximum annual SWP amounts.

  During a drought that reduces the available SWP allotment, all of the water agencies receiving SWP water will share in the deficit of the water budget on a percentage basis. In the event of reductions in SWP allotment, water agencies have discussed prioritizing

the delivery of water with direct delivery having a higher priority than groundwater replenishment and recharge. As noted previously, in addition to the potential for drought which could reduce the available SWP allotment, the impact of the recent court decision (Natural Resources Defense Council v. Kempthorne) could also result in a reduction of SWP exports from the Sacramento Delta, although the exact amount of such reduction is not known at this time and depends upon if the year is considered an average water year or a dry water year. Should imported SWP water be reduced, the District would turn to and place greater reliance on the groundwater basins as a source for its future supplies of water until SWP allotments are increased.

Table 4.10-9
AVERAGE AND DRY PERIOD SWP DELIVERIES FROM THE SACRAMENTO DELTA UNDER CURRENT AND FUTURE CONDITIONS

Year	Long-Term Average	Single-Dry Year 1977	6-Year Drought 1929-1934
Current (2007)	63%	6%	34%
Future (2027)	66-69%	7%	33-36%

Source: West Valley Water District

Projections for SWP are based on the District's ability to utilize the supply at the District's water filtration facilities (WFF). Phase III of the Oliver P. Roemer WFF expansion, projected to be on line in 2010, will add 6.0 mgd of capacity to that facility for a total of 20.4 mgd. The District is projected to use their full allotment of surface water to treat at the WFF, allowing the District to utilize about 15,000 AF of SWP water, if available. By 2015, the 6.0 mgd Lytle Creek North Water Filtration Facility (Lytle Creek North WFF) is anticipated to be in operation, which would increase the District's ability to use up to 23,000 AF/Y of SWP water, if available. The proposed expansion of the Oliver P. Roemer WFF, in combination with the Lytle Creek North WFF, would enable the District to utilize additional SWP water, when available, and will allow the District to reduce groundwater pumping or replenish groundwater basins. The Oliver P. Roemer WFF and Lytle Creek North WFF will provide water to this project and to others and allows the District flexibility in operating their water supply options.

Table 4.10-10 (Projected Normal Water Year Supply and Demand Comparison) represents future production for 2010 through 2028 and projected demand within the District during a normal water year. In addition to other known developments within the District that will occur during this time frame, the demand which is shown includes the projected LCRSP at a 10 percent growth per year.

The availability of SWP water, as shown in Table 4.10-10 (Projected Normal Water Year Supply and Demand Comparison), Table 4.10-11 (Projected Single-Dry Year in Southern California Only – Supply and Demand Comparison), Table 4.10-12 (Projected Single-Dry Year in Southern California Only – Supply and Demand Comparison), and Table 4.10-13 (Projected Supply and Demand Comparison – Fifth Year of a Five-Year Drought in both Southern and Northern California), is based upon the projected deliveries from Table 4.10-9 (Average and Dry Period State Water Project Deliveries from the Sacramento Delta under Current and Future Conditions) and the District's ability to utilize this source at their WFFs. Under all scenarios, projected water supply exceeds anticipated water demand for 2010, 2015, 2020, and 2028.

Projections for 2010 are based on the long-term average of 63 percent. In 2028, the long-term average SWP water delivery is projected to be between 66 and 69 percent (66 percent of 23,000 AF or about 15,200 AF) of the maximum annual SWP water amount. SWP water is used by the District as a supplemental water supply to their existing water sources. In addition to the percentage reductions in SWP water that have been factored into Table 4.10-10 (Projected Normal Water Year Supply and Demand Comparison), even if SWP water were eliminated entirely, the District's groundwater supplies would be sufficient to address the projected demand.

The implementation of the "Upper Santa Ana River Watershed Integrated Regional Water Management Plan"[106] (IRWMP) will improve groundwater management and water supply reliability in many of the groundwater basins utilized by the District, especially during times of drought. The Bunker Hill Basin, which the District plans to focus on for its future supplies, is the major basin that will benefit from the projects implemented under the IRWMP. Assuming that the groundwater basins are managed properly, groundwater is thought to be a reliable source of supply during drought years when SWP water allotments are cut back.

The District is planning to utilize projected supplies from the Bunker Hill Basin sooner than previously anticipated due to increased demand and rapid growth within the District's service area. The supply and demand comparison tables during normal, single-dry, and multiple-dry water years reflect this and the increased reliability of this source. The District's WVWD-UWMP, when updated, will reflect these changes.

Development within the District is occurring at a greater rate than the 3 percent annual growth rate projected in the current WVWD-UWMP.[107] Current demands plus demands from new development have increased the 2015 water demand beyond projections of the WVWD-UWMP. Despite the increased demand, the District is estimating a surplus of water. The demand at build-out of the District's service area is calculated in the District's 2004 Water Master Plan to be 43.28 mgd or 48,483 AF/Y. Build-out demands plus the additional demand for the proposed project are approximately 56,400 AF/Y in 2028.

The District plans to construct new wells and pump stations to ensure an adequate water supply for their existing and future customers. The 73,700 AF/Y of supply, as projected for a normal water year in 2028, is sufficient to accommodate the additional demand that is projected. The District retains, as their option, the ability to construct water supply projects sooner than now planned in anticipation of a multiple-dry year event.

When there is a drought in northern California or if water supplies from northern California are reduced as a result of restrictions on Sacramento Delta pumping or other similar measures, SWP water deliveries will be reduced or curtailed based on the available supplies. During this time, the District will obtain water supplies from their multiple groundwater sources and surface water diversions. During periods of drought in southern California when production in the groundwater basins has declined, the District will utilize SWP water to augment their supplies.

[106]/ San Bernardino Valley Municipal Water District (GEI Consultants, Inc.), Upper Santa Ana River Integrated Regional Water Management Plan, November 2007.

[107]/ *Op. Cit.*, Urban Water Management Plan, Table 2-8 (Projected Residential Growth) and Table 2-14 (Water Use by Customer - Past, Current and Future).

Table 4.10-10
PROJECTED NORMAL WATER YEAR
SUPPLY AND DEMAND COMPARISON (AF/Y)

Source	2010	2015	2020	2028
Lytle Creek Basin	10,000	10,000	10,000	10,000
North Riverside Basin	6,000	8,000	6,000	5,000
Rialto Basin	10,000	10,000	10,000	10,000
Bunker Hill Basin	10,000	15,000	20,000	25,000
Chino Basin	3,000	3,000	3,000	3,000
Lytle Creek Surface Water	5,500	5,500	5,500	5,500
State Project Water	9,450[1]	15,200[2]	15,2000[2]	15,200[2]
Supply	53,950	66,700	69,700	73,700
Demand	30,000	45,500	50,900	56,400
Surplus	23,950	21,200	18,800	17,300

Notes:
1. In 2010, the District's WFFs will have the ability to treat up to 20.4 mgd. When the City's 1.5 mgd capacity and the District's Lytle Creek surface water supply are subtracted, the District will be able to utilize about 15,000 AF/Y of SWP waters. The long- term average of 63 percent of 15,000 AF would be 9,450 AF.
2. In 2015, when the 6.0 mgd Lytle Creek North WFF is anticipated to be in operation, the District will be able to utilize up to 23,000 AF/Y. The long-term average 66 percent of 23,000 AF would be 15,200 AF.

Source: West Valley Water District

Table 4.10-11
PROJECTED SINGLE-DRY YEAR IN SOUTHERN CALIFORNIA ONLY
SUPPLY AND DEMAND COMPARISON (AF/Y)

Source	2010	2015	2020	2028
Lytle Creek Basin	9,500	9,500	9,500	9,500
North Riverside Basin	6,000	8,000	6,000	5,000
Rialto Basin	9,500	9,500	9,500	9,500
Bunker Hill Basin	10,000	15,000	20,000	25,000
Chino Basin	3,000	3,000	3,000	3,000
Lytle Creek Surface Water	3,000	3,000	3,000	3,000
State Project Water	9,450[1]	15,200[2]	15,2000[2]	15,200[2]
Supply	50,450	53,200	66,200	70,200
Demand	30,000	45,500	50,900	56,400
Surplus	20,450	17,000	15,300	13,800

Notes:
1. In 2010, the District's WFFs will have the ability to treat up to 20.4 mgd. When the City's 1.5 mgd capacity and the District's Lytle Creek surface water supply are subtracted, the District will be able to utilize about 15,000 AF/Y of SWP water. The long-term average of 63 percent of 15,000 AF would be 9,450 AF.
2. In 2015, when the 6.0 mgd Lytle Creek North WFF is anticipated to be in operation, the District will be able to utilize up to 23,000 AF/Y. The long-term average 66 percent of 23,000 AF would be 15,200 AF.

Source: West Valley Water District

Table 4.10-12
PROJECTED SINGLE-DRY YEAR IN NORTHERN CALIFORNIA ONLY SUPPLY AND DEMAND COMPARISON (AF/Y)

Source	2010	2015	2020	2028
Lytle Creek Basin	10,000	10,000	10,000	10,000
North Riverside Basin	6,000	8,000	6,000	5,000
Rialto Basin	10,000	10,000	10,000	10,000
Bunker Hill Basin	10,000	15,000	20,000	25,000
Chino Basin	3,000	3,000	3,000	3,000
Lytle Creek Surface Water	5,500	5,500	5,500	5,500
State Project Water	900[1]	1,600[2]	1,600[2]	1,600[2]
Supply	45,400	53,100	56,100	60,100
Demand	30,000	45,500	50,900	56,400
Surplus	15,400	7,600	5,200	3,700

Notes:
1. In 2010, the District's WFFs will have the ability to treat up to 20.4 mgd. When you City's 1.5 mgd capacity and the District's Lytle Creek surface water supply are subtracted, the District will be able to utilize about 15,000 AF/Y of SWP water. The current single-dry year projected SWP water delivery of 6 percent of 15,000 AF would be 900 AF.
2. In 2015, when the 6.0 mgd Lytle Creek North WFF is anticipated to be in operation, the District will be able to utilize up to 23,000 AF/Y. The future single-dry year projected SWP water delivery of 7 percent of 23,000 AF would be 1,600 AF.

Source: West Valley Water District

Table 4.10-13
PROJECTED SUPPLY AND DEMAND COMPARISON - FIFTH YEAR OF A FIVE-YEAR DROUGHT IN BOTH SOUTHERN AND NORTHERN CALIFORNIA (AF/Y)

Source	2010	2015	2020	2028
Lytle Creek Basin	5,000	7,000	7,000	7,000
North Riverside Basin	4,000	5,000	4,000	3,000
Rialto Basin	3,067	3,067	3,067	3,067
Bunker Hill Basin	10,000	15,000	20,000	25,000
Chino Basin	3,000	8,000	8,000	8,000
Lytle Creek Surface Water	3,000	3,000	3,000	3,000
State Project Water	5,100[1]	7,600[2]	7,600[2]	7,600[2]
Supply	33,167	48,667	52,667	56,667
Demand	30,000	45,500	50,900	56,400
Surplus	3,167	3,167	1,767	267

Notes:
1. In 2010, the District's WFFs will have the ability to treat up to 20.4 mgd. When the City's 1.5 mgd capacity and the District's Lytle Creek surface water supply are subtracted, the District will be able to utilize about 15,000 AF/Y of SWP water. The current multi-year drought projection of SWP water delivery is 34 percent of 15,000 AF or 5,100 AF.
2. In 2015, when the 6.0 mgd Lytle Creek North WFF is anticipated to be in operation, the District will be able to utilize up to 23,000 AF/Y. The future multi-year drought projection of SWP water delivery is 33-36 percent of 23,000 AF would be 7,600 AF.

Source: West Valley Water District

In the event of prolonged periods of water shortages, the District may enact its "Water Shortage Contingency Plan" to reduce consumption and demand through additional water conservation efforts. In addition, the District may also document new sources of supply through increased use of recycled water and improving mechanisms to capture as much water as possible from local surface water sources (such as Lytle Creek).

Table 4.10-11 (Projected Single-Dry Year in Southern California Only – Supply and Demand Comparison) shows the projected supply available during a single-dry water year in southern California. Projections for 2010 are based on the long-term average of 63 percent. SWP water delivery during a single-dry year in southern California in 2028 is projected to be between 66 and 69 percent (66 percent of 23,000 AF or approximately 15,200 AF) of the maximum annual SWP amount. In addition to the percentage reductions in SWP water that have been factored into the analysis, even if SWP water were eliminated entirely, the District's groundwater supplies would be sufficient to address the projected demand in every year except 2028.

Table 4.10-13 (Projected Single-Dry Year in Southern California Only – Supply and Demand Comparison) shows the projected supply available during a single-dry water year in northern California. SWP water deliveries were projected to be as seen in 1977 or 7 percent of the maximum annual SWP amount. In addition to the percentage reductions in SWP water that has been factored into the analysis, even if SWP water was eliminated entirely, the District's groundwater supplies would be sufficient to address the projected demand. During a single-dry year event, the District is not expected to enact any of their water supply shortage stages. The District anticipates that it will utilize additional supply in the Chino Basin as needed. The projected supply during a single-dry year is sufficient to meet the projected demands.

Usually, when there is a drought in northern California, it does not coincide with a drought in southern California; however, there have been instances where a Statewide drought has occurred. The durations, frequencies, and intensities of these occurrences range. The Statewide drought of 1929-1934 is unequaled in the historical record of the Sacramento River Basin Index, dating back to 1872. This data indicates that the drought had a recurrence interval of more than 100 years. In comparison, the stream flow record, as reconstructed from tree ring data, indicates that the 1929-1934 drought is unequaled for the entire period from 1560 to 1980. This data indicates a possible recurrence interval of more than 400 years.[108]

Table 4.10-14 (Projected Supply and Demand Comparison – Fifth Year of a Five-Year Drought in both Southern and Northern California) shows the projected supply during the fifth year of a five-year Statewide drought. During a Statewide drought, similar to the one that occurred from 1929-1934, the maximum annual SWP water amount is projected to be between 33 and 36 percent (34 percent of 15,000 AF or 5,100 AF in 2010 and 33 percent of 23,000 AF or 7,600 AF in 2028) (see Table 4.10-12 [Projected Single-Dry Year in Southern California Only – Supply and Demand Comparison]).

As shortages become evident, the District may enact the appropriate stage of their water shortage contingency plan. The District, in managing their water supply options and

[108]/ Paulson, Richard W., Chase, Edith B., Roberts, Robert S., and Moody, David W., National Water Summary 1988-1989 - Hydrologic Events and Floods and Droughts: U.S. Water-Supply Paper 2375, United States Geological Survey, 1991.

system operation, may choose to purchase additional supplies if available or enact any of their water shortage stages.

Table 4.10-14
PROJECTED AVERAGE DAILY WASTEWATER FLOWS BASED ON MODEL FLOW FACTORS

Development Class	Development Type	Cap per Acre	Generation Rate (GPAPD[1])	Acres	Projected Flow (GPD[1])
Residential	High Density Single-Family	12	660	220.0	145,200
	Low Density Single-Family	8	440	567.7	249,788
	Mixed Multi-Family Res.	25	1,375	106.3	146,163
Schools	Junior High School	-	1,200	14.0	16,800
	Elementary School	-	1,000	10.0	1,000
Parks	Local Parks/Golf Course	-	200	345.8	69,160
	Open Space	-	200	908.0	181,600
Commercial	Wholesaling/Warehousing	-	500	-[2]	-
	Commercial Recreational	-	1,000	-[2]	-
	Modern Strip Development	-	750	141.0	105,750
Public	Fire Stations	-	500	-[3]	-
	Roadways	-	-	134.5	-
Total				2,447.3	951,461

Notes:
1. GPADP = gallons per acre per day GPD = gallons per day
2. Included "modern strip development."
3. Not separately calculated.

Source: Environmental Impact Sciences

- **Water Shortage Contingency Plan**. The District has an adopted a water shortage contingency plan ordinance (Water Conservation Plan[109]) which is contained in the District's latest WVWD-UWMP. The ordinance has the following four stages of water use: (1) Stage 1 is normal conditions; (2) Stage 2 is both a voluntary and mandatory program with a goal of 10 to 25 percent reduction in water usage; (3) Stage 3 is voluntary and mandatory program with a goal of 25 to 35 percent reduction in water usage; and (4) Stage 4 is referred to as a declared water emergency with a voluntary and mandatory program with a goal of 35 to 50 percent reduction in water usage.

The District's water supply is vulnerable to seasonal and climatic changes based upon precipitation patterns in both southern and northern California and may vary substantially from one year to the next. It is impossible to accurately predict the reliability of future SWP water deliveries. Deliveries can be affected by several factors including, but not limited to, the amount and location of rain and snowfall in a given year, operational and environmental impacts, levee failures, and earthquakes. All of these items can affect water delivery and, although recognized by the WVWD, are not within their control.

When there is a drought in northern California, SWP water deliveries will be curtailed based on the available supplies. During this time, the District will obtain water supplies from their multiple groundwater sources and surface water diversions. During periods of drought in southern

[109]/ West Valley Water District, Article No. 24, Ordinance No. 68, adopted July 5, 1990.

California, when production in the groundwater basins has declined, the District will utilize SWP supplies to augment their own supplies.

The impacts of global climate change on the rain and snowfall is uncertain. To mitigate this impact on the District's water supplies, the District banks (stores water in underground aquifers) SWP water into the Bunker Hill and Chino Groundwater Basins when it is available and extracts this water during periods of drought. The facilities needed to bank water supplies are currently in place. In addition, the District has the ability to participate in existing programs that will allow additional water banking by the time the proposed project will require this supply.

As with all water supplies in southern California, the District's sources are also vulnerable to chemical contamination. The District will not, however, see a reduction in supply due to water quality. As needed, the District's plan is to implement wellhead treatment to remove the volatile organic compounds (VOC) on existing and future proposed wells. To achieve an acceptable level of reliability of supply within their system, the District plans and constructs facilities and water supply projects to meet projected water demands.

The demands projected in the WVWD-UWMP, along with the demand required for the proposed project, have been identified in the District's project-specific WSA. For the purpose of this environmental compliance and in satisfaction of its requirements under SB 610 and SB 221, the District has demonstrated its plans to implement the additional supply projects which may be needed for the proposed project. The District has verified that it has the water supplies available during normal, single-dry, and multiple-dry years, within a 20-year projection, that will meet the projected demand associated with the proposed project, in addition to existing and planned future uses including, but not limited to, agricultural and industrial uses. The District has shown, through its WSA, written verification of water rights and contracts, agreements, and its capital improvements program of a sufficient water supply that has been adopted by its governing board of directors. The District has determined that there will be no foreseeable impacts of the proposed project on the availability of water resources for agricultural and industrial uses within the District's public water system service area that are not currently receiving water from the District's water system but are utilizing the same sources of water. The proposed LCRSP is, therefore, consistent with the District's latest approved WMP (2004) and WVWD-UWMP (2006).

The "City of Rialto 2007-2011 Capital Improvement Program – Wastewater Capital" notes that the City, "like other cities in the Inland Empire, depends on groundwater for nearly 100% of its supply. This water resource is impaired by perchlorate contamination and a persistent overdraft condition. Reclaimed water is the most obvious alternative water supply available to Rialto."[110]

While no significant environmental effects have been identified with regards to this impact, since the proposed LCRSP does not explicitly delineate the timing of certain infrastructure improvements, a mitigation measure (Mitigation Measure 1-9) has been formulated to ensure that the sequencing of authorized land uses occurs in a manner and in a time period integrally linked to those infrastructure improvements and municipal serves required to adequately support the proposed land uses.

[110]/ City of Rialto, City of Rialto 2007-2011 Capital Improvement Program – Wastewater Capital, Storm Drain & Wastewater Master Plan, updated.

Wastewater

Environmental Impact 10-5. Sewerage Disposal*. At build-out, residential and non-residential uses will generate an estimated 5.016 million gallons of wastewater per day (mgd), thus placing a long-term demand on available wastewater treatment facilities. Of that, an estimated 4.295 mgd (from Neighborhoods II, III, and IV) of average daily flow will be conveyed to the City of Rialto Wastewater Treatment Plant and an estimated 0.721 mdg (from Neighborhood I) of average daily flow will be conveyed to the Lytle Creek North Wastewater Recycling Facility for treatment. Insufficient sewerage treatment capacity presently exists at the City of Rialto Wastewater Treatment Plant to accommodate anticipated future year flows.*

Preliminary Determination 10-5*. Potentially significant unless mitigation incorporated.*[111]

For general planning purposes, excluding the contribution of potential groundwater infiltration (groundwater that infiltrates pipelines through defective pipes and maintenance holes), project-related daily dry-weather flow (AADWF) can be estimated based on the model flow factors presented in the "City of Rialto Wastewater Collection System Evaluation"[112] and the land-use designations and project-specific acreages presented in Table 2-1 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan Summary). Table 4.10-14 (Projected Average Daily Wastewater Flows based on Model Flow Factors) presented estimated new sewer flows based on the flow factors presented in the Wastewater Master Plan.[113] Applicable peaking factors have not been applied to those acreage-based projections.

More precise engineering was undertaken by the Otte-Berkeley Groupe, Inc. (OBG),[114] which formed the bases for the proposed project's conceptual sewer master plan, as illustrated in Figure 2-20 (Lytle Creek Ranch Specific Plan – Conceptual Sewer Master Plan) and described in Section 2.7.6 (Conceptual Sewer Master Plan) herein. Projected neighborhood-specific average daily flow (ADF) and peaked flow is described below and summarized in Table 4.10-15 (Projected Average Daily Wastewater Flows based on Engineering Analysis).

- **Neighborhood IV**. Based on an estimated 1,171 dwelling units or equivalents and assuming a per unit occupancy rate of 2.6 persons and a generation rate of 69.72 gallons per capita per day (gpd), Neighborhood IV will generate an ADF of about 212,270 gpd (0.212 mgd). Applying a peaking factor of 3.0, the estimated peaked flow in Neighborhood IV is about 0.636 mgd or 0.98 cubic feet per second (cfs). Wastewater generated in Neighborhood IV will be conveyed to the Rialto WTP.

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[111]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) exceed wastewater treatment requirements of the RWQCB; (2) require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; (3) result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitment; (4) generate a quantity of wastewater that would cause or contribute to an exceedance of the current or projected capacity of existing or proposed wastewater treatment plants; (5) result in conditions where the existing sewer lines could not accommodate the proposed project's anticipated wastewater volumes; and/or (6) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

[112]/ City of Rialto (TRC), City of Rialto Wastewater Collection System Analysis, September 2005, Table 3.0 (Model Flow Factors).

[113]/ *Ibid*, p. 3-2.

[114]/ Otte-Berkeley Groupe, Inc., Wastewater Facilities Plan Summary, October 9, 2009.

Table 4.10-15
PROJECTED AVERAGE DAILY WASTEWATER FLOWS BASED ON ENGINEERING ANALYSIS

Neighborhood (Sewer Line)	**Dwelling Unit Equivalents**	**Average Daily Flow** (gpd)	**Peaking Factor**	**Peaked Flow** (mgd)	**CFS**	**Sewer Plant**
IV (Locust Avenue)	1,171	212,270 (0.212 mgd)	3.0	0.636	0.98	Rialto WTP
III (Locust Avenue)	3,635	658,924 (0.659 mgd)	2.7	1.789	2.75	Rialto WTP
Combined III/IV (Locust Avenue)	4,806	871,194 (0.871 mgd)	2.7	2.352	3.64	Rialto WTP
III (Cactus Avenue)	694	125,803 (0.126 mgd)	3.2	0.403	0.62	Rialto WTP
II (Cactus Avenue)	2,568	465,506 (0.466 mgd)	2.7	1.258	1.85	Rialto WTP
Combined III/II (Cactus Avenue)	3,262	591,309 (0.591 mgd)	2.7	1.596	2.47	Rialto WTP
II (Oakdale Avenue)	562	101,875 (0.102 mgd)	3.4	0.347	0.50	Rialto WTP
Subtotal Rialto WTP	8,630	1,564,378 (1.564 mgd)	-	4.295	6.61	-
I (Sycamore Canyon)	342	61,995 (0.064 mgd)	3.4	0.218	0.34	Lytle Creek North WRP
I (Sycamore Flat)	347	62,901 (0.063 mgd)	3.4	0.214	0.33	Lytle Creek North WRP
I (10-Inch Dry Sewer)	466	84,473 (0.085 mgd)	3.4	0.289	0.44	Lytle Creek North WRP
Subtotal Lytle Creek North WRP	1,155	209,369 (0.209 mgd)	-	0.721	1.11	-
Total	9,785	1,773,747 (1.774 mgd)	-	5.016	7.72	-

Source: Otte-Berkeley Groupe, Inc.

- **Neighborhood III**. Neighborhood III is comprised of two tributary areas (i.e., upstream and downstream of the point of connection in Locust Avenue). With regards to the upstream tributary area, based on an estimated 3,635 dwelling units or equivalents and assuming a per unit occupancy rate of 2.6 persons and a per capita consumption factor of 69.72 gallons per day (gpd), the upstream (Locust Avenue sewer) portion of Neighborhood III will generate an ADF of approximately 658,924 (0.659 mgd). Applying a peaking factor of 2.7, the estimated peaked flow rate upstream of the Locust Avenue sewer is about 1.789 mgd or 2.75 cfs.

  The combined Locust Avenue sewer tributary flows from both Neighborhoods III and IV is estimated to be about 0.871 mgd ADF and, based on a peaking factor of 2.7, a cumulative peak flow of about 2.352 mgd or 3.64 cfs. These expected flows will be directed to the City's identified collection point approximately 250 feet south of the Locust Avenue/Riverside Avenue intersection.

  A remainder of the Neighborhood III tributary area lying downstream of the point of connection in Locust Avenue will convey its flows into the Cactus Avenue sewer in

Neighborhood II. Based on an estimated 694 dwelling units or equivalents and assuming a per unit occupancy rate of 2.6 persons and a per capita generation rate, this tributary area will generate an ADF of about 125,803 gpd (0.126 mgd). Applying a peaking factor of 3.2, the estimated peaked flow rate for the downstream portion of Neighborhood III is about 0.403 mgd or 0.62 cfs. Wastewater generated in Neighborhood III will be conveyed to the Rialto WTP.

- **Neighborhood II**. Neighborhood III is comprised of two tributary areas (i.e., tributary to the Cactus Avenue sewer and tributary to the Oakdale Avenue sewer). With regards to the area tributary to the Cactus Avenue sewer, based on an estimated 2,568 dwelling units and/or equivalents in Neighborhood II, combined with the 694 dwelling units or equivalents from Neighborhood III lying downstream of the point of connection in Locust Avenue, assuming a per unit occupancy rate of 2.6 persons and a per capita generation rate of 69.72 gpd, that portion of Neighborhood II tributary to the Cactus Avenue sewer will generate an ADF of approximately 591,309 gpd (0.591 mgd). Applying a peaking factor of 2.7, the estimated peaked flow rate for that portion of Neighborhood II tributary to the Cactus Avenue sewer is about 1.596 mgd (rounded to 1.60 mgd) or 2.47 cfs.

  With regards to the area tributary to the Oakdale Avenue sewer, based on an estimated 562 dwelling units or equivalents in Neighborhood II, assuming a per unit occupancy rate of 2.6 persons and a per capita generation rate of 69.72 gpd, that portion of Neighborhood II tributary to the Oakdale Avenue sewer will generate an ADF of approximately 101,875 gpd (0.102 mgd). Applying a peaking factor of 3.4, the estimated peaked flow rate for that portion of Neighborhood II tributary to the Oakdale Avenue sewer is about 0.347 mgd or 0.50 cfs. Wastewater generated in Neighborhood II will be conveyed to the Rialto WTP.

- **Neighborhood I**. Neighborhood I is comprised of three tributary areas, all tributary to the Lytle Creek North WRP. The area west of the I-15 Freeway (Sycamore Canyon) is comprised of 342 dwelling units or equivalents. Based on a per unit occupancy rate of 2.6 persons and a per capita generation rate of 69.72 gpd, the western portion of Neighborhood I will generate an ADF of approximately 61,995 gpd (0.064 mgd). Applying a peaking factor of 3.4, the estimated peaked flow from the western portion of Neighborhood I is approximately 0.218 mgd or 0.34 cfs.

  The area to the east of the I-15 Freeway (Sycamore Flat) is comprised of 347 dwelling units or equivalents. Based on a per unit occupancy rate of 2.6 persons and a per capita generation rate of 69.72 gpd, the eastern portion of Neighborhood I will generate an ADF of about 62,901 gpd (0.063 mgd). Applying a peaking factor of 3.4, the estimated peaked flow from the eastern portion of Neighborhood I is about 0.214 mgd or 0.33 cfs.

  A 10-inch diameter dry sewer line constructed just north of Rosena Ranch and connecting to the main sewer line in Clearwater Parkway has been specifically installed to convey the flows of 466 dwelling units (PAs 11, 13, and 15) located adjacent to Glen Helen Parkway and west of the I-15 Freeway. Assuming a per unit occupancy rate of 2.6 persons and a per capita generation rate of 69,72 gpd, that portion of Neighborhood I tributary to the existing 10-inch diameter sewer line will generate an ADF of approximately 84,473 gpd (0.085 mgd). Applying a peaking factor of 3.4, the estimated peaked flow from that portion of Neighborhood I is 0.289 mgd or 1.11 cfs.

Subject to an out-of-agency service contract between the City and County, wastewater generated in Neighborhood II will be conveyed to the Lytle Creek North WRP, as operated by County Service Area 70 Improvement Zone GH (CSA 70 GH).

Total estimated average daily and peaked flows from Neighborhood I are 0.209 and 0.721 mgd, respectively. As indicated in the August 2004 "Wastewater System Agreement," as executed by the County, the Lytle Development Company, and Pulte Home Corporation, 0.79 mgd of reserve capacity has been retained at the Lytle Creek North WRP to accommodate projected flows from the area comprising Neighborhood IV. Since projected peak flows (0.429) are less than the reserved capacity at the Lytle Creek North WRP (0.79 mgd), no significant wastewater conveyance and/or treatment impacts are anticipated from the development of Neighborhood IV.

The majority of the expected flow conveyed to the Rialto WTP is tributary to the Ayala Avenue Lift Station. The expected connect point for this tributary reach is the existing manhole within Locust Avenue, south of Riverside Avenue. Remaining flows would be directed to the Cactus Avenue Lift Station (connection point at Cactus and Riverside Avenues), Lilac Avenue Lift Station (connection point at Cactus and Casmalia Avenues), and Sycamore Avenue Lift Station (connection point along Oakdale Avenue). Based on those sewer nodes depicted in Figure 4.10-6 (Lytle Creek Ranch Specific Plan – Conceptual Sewer System Node Map), the proposed project's sewer mains, including average daily and cumulative peaks flows, are illustrated in Figure 4.10-7 (Lytle Creek Ranch Specific Plan – Conceptual Sewer System Sewer Mains).

At build-out, an estimated 4.295 mgd average daily flow from Neighborhoods II, III, and IV will be conveyed to the Rialto WTP. By directing that flow to multiple existing lift stations (Ayala, Cactus, Lilac, and Sycamore Avenues) located south of the I-210 Freeway, the City has determined that, with certain upgrades, sufficient sewerage treatment capacity exists to accommodate expected flows from the proposed development. Those improvements and modifications have been included in the project description and constitute components of the proposed project.

Although sufficient capacity exists in the Lytle Creek North WRP to accommodate projected Neighborhood I sewer flows, with regards to Neighborhoods II, III, and IV, the Applicant assumes that planned master plan upgrades to the Rialto WTP will be implemented by the City is advance of any future flows that might exceed that facility's capacity; however, improvement plans have not been finalized and funding for requisite improvements is not currently in place.

The wastewater collection system analysis has also identified transmission line deficiencies requiring upgrades to serve the proposed development. To facilitate expected flows, approximately 9,135 linear feet of existing 12-inch to 30-inch diameter transmission main line would need to be upgraded downstream of the four identified lift stations. Those upgrades include the following: (1) the existing 12-inch diameter transmission main extending northerly up Locust Avenue to the proposed connection point approximately 250 feet southerly of Riverside Avenue would need to either be replaced with a 21-inch diameter main or an additional 18-inch diameter main installed parallel with the existing main (this upgrade would accommodate 2.23 mgd of the expected flows and would deliver those flows to the Ayala Avenue Lift Station); (2) the existing 10-inch diameter transmission line extending up Cactus Avenue from the Cactus Avenue Lift Station to the intersection of Riverside Avenue would need to be replaced with a 15-inch diameter main (this upgrade would accommodate 0.86 mgd of the expected flows and would deliver those flows to the Cactus Avenue Lift Station); (3) the existing 8-inch diameter transmission line extending northerly from the Lilac Avenue Lift Station to Casmalia Avenue

would need to be replaced with a 15-inch diameter main and a parallel 12-inch diameter main installed westerly along Casmalia Avenue to intercept a portion of the existing tributary flows and redirect those flows through a diverter structure to the Lilac Avenue Lift Station (this upgrade would accommodate 0.66 mgd of the expected flows to the Lilac Avenue Lift Station); (4) the existing combination 8-inch and 10-inch diameter transmission line extending from the Sycamore Avenue Lift Station northerly to the proposed connection point north of Arbeth Avenue would need to be replaced with a 15-inch diameter main (this upgrade would accommodate 0.86 mgd of the expected flows to the Sycamore Avenue Lift Station).

In recognition of these deficiencies and needed upgrades, since the proposed LCRSP does not explicitly delineate the timing of certain infrastructure improvements, a mitigation measure (Mitigation Measure 1-9) has been formulated to ensure that the sequencing of authorized land uses occurs in a manner and in a time period integrally linked to those infrastructure improvements and municipal serves required to adequately support the proposed land uses. In addition, the Lead Agency has formulated a mitigation measure (Mitigation Measure 10-4) stipulating that no building permits shall be issued for any use generating additional sewer flows unless the City Engineer first verifies that adequate sewer capacity is in place to accommodate that development. As mitigated, operational wastewater impacts can be mitigated to a less-than-significant level. Additional information concerning wastewater collection and treatment is presented in Appendix III-K (Wastewater Collection and Treatment).

Solid Waste

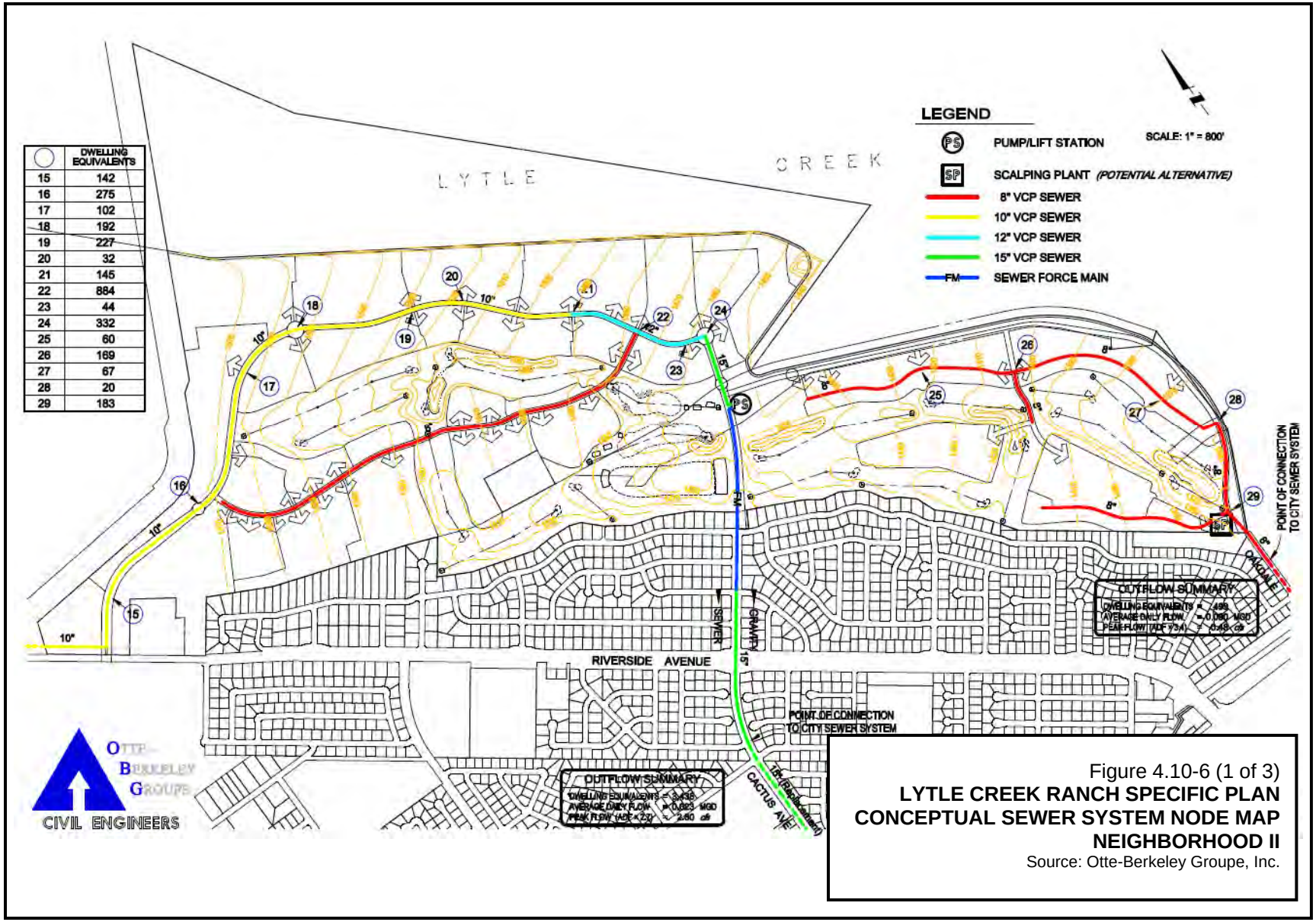
Environmental Impact 10-6*. Solid Waste. At build-out, an estimated 80,143 tons of solid waste will be generated per year (220 tons/day), inclusive of both residential and non-residential waste streams. Based on current estimated diversion rates (45 percent), an estimated 44,078 tons of waste will require landfilling per year (121 tons/day).*

Preliminary Determination 10-6*. Less-than-significant impact.*

Project implementation will result in the introduction of new residents and new businesses which will generate a variety of solid wastes. Wastes that are not recycled or otherwise utilized will require landfill disposal and will serve to incrementally reduce remaining landfill capacity.

In 2005, in the City, the CIWMB reported that the daily disposal rate represents an average of 9.36 pounds waste generated per person per day (ppd) or about 1.7 tons per year. That estimate is based on a population of 97,100 and a non-residential waste stream percentage of 59 percent and a residential waste stream percentage of 41 percent.[115] In contrast, the CIWMB notes that "[s]ingle-family and multi-family residential waste together account for 31.6 percent of the State's waste stream, while 68.4 percent comes from all other sources. Overall, the per capita disposal rate for the State was approximately 1.11 tons per person per year in 2003. The per-capita disposal rate for residential waste (single-family and multi-family) was approximately 0.35 tons per person per year. The average per unit disposal rate for the multi-family subsector is 0.99 tons per unit per year."[116]

[115]/ California Integrated Waste Management Board, Board Meeting, Agenda Item 16, June 14-15, 2005, p. 16-2 (http://www.ciwmb.ca.gov/agendas/mtgdocs/2005/06/00018528.doc).
[116]/ *Op. Cit*., Contractor's Report to the Board – Statewide Waste Characterization Study, p. 16.



	DWELLING EQUIVALENTS
15	142
16	275
17	102
18	192
19	227
20	32
21	145
22	884
23	44
24	332
25	60
26	169
27	67
28	20
29	183

Figure 4.10-6 (1 of 3)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL SEWER SYSTEM NODE MAP
NEIGHBORHOOD II
Source: Otte-Berkeley Groupe, Inc.

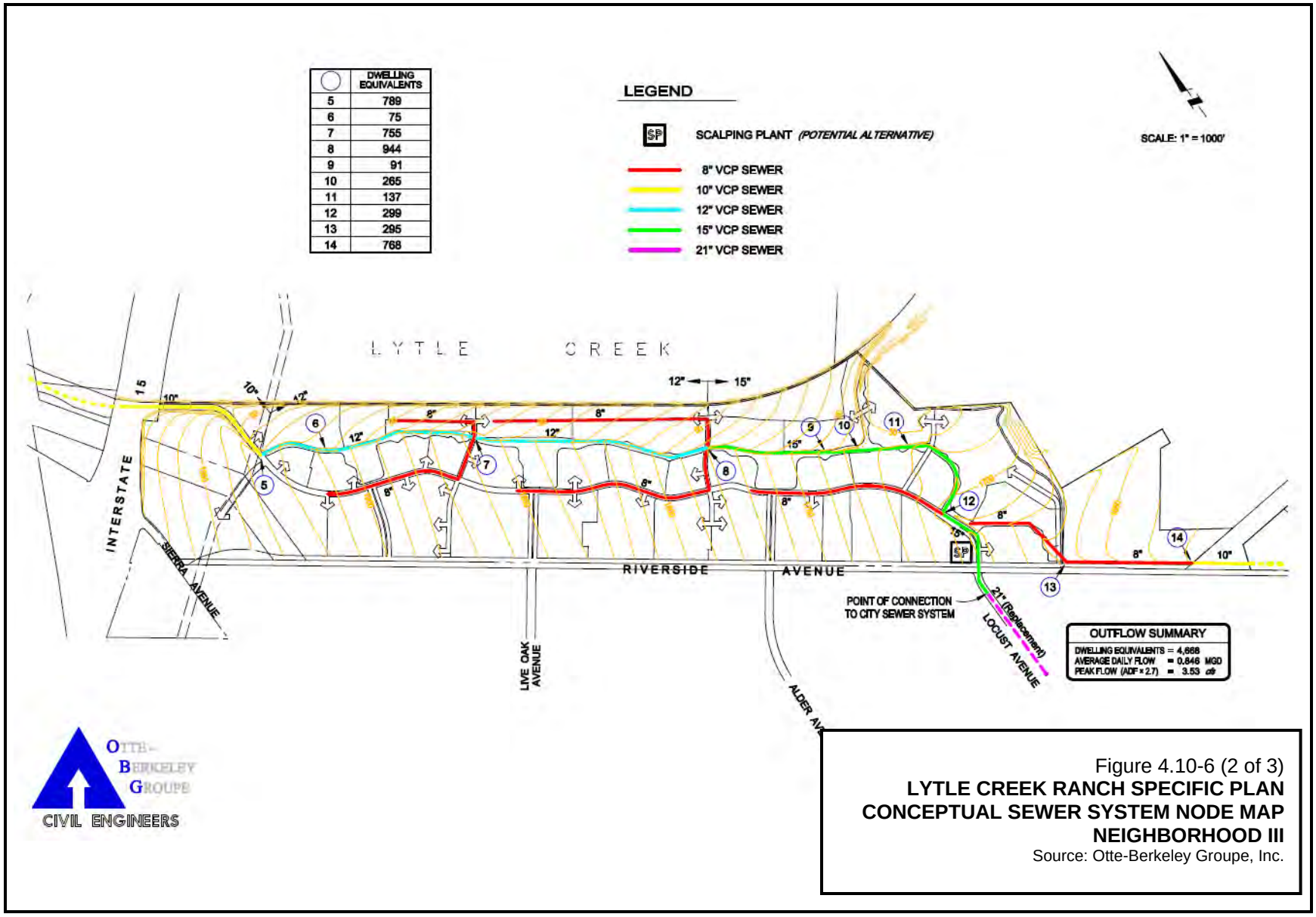


Figure 4.10-6 (2 of 3)
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL SEWER SYSTEM NODE MAP
NEIGHBORHOOD III
Source: Otte-Berkeley Groupe, Inc.

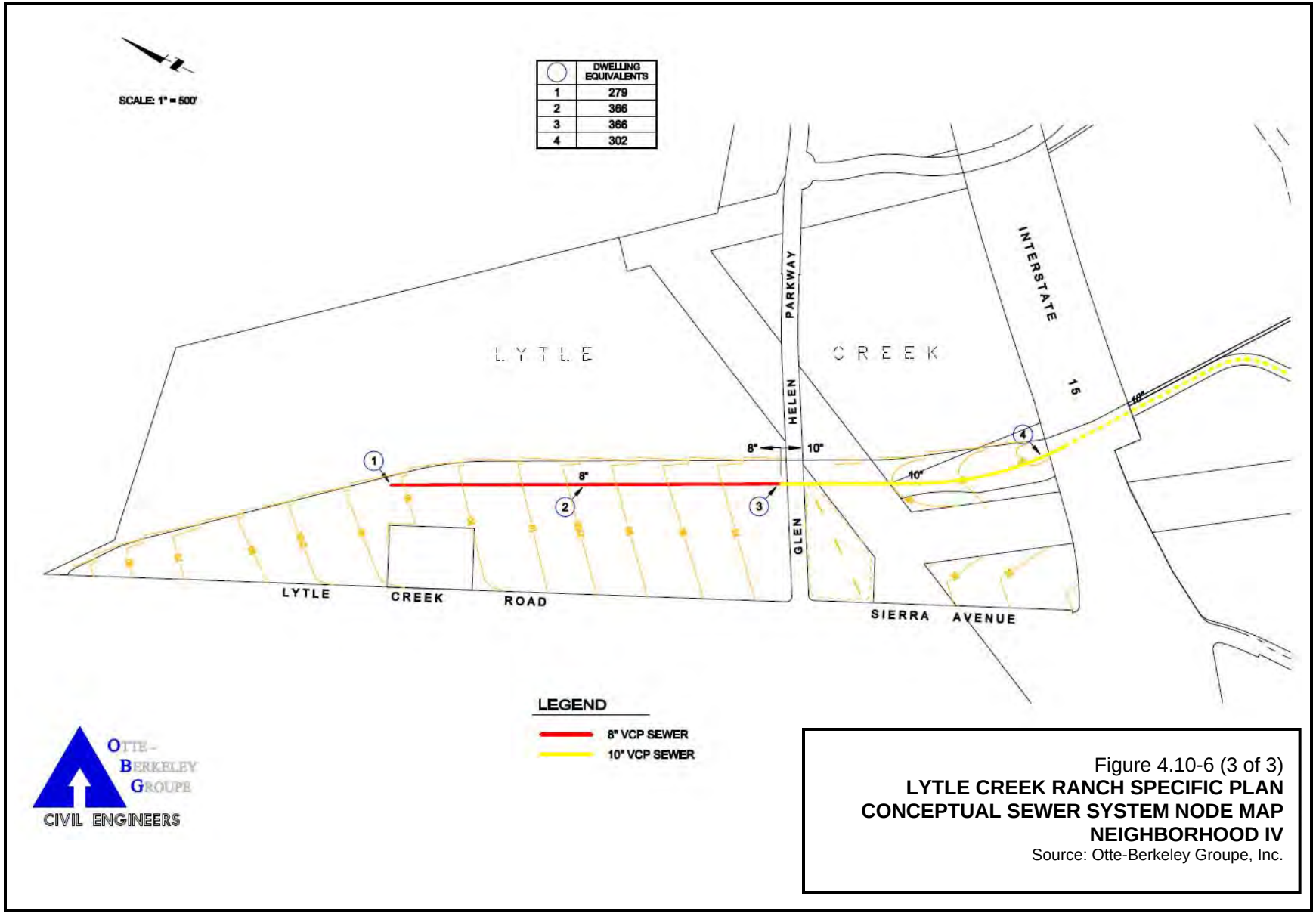


Figure 4.10-6 (3 of 3)
LYTLE CREEK RANCH SPECIFIC PLAN CONCEPTUAL SEWER SYSTEM NODE MAP NEIGHBORHOOD IV
Source: Otte-Berkeley Groupe, Inc.

	Node Number	Pipe Size Downstream	Pipe Slope	Planning Areas	Tributary Dwelling Units	Number of Persons (2.6 per DU)	Average Daily Flow GPD (69.72 GPCD)	Peaking Factor (per County design Criteria)	Cumulative Peak Flow (MGD)	Cumulative Peak Flow (CFS)	Flow Velocity	Depth of Flow	Percent Full
N'hood 4	1	8"	S=0.02000	portion of 20	241	626.6	43,687	4	0.1747	0.27	3.7	2.08"	26%
	2	8"	S=0.02000	portion of 20	314	816.4	56,919	3.2	0.3219	0.50	4.4	2.88"	36%
	3	8"	S=0.02000	portion of 20	314	816.4	56,919	3.2	0.5041	0.78	4.8	3.76"	47%
Neighborhood 3	4	10"	S=0.02000	23, 25, 27	17.0 Ac × 3,214 GPD/Ac		54,638	3	0.6365	0.98	5.2	3.80"	38%
	5	10"	S=0.02000	30	126	327.6	22,840	3	0.7050	1.09	5.4	4.00"	40%
		10"	S=0.02000	31, 33	40.0 Ac × 3,214 GPD/Ac		128,560	2.8	1.0180	1.58	5.8	5.00"	50%
	6	12"	S=0.02000	36, 38, 41	201	522.6	36,436	2.8	1.1200	1.73	5.9	4.80"	40%
	7	12"	S=0.02000	35, 39, 42, 43, 44, 46, 47	640	1,664.0	116,014	2.7	1.3932	2.16	6.3	5.40"	45%
	8	15"	S=0.02000	50, 52, 54, 55, 57-59	843	2,191.8	152,812	2.7	1.8058	2.79	6.8	5.55"	37%
		15"	S=0.02000	48, 49	15.0 Ac × 1,285 GPD/Ac		19,275	2.7	1.8579	2.87	6.7	5.70"	38%
	9	15"	S=0.02000	60, 62, 63, 66	431	1,120.6	78,128	2.7	2.0688	3.20	7.0	6.00"	40%
	10	15"	S=0.02000	70, 71	150	390.0	27,191	2.7	2.1422	3.31	7.0	6.15"	41%
	11	15"	S=0.02000	65, 68, 72, 73	244	634.4	44,230	2.7	2.2617	3.50	7.2	6.30"	42%
		15"	S=0.02000	69, 74	26.0 Ac × 1,285 GPD/Ac		33,410	2.7	2.3519	3.64	7.2	6.45"	43%
				then out Locust Avenue									
Neighborhood 2	12	8"	S=0.02000	76, 77	195	507.0	35,348	4	0.1414	0.22	3.4	1.92"	24%
	13	8"	S=0.02000	78	499	1,297.4	90,455	3.2	0.4026	0.62	4.6	3.28"	41%
	14	8"	S=0.02000	89, 90	8.0 Ac × 3,214 GPD/Ac		25,712	3.2	0.4848	0.75	4.8	3.68"	46%
	15	10"	S=0.02000	92	364	946.4	65,983	3	0.6525	1.01	5.1	3.90"	39%
		10"	S=0.02000	91	3.2 Ac × 3,214 GPD/Ac		10,285	3	0.6833	1.06	5.2	4.00"	40%
	16	10"	S=0.02000	82	336	873.6	60,907	3	0.8661	1.34	5.6	4.50"	45%
	17	12"	S=0.02000	83, 84, 93, 94	1,669	4,339.4	302,543	2.7	1.5963	2.47	6.5	5.88"	49%
				then out Cactus Avenue									
	18	8"	S=0.02000	98	316	821.6	57,282	3.4	0.1948	0.30	3.8	2.24"	28%
	19	8"	S=0.02000	100, 102, 103	246	639.6	44,593	3.2	0.3260	0.50	4.3	2.96"	37%
				then out to Oakdale Avenue									
Neighborhood 1		8"	S=0.02000	3	129	335.4	23,384	4	0.0935	0.14	3.1	1.52"	19%
		8"	S=0.02000	4	12.0 Ac × 3,214 GPD/Ac		38,568	3.4	0.2106	0.33	3.9	2.32"	29%
				then under I-15									
		8"	S=0.02000	8	347	902.2	62,901	3.4	0.2139	0.33	3.9	2.32"	29%
				then to Clearwater Parkway									
		8"	S=0.02000	11, 13, 15	466	1,211.6	84,473	3.4	0.2872	0.44	4.2	2.72"	34%
				then to Clearwater Parkway									

Notes:

1. Average Daily Flow (ADF) calculations are shown pursuant to criteria provided in a Draft of the City of Rialto's Department of Public Works Sewer Policy & Procedures.
2. The ADF for areas of mixed use were determined by multiplying the acreage by 3,214 GPD, the maximum rate provided in the Sewer Policy directive for non-residential uses.
3. Peaking Factors were applied to determine peak flow rates based on The County of San Bernardino Special Districts Department Standards for Sanitary Sewers.

Figure 4.10-7
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL SEWER SYSTEM SEWER MAINS
Source: Otte-Berkeley Groupe, Inc.

Because the residential waste generation rates utilized in this analysis are substantially larger than Statewide average, the quality of solid waste estimated herein and associated with the project's residential component likely over-estimates the actual impacts attributable to the proposed project.

Although population projections for the LCRSP can vary substantially based on average household size factors selected, an on-site population of 32,754 persons (based on an average household size of 3.896 persons per unit and zero percent vacancy rate) has been calculated herein. Based on that population estimate and a generation rate of 2.0 tons/resident/year, the proposed project residential component would generate about 65,508 tons of waste per year.

Each business type has its own disposal rate. For example, restaurants dispose different amounts from offices. In general, the larger the business, the more waste it usually disposes. The number of employees can be used to indicate business size. The CIWMB has utilized the number of employees in its waste disposal characterization database in order to develop waste disposal rates for businesses. The assumption in the CIWMB database is that businesses of a certain type dispose similar wastes at similar rates (per employee), regardless of the location or size of the business. Based on a 1999 waste characterization study, the employee-based generation rates presented in Table 4.10-16 (Generalized Waste Disposal Rates for Business Types) were developed for different Standard Industrial Classifications (SIC).[117]

Because the precise nature of the non-residential land uses to be developed on the project site has not been determined, rather than applying use-specific rates, more generalized employee-based generation rates have been utilized. Because the non-residential waste generation rates utilized in this analysis are substantially larger than Statewide average, the quality of solid waste estimated herein and associated with the project's non-residential component likely over-estimates the actual impacts attributable to the proposed project.

The CIWMB reports that, in 2004, the employee daily disposal rate (pounds/employee/day) was 23.6 pounds (4.3 tons/year).[118] Based on an estimated 3,398 permanent, on-site employment opportunities, the proposed project's non-residential component would generate about 14,635 tons of waste per year. Collectively, at build-out, the project's residential and non-residential components would generate approximately 80,143 tons per year or about 220 tons per day. Assuming an estimated 45 percent diversion rate, a total of about 44,078 tons of waste per year or about 121 tons of waste per day would still require landfill disposal. If it is assumed that project-related wastes will be similar in composition to those currently being generated throughout the City, general estimates of waste type attributable to the proposed project can be presented. Table 4.10-17 (Generalized Estimated Waste Disposal by General Material Category) provides an estimate of the project's annual waste stream prior to any recycling.[119] As indicated, nearly 80 percent of the project's projected total waste stream is comprised of organics, paper, and plastic wastes.

Within certain County unincorporated areas, a number of greenwaste collection (green-cycling) programs are currently being operated, including residential curbside and self-haul programs and commercial on-site collection and self-haul programs. Because no such programs are currently in operation in the City, pending the implementation of comparable residential and

[117]/ California Integrated Waste Management Board (http://www.ciwmb.ca.gov/wastechar/DispRate.htm).
[118]/ California Integrated Waste Management Board (http://www.ciwmb.ca.gov/Profiles/Juris/JurProfile1.asp?RG=C&JURID=401&JUR=Rialto).
[119]/ California Integrated Waste Management Board (http://www.ciwmb.ca.gov/Profiles/Juris/JurProfile1.asp?RG=C&JURID=401&JUR=Rialto).

commercial collection efforts, the quantity of greenwaste likely to be diverted from local landfills may be reduced upon annexation.

Table 4.10-16
GENERALIZED WASTE DISPOSAL RATES FOR BUSINESS TYPES

Business SIC Grouping Number	Business SIC Grouping Name	Disposal Rate (tons/employee/year)	Waste Density (pounds/cubic yard)
1	Agriculture/Fisheries	0.9	107
2	Forestry	0.2	100
3	Mining	1.8	100
4	Construction Companies	3.0	116
5	Manufacturing – Food/Kindred	1.6	74
6	Manufacturing – Apparel/Textile	0.9	103
7	Manufacturing –Lumber and Wood Products	3.1	134
8	Manufacturing –Furniture/Fixtures	2.4	145
9	Manufacturing –Paper/Allied	0.6	100
10	Manufacturing – Printing/Publishing	0.8	88
11	Manufacturing – Chemical/Allied	0.9	135
12	Manufacturing – Primary/Fabricated Metal	0.7	122
13	Manufacturing – Industrial Machinery	0.2	69
14	Manufacturing – Electronic Equipment	0.5	63
15	Manufacturing – Transportation	0.4	76
16	Manufacturing – Instruments/Related	1.2	1212
17	Manufacturing – Other	3.1	122
18	Trucking and Warehousing	1.9	95
19	Transportation – Air	1.0	82
20	Communications	1.5	98
21	Utilities	0.3	73
22	Transportation - Other	1.3	73
23	Wholesale Trade – Durable Goods	0.9	65
24	Wholesale Trade – Nondurable Goods	0.9	87
25	Retail Trade – Building Material and Garden	3.3	121
26	Retail Trade – General Merchandise Stores	0.3	87
27	Retail Trade –Food Store	2.9	84
28	Retail Trade – Automotive Dealers and Service Station	0.6	84
29	Retail Trade – Restaurants	3.1	109
30	Retail Trade – Other	1.9	72
31	Finance/Insurance/Real Estate/Legal	0.3	88
32	Services – Hotels/Lodging	2.1	97
33	Service – Business Services	1.7	87
34	Services – Motion Pictures	1.1	169
35	Services – Metal/Health	1.5	75
36	Services – Education	0.8	73
37	Services – Other Professional	1.2	104
38	Services – Other Misc.	0.9	90
39	Public Administration	0.4	89

Source: California Integrated Waste Management Board

Table 4.10-17
ESTIMATED WASTE DISPOSAL BY GENERAL MATERIAL CATEGORY

Material	Residential		Non-Residential		Total	
	Percent	Tons	Percent	Tons	Percent	Tons
Other Organics	45.0	29,478.6	32.9	4,814.9	42.8	34,293.5
Paper	27.5	18,014.7	30.9	4,522.2	28.1	22,536.9
Plastic	8.8	5,764.7	9.1	1,331.8	8.9	7,096.5
Metal	4.6	3,013.4	6.3	922.0	4.9	3,935.4
Construction and Demolition	4.5	2,947.9	12.3	1,800.1	5.9	4,748.8
Glass	4.0	2,620.3	3.0	439.1	3.8	3,059.4
Mixed Residue	4.0	2,620.3	0.5	73.2	3.4	2,693.5
Household Hazardous Waste	0.3	196.5	0.2	29.3	0.2	225.8
Special Waste	0.0	0.0	0.1	14.6	0.1	14.6
Not Categorized	1.3	851.6	4.7	687.8	1.9	1,539.4
Total	100.0	65,508	100.0	14,635	100.0	80,143

Source: Environmental Impact Sciences

Although composting facilities are not explicitly identified, as indicated in the proposed LCRSP, “recycling centers as a principal use, collection and sorting only” is identified as a “conditionally permitted” land use within the “Generally Warehousing Overlay,” subject to compliance with Section 18.108 (Regulation of Recycling Facilities) of the City Municipal Code.

Although not major generators of hazardous wastes, residential units generate small quantities of household hazardous wastes (HHW), including used motor oil, car and household batteries, paints and stains, aerosol cans, bleaches and related cleaning products, herbicides, antifreeze, and pesticides. HHW are considered hazardous because they fall into one of the following four categories: (1) toxic (poisonous or lethal when ingested, touched, or inhaled); (2) flammable (ignites easily); (3) corrosive (eats away materials and living tissue by chemical action); and/or (4) reactive (creates an explosion or produces potentially deadly vapors).

The SBCFD operates a HHW program, including period HHW round-up events. The City, in cooperation with the SBCFD, operates a HHW collection site (City Maintenance Yard, 246 S. Willow Avenue, Rialto). HHW accepted at the collection facility include, but are not limited to, motor oil, oil filters, brake fluid, paints, paint thinners, turpentine, cleaners with acid or lye, pesticides and herbicides, household and car batteries, pool chemicals, batteries, unwanted or expired pharmaceuticals, fluorescent tubes, mercury thermometers, thermostats, and fertilizers. Unaccepted items include, but are not limited to, furniture, electronics, medical wastes, non-sharp wastes, business wastes, explosive and radioactive wastes, and asbestos.

4.10.5.3 Cumulative Impacts

Environmental Impact 10-7*. Implementation of the proposed project and other related projects would impose cumulative impacts on water services and supplies, wastewater collection and treatment facilities, and solid waste collection and disposal within the general project area.*

Preliminary Determination 10-7*. Less-than-significant impact.*

With regards to water supplies, the demands projected in the WVWD-UWMP, along with the demand required for the proposed project, have been identified in the West Valley Water District's project-specific WSA. For the purpose of this environmental compliance and in satisfaction of its requirements under SB 610 and SB 221, the District has demonstrated its plans to implement the additional supply projects which may be needed for the proposed project. The District has verified that it has the water supplies available during normal, single-dry, and multiple-dry years, within a 20-year projection, that will meet the projected demand associated with the proposed project, in addition to existing and planned future uses including, but not limited to, agricultural and industrial uses.

With regards to wastewater facilities, at the project-specific level, local agencies require project proponents to assess the impacts of proposed projects on existing sewer facilities on an as-needed basis. Those analyses are conducted to identify any site-specific or project-specific improvements that may be required to the local and/or County sewer system that may be needed to handle increased sewage flows attributable to each project. As required, all related projects must construct any requisite local wastewater improvements needed to handle their respective flows. Based on those related project-specific obligations, cumulative impacts on areawide and localized wastewater collection and disposal facilities are not projected to manifest at a significant level.

With regards to solid waste, related projects, in combination with continued regional growth, will incrementally contribute to the quantities of materials requiring landfill disposal. Each related project will incrementally contribute to the overall quantity of MSW and other wastes generated within the County. Continued regional growth will place increased demand on available solid waste transfer and disposal facilities. Regional response to solid waste collection and disposal must include the permitting of additional landfills, the implementation of additional regulatory requirements mandating further waste reduction and diversion, and increased use of recycled materials. None of these actions can, however, be feasible implemented at the project-level.

New solid waste disposal and processing facilities and alternative disposal strategies, including out-of-County disposal, are being independently formulated and will ensure that cumulative solid waste impacts will remain at a less-than-significant level.

4.10.6 Recommended Mitigation Measures

- **Mitigation Measure 10-1**. Water Supply. Prior to the issuance of any grading permits, the Rialto Fire Department shall review and, when deemed acceptable, approve final water improvement plans including, but not limited to, the location, sizing, design, and capacity of any proposed water storage tanks, water mains, and fire hydrants to ensure the sufficiency of fire storage and delivery capacity and compliance with applicable City requirements.

- **Mitigation Measure 10-2**. Water Supply. Prior to the issuance of grading permits, fire hydrants shall be installed in compliance with applicable code requirements (e.g., Section 10.301 of the Uniform Fire Code) or, if fire flow requirements cannot be fully satisfied from existing on-site fire hydrants and mains, alternative fire flow delivery measures acceptable to the Chief Officer of the Fire Department (Fire Chief) serving the jurisdiction shall be formulated and make conditions of grading permit approval. Prior to permit issuance, a letter of compliance or similar documentation shall be submitted to the City Engineer by the Fire Chief or designee.

- **Mitigation Measure 10-3**. Water Supply. Prior to the issuance of any building permits, the Applicant shall deliver to the City a will-serve letter or similar documentation from the project's water purveyor, as may be acceptable to the City Engineer, documenting the availability and sufficiency of water supplies to serve the proposed development.

- **Mitigation Measure 10-4**. Wastewater. Prior to the issuance of building permits for any use that generates additional sewer flows, the City Engineer shall verify that adequate sewer capacity is in place to accommodate that development. This measure neither obligates the City to fund nor stipulates a performance schedule whereby any publicly funded improvements to the City's sewer collection and treatment system shall be implemented.

4.10.7 Significant Unavoidable Adverse Effects

As mitigated, the approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative utilities and service systems impacts.

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4.11 HAZARDS AND HAZARDOUS MATERIALS

A broad array of potential hazards is addressed throughout this EIR. For example, possible geologic hazards are examined in Section 4.3 (Geology and Soils) and possible flood hazards are discussed in Section 4.4 (Hydrology and Water Quality). Fire and wildfire-related hazard are addressed in Section 4.9 (Public Services and Recreation). Since the project site is not located within an airport land-use planning area, is not located within the vicinity of a private airstrip, and is not included as a staging area in any emergency response plan or emergency evacuation plan, the following discussion focuses on hazardous materials and other identified hazards not otherwise addressed elsewhere in this document.

4.11.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- C.H.J., Incorporated, Summary Report: Site Reconnaissance and Database Review Related to Hazardous Materials – Proposed Lytle Creek Ranch Project, 2,450± Acres, Lytle Creek Area, San Bernardino County, California, Prepared for Lytle Development Company, April 11, 2008 (see Appendix III-L).
- C.H.J., Incorporated, Preliminary Environmental Site Assessment, 307± Acres East and West of Interstate 15, Sycamore Flat Area, San Bernardino County, California, Prepared for Lytle Development Company, March 31, 2006.
- C.H.J., Preliminary Environmental Site Assessment, Proposed Rialto Project, 1,495± Acres Lytle Creek Area, San Bernardino County, California, Prepared for Lytle Development Company, January 12, 2005.
- C.H.J., Preliminary Environmental Site Assessment, Approximately 647 Acres South of Interstate 15 between Sycamore Flat and Lytle Creek, Devore Area, San Bernardino County, California, Prepared for Lytle Development Company, January 12, 2005.

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.11.2 Regulatory and Policy Setting

4.11.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Federal Water Pollution Control Act**. The Federal Water Pollution Control Act (33 U.S.C. 1251 *et seq*.), more commonly known as the Clean Water Act, provides for the restoration and maintenance of the chemical, physical, and biological integrity of the waters of the United States.

- **Resource Conservation and Recovery Act**. The federal law that governs hazardous waste management is the Resource Conservation and Recovery Act (42 U.S.C. 6901 *et*

seq.) (RCRA). RCRA is the major federal statute addressing the management of the nation's wastes, including hazardous, municipal, industrial, and other types of solid waste. RCRA gave the USEPA the authority to control hazardous waste from the "cradle-to-grave," including the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous wastes. RCRA focuses only on active and future facilities and does not address abandoned or historical sites.

RCRA defines "solid waste" as "any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, or from community activities, but does not include solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under Section 402 of the Federal Waster Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or bvproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923)." Under RCRA, a "hazardous waste" is defined as "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed" (Section 1004[5], RCRA). A "solid waste" is a "hazardous waste" if it is not excluded by regulation (40 CFR 261.4) and if it is listed (40 CFR 261.30) as a hazardous waste, is a waste mixture containing one or more listed hazardous wastes, or exhibits one or more characteristics of hazardous waste (i.e., ignitability, corrosivity, reactivity, or toxicity) (40 CFR 261.21 to 261.24).

Under RCRA, a waste is hazardous if it is a "listed" waste or exhibits a hazardous "characteristic." Wastes are listed by the USEPA if they contain significant amounts of toxic constituents identified in Appendix VIII and the USEPA has determined that these toxic constituents are persistent and mobile to some degree, such that they pose a potential and substantial threat to human health and the environment. Until the USEPA lists the wastes in Subpart D of Part 261, they would not be considered hazardous, even if the waste contains one or more of the hazardous constituents listed on Appendix VIII, unless the waste would exhibit one or more of the hazardous waste characteristics.

Listed wastes meet the definition of hazardous waste regardless of the concentration level of hazardous constituents in them. In contrast to listed waste, a characteristic waste remains hazardous only as long as it exhibits a hazardous characteristic. Generators must manage hazardous wastes in accordance with RCRA generator requirements (40 CFR 262). Generators must further comply with regulations concerning record keeping and reporting, the labeling of wastes, the use of appropriate containers, the provision of information on the waste's general chemical composition to transporters, treaters, and disposers, and the use of a manifest system.

RCRA contains ten subtitles. Subtitle C (Hazardous Waste Management), Subtitle D (State and Regional Solid Waste Plans), and Subtitle I (Regulation of Underground Storage Tanks), and Subtitle J (Demonstration Medical Waste Tracking Program)

constitute the regulatory portion of the law. The other subtitles provide the legal and administrative structure for achieving the objectives of the law.

With the exception of RCRA groundwater monitoring and cleanups of releases from some RCRA units that have been delegated to the RWQCBs, in California, the California Department of Toxic Substances Control (DTSC) oversees most of the RCRA program.

- **Comprehensive Environmental Response, Compensation and Liability Act**. In 1980, the United States Congress enacted the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 9601 *et seq*.) (CERCLA), commonly known as Superfund, to regulate "hazardous substances," as codified in 40 CFR 302.4. CERCLA requires persons or businesses that spill or release hazardous substances to immediately notify the federal government that they have released hazardous substances into the environment. CERCLA uses the term "release" because that term can be more broadly interpreted that "spill."

  CERCLA establishes a comprehensive procedure for cleaning up sites where hazardous substances have been released. In addition, under CERCLA, the USEPA compiles a list of the sites of hazardous substance releases presenting the greatest threat to human health or the environment (i.e., National Priorities List [NPL]). Through the act, the USEPA was given power to seek out those parties responsible for any release and assure their cooperation in the cleanup. The law authorizes two kinds of response actions: (1) short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and (2) long-term remedial response actions, that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. These actions can be conducted only at sites listed on the USEPA's NPL.

  On September 23, 2009, the USEPA added an approximately 160-acre site in the City of Rialto, formally operated by West Coast Loading Corporation, Goodrich Corporation, and a number of pyrotechnics manufacturers, to its Superfund National Priorities List, designating the area the B.F. Goodrich Superfund Site (CAN000905945). The B.F. Goodrich Superfund Site includes that area where VOCs and perchlorate have contaminated soil and groundwater and additional downgradient areas of groundwater contamination.[1]

- **Superfund Amendments and Reauthorization Act of 1986**. The Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 9601 *et seq*., 11000 *et seq*.) (SARA) reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and technical requirements were added to the legislation, including additional enforcement authorities. Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA), separately discussed below. SARA also required the USEPA to revise the Hazard Ranking System (HRS) to ensure that it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled hazardous waste sites that may be placed on the NPL. The HRS (a numerically based screening system that uses information from initial, limited investigations to assess the relative potential of sites to

[1]/ The 160-acre area is located in the southwest quadrant of Section 21, Township 1 North, Range 5 West of the USGS 7.5-Minute Devore Quadrangle. The site is bounded by West Casa Grande Drive on the north, Locust Avenue on the east, Alder Avenue on the west, and an extension of Summit Avenue on the south.

pose a threat to human health or the environment) is the principal mechanism the USEPA uses to place uncontrolled waste sites on the NPL. The NPL identifies sites that warrant further investigation to determine if they pose risks to public health or the environment. Sites on the NPL are eligible for long-term "remedial action" financed under CERCLA, as amended by SARA.

- **Emergency Planning and Community Right-to-Know Act**. The federal Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. 11001 *et seq*.) (EPCRA), also known as SARA Title III, established a program to: (1) encourage state and local planning for responding to releases of hazardous chemicals; and (2) provide the public, local governments, fire departments, and other emergency officials with information concerning chemical releases and the potential chemical risks in their communities. Facilities that store, use, or release certain chemicals may be subject to various reporting requirements. EPCRA requirements include: (1) emergency response notification; (2) emergency release notification: (3) hazardous chemical inventory reporting; and (4) toxics release inventory reporting.

  Section 311 of EPCRA requires facilities that have hazardous chemicals above specified thresholds to provide either material safety data sheets (MSDSs) for those chemicals or a list of those chemicals to their State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and local fire departments. Under Section 312, those facilities must also report annually to the SERC, LEPC, and local fire department on the quantities and locations of hazardous chemicals they have on site above specified thresholds. Facilities must report under Section 312 either Tier I or Tier II inventory information. Tier I inventory information is the minimum information that facilities must report to comply with Section 312 and includes information on the general types and locations of hazardous chemicals at the facility. Tier II inventory information is more specific information concerning the amounts and locations of hazardous chemicals at the facility. A facility can choose to report Tier II inventory information and must report it if requested by the SERC, LEPC, local fire department, or if required under state and local laws.[2]

  Any release of one or more of the roughly 800 CERCLA or 360 EPCRA hazardous substances that equals or exceeds a reportable quantity (RQ) must be reported to the USEPA's National Response Center (NRC).

[2]/ Unlike the MSDS, under SARA Title III, a Tier I chemical inventory form must be filed annually and must include information for the preceding calendar year. The Tier I form does not identify specific hazardous chemicals that were stored, produced, or used by a business but provides only a general picture of the potential dangers that may be caused by hazardous chemicals that were used, produced, or stored by a business in the preceding year. The following categories of health hazard or physical hazard are reported on the Tier I chemical inventory form: (1) fire hazard (chemicals that can cause fires); (2) sudden release hazard (explosive chemicals); (3) reactivity hazards (chemicals that react dangerously with other chemicals); (4) acute health hazards (chemicals that may cause short-term health damage); and (5) chronic health hazards (chemicals that may cause long-term health damage). Tier II chemical inventory forms provide more detailed, chemical-specific information about the hazardous chemicals that are used, produced, or stored by a business. The II form contains the following information about the hazardous chemical that a business stored, produced, or used in the previous year: (1) chemical name; (2) estimate of the average daily volume and maximum amount of the chemical present at the business during the preceding calendar year; and (3) brief description of the location in the business where the chemical was used, produced, or stored and a description of the manner in which the chemical was stored.

- **Occupational Safety and Health Act**. The United States Congress passed the Occupational and Safety Health Act[3] (29 U.S.C. 651 *et seq*.) to ensure worker and workplace safety. The act's intent is to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. In order to establish standards for workplace health and safety, the act also created the National Institute for Occupational Safety and Health (NIOSH) as the research institute for OSHA. OSHA is a division of the United States Department of Labor and oversees the administration of the act and enforces standards.

  The act assigns to OSHA two principal functions: setting standards and conducting workplace inspections to ensure that employers are complying with the standards and providing a safe and healthful workplace. OSHA standards may require that employers adopt certain practices, means, methods, or processes reasonably necessary to protect workers on the job. It is the responsibility of employers to become familiar with standards applicable to their establishments, to eliminate hazardous conditions to the extent possible, and to comply with the standards. Compliance may include ensuring that employees have and use personal protective equipment (PPE) when required for safety or health. Employees must comply with all rules and regulations that are applicable to their own actions and conduct. Even in areas where OSHA has not promulgated a standard addressing a specific hazard, employers are responsible for complying with the act's "general duty" clause. The general duty clause states that each employer shall furnish "a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees" (Section 5[a][1]).

- **Code of Federal Regulations**. As specified in the Code of Federal Regulations (CFR), "each operator of a buried pipeline must carry out, in accordance with this section, a written program to prevent damage to that pipeline from excavation activities. For the purpose of this section, the term "excavation activities" includes excavation, blasting, boring, tunneling, backfilling, the removal of aboveground structures by either explosive or mechanical means, and other earthmoving operations" (49 CFR 195.442[a]).

  The United States Department of Transportation (USDOT) regulates the surface and air carriage of hazardous materials within the United States via any means of transportation. The UDDOT regulations for the transport of hazardous materials are codified in 49 CFR Part 100-185 (Hazardous Materials Regulations and Procedures),[4] Part 397 (Transportation of Hazardous Materials; Driving and Parking Rules), and Part 397.61-397.77 (Routing of Non-Radioactive Hazardous Materials). Presented in 49 CFR 172.101 is a list (Hazardous Materials Table[5]) of those materials that the USDOT has designated as hazardous materials for purposes of transportation and prescribes the

[3]/ Implementing regulations include 29 CFR 1910 (General Industry) and 29 CFR 1926 (Construction).

[4]/ In March 2003, the USDOT's Research and Special Programs Administration (RSPA) published a final rule in the Federal Register (68 FR 14510) enhancing the security of hazardous materials in transportation and amending the Hazardous Materials Regulations (HMR) codified in 49 CFR Parts 171-180. As amended, shippers and carriers subject to the registration requirements in 49 CFR Part 107 or who offer or transport select agents and toxins regulated by the Centers for Disease Control and Prevention (CDC) must develop and implement security plans. Additionally, hazmat employers must provide security training to their hazmat employees.

[5]/ The Hazardous Materials Table lists materials considered hazardous. The rules, codified in Title 49 Code of Federal Regulations, sometimes requires the display of diamond-shaped, square-on-point, warning signs (placards) on vehicles transporting certain types or quantities of hazardous materials.

requirements for shipping papers, package marking, labeling, and transport vehicle placarding applicable to the shipment and transportation of those materials. The regulations apply to each person who offers a hazardous material (hazmat) for transport and each carrier by air, highway, rail, or water which transports a hazardous material.

Federal Pipeline Safety Regulations are codified in Title 49 Parts 190, 191, 192, 193, 194, and 198. Specific federal pipeline safety provisions are briefly described below.

◊ **Pipeline Safety Improvement Act of 2002**. The Pipeline Safety Improvement Act of 2002 (H.R. 3609), as signed into law on December 17, 2002, mandated specified changes and new requirements in the way that the natural gas industry ensures the safety and integrity of its pipelines. The law places requirements on each pipeline operator to prepare and implement an "integrity management program"[6] (IMP) that, among other things, requires operators to identify "high consequence areas"[7] (HCA) on their systems, conduct risk analysis of these areas, perform baseline integrity assessments of each pipeline segment, and inspect the entire pipeline system according to a prescribed schedule and using prescribed methods. HCAs are areas within a specified distance from a pipeline meeting USDOT-defined human occupancy criteria.

[6]/ As indicated in 49 CFR 192.907: "(a) General. No later than December 17, 2004, an operator of a covered pipeline segment must develop and follow a written integrity management program that contains all the elements described in §192.911 and that addresses the risks of each covered transmission pipeline segments. The initial integrity management program must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by whom, a timeline for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator will make continuous improvements to the program. (b) Implementation Standards. In carrying out this subpart, an operator must follow the requirements of this subpart and of ASME/ANSI B31.8S (ibr, see §192.7) and its appendices, where specified. An operator may follow an equivalent standard or practice only when the operator demonstrates the alternative standard or practice provides an equivalent level of safety to the public and property. In the event of conflict between this subpart and ASME/ANSI B31.8S, the requirements of this subpart control."

[7]/ As defined in 49 CFR 192.903: "High consequence area means an area established by one of the following methods described in paragraphs (1) or (2) as follows: (1) An areas defined as (i) A Class 3 location under §192.5; or (ii) A Class 4 location under §192.5; or (iii) Any area in a Class 1 or Class 2 location where the potential impact radius is greater than 660 feet (200 meters), and the area within a potential impact circle contains 20 or more buildings intended for human occupancy; or (iv) Any area in a Class 1 or Class 2 location where the potential impact circle containing (i) 20 or more buildings intended for human occupancy, unless the exception in paragraph (4) applies; or (ii) An identified site. Identified site means each of the following areas: (a) An outside area or open structure that is occupied by twenty (20) or more persons on at least 50 days in any twelve (12)-month period. (The days need not be consecutive.) Examples include but are not limited to, beaches, playgrounds, recreational facilities, camping grounds, outdoor theaters, stadiums, recreational areas near a body of water, or areas outside a rural building such as a religious facility; or (b) A building that is occupied by twenty (20) or more persons on at least five (5) days a week for ten (10) weeks in any twelve (12)-month period. (The days and weeks need not be consecutive.) Examples include, but are not limited to, religious facilities, office buildings, community centers, general stores, 4-H facilities, or roller skating rinks; or (c) A facility occupied by persons who are confined, are of impaired mobility, or would be difficult to evacuate. Examples include but are not limited to hospitals, prisons, schools, day-care facilities, retirement facilities or assisted-living facilities. Potential impact circle is a circle of radius equal to the potential impact radius (PIR). Potential impact radius (PIR) means the radius of a circle within which the potential failure of a pipeline could have significant impact on people or property. PIR is determined by the formula r=0.69* (square root of p*d2)), where 'r' is the radius of a circular area in feet surrounding the point of failure, 'p' is the maximum allowable operating pressure (MAOP) in the pipeline segment in pounds per square inch and 'd' is the nominal diameter of the pipeline in inches. Note: 0.69 is the factor for natural gas. This number will vary for other gases depending upon their heat of combustion. An operator transporting gas other than natural gas must use section 3.2 of ASME/ANSI B31.8S-2001 (Supplement to ASME B31.8; ibr, see §192.7) to calculate the impact radius formula."

Because the environmental consequences of a gas pipeline accident tend to be localized, the USDOT Office of Pipeline Safety's (OPS) approach to defining areas of potentially high consequences has focused on populated areas, particularly, areas of high population and areas where groups of people reside who may have difficulty evacuating an area. Presently, gas pipeline regulations are structured to provide increasing levels of protection, consistent with predetermined thresholds, where resident population is greater. Accordingly, operators of gas pipelines are required to monitor the number of dwellings within 660 feet of the pipeline and either to lower operating pressure or to replace the pipe with one having greater wall thickness or strength as the number of dwellings increases above predefined thresholds.

Minimum standards for pipeline safety are more stringent where there is a potential for grater impacts on human health and safety. Pipeline area classes (as defined in 49 CFR 192.5) are based on an estimate of population density in the vicinity of the pipeline Class locations are on-shore areas that extend 660 feet (200 meters) on either side of the centerline of any continuous one-mile length pipeline.[8]

Class locations for more populated areas require higher safety factors in pipeline design, testing, and operation. Pipeline area class locations are used to specify the maximum spacing allowed between sectionalizing block valves, which are used to isolate portions of the line to allow maintenance and are essential to limiting the amount of gas that can be released in the event of a leak or rupture along the pipeline. Federal regulations (49 CFR 192.179) require every point on a natural gas transmission pipeline to be within a minimum of 10 miles (16 kilometers) of a sectionalizing block location in Class 1 locations, within 7.5 miles (12 kilometers) in Class 2 locations, within four miles (6.4 kilometers) in Class 3 locations, and within 2.5 miles (4 kilometers) in Class 4 locations. Pipe wall thickness and pipeline design pressures, hydrostatic test pressures, maximum allowable operating pressure, inspection and testing of welds, and frequency of pipeline patrols and leak surveys must all conform to higher standards in more populated areas.

As defined in 49 CRF Part 192, Subpart O, a "high consequence area" means any of the following: "(a) An area defined as a Class 3 location under §192.5; (b) An area defined as a Class 4 location under §192.5; (c) For a pipeline not more than 12 inches in nominal diameter and operating at a maximum allowable operating pressure of not more than 1200 p.s.i.g., [pounds per square inch gage] an area which extends 300 feet from the centerline of the pipeline to the identified site; (d) For a pipeline greater than 30 inches in nominal diameter and operating at a maximum allowable operating pressure greater than 1000 p.s.i.g., an area which extends 1000 feet from the centerline of the pipeline to the

[8]/ Pipeline location class definitions: (1) Class 1 – An offshore area or any class location unit with 10 or fewer buildings intended for human occupancy; (2) Class 2 – Any class location unit with more than 10 but fewer than 46 buildings intended for human occupancy; (3) Class 3 – Any class location unit with 46 or more buildings intended for human occupancy or an area where the pipeline lies within 300 feet (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period (the days need not be consecutive); and (4) Class 4 – any class location unit where buildings with four or more stories above ground are prevalent.

identified site; and (e) For a pipeline not described in paragraph (c) or (d) of this section, an area which extends 660 feet from the centerline of the pipeline to the identified site" (49 CFR 192.761).

Companies were required to identify all HCAs by December 17, 2004, and submit specific IMPs to the OPS,[9] the Research and Special Projects Administration and the USDOT. All pipeline segments within HCAs must be inspected and remediation plans (if required) completed by December 17, 2008. Non-HCA segments must be inspected by 2012. With certain exceptions, all segments must be re-inspected on a 7-year cycle.

◊ **Pipeline Inspection Protection, Enforcement and Safety Act**. On December 29, 2006, the Pipeline Inspection Protection, Enforcement and Safety Act (PIPES Act) was signed into law. The PIPES Act: (1) improves state programs to reduce excavation damage to pipelines and strengthens federal enforcement of damage prevention laws; (2) requires that Distribution Integrity Standards be in place by the end of 2007; (3) requires excess flow valves to be installed on all new residential natural gas service lines, where feasible, beginning June 1, 2008; (4) adopts new regulations requiring operators of gas pipeline systems to evaluate and reduce the risks associated with human factors such as fatigue; (5) creates an emergency waiver process; and (6) implements a pipeline corrosion research program.

The USDOT's OPS periodically issues advisory notices to pipeline operators. For example, on May 23, 2005, OPS issued "Advisory Bulletin ADB-05-03: Preplanning with Owners of Electric and Other Utilities for Coordinated Response to Pipeline Emergencies" (70 FR 29557). That bulletin was issued to remind operators of natural gas and hazardous liquid pipelines located near electric and other utilities of the need to preplan emergency response to ensure better coordination of response and reduce damages when a pipeline emergency occurs. The notice emphasized that in planning emergency response, an operator should carefully look at the environment surrounding the pipeline facility and the risks that the environment will pose in the event of a pipeline emergency. Electric and other utilities may pose sources of ignition or may provide additional fuels for fires. The operators of these utilities may make response to a pipeline emergency by firefighters or the pipeline operator more difficult. Preplanning will help the operator identify issues that may arise in responding to pipeline emergencies and plan effective response before there is an emergency.

4.11.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Underground Service Alert "One Call" Law**. In recognition of the potential hazards to underground pipelines associated with grading and associated earthmoving activities, the State has imposed certain requirements regarding excavation activities in proximity to underground infrastructure.[10] As required under Section 4216.2(a) of the CGC:

[9]/ The Office of Pipeline Safety implements the law by revising the Code of Federal Regulations (49 CFR Part 192).

[10]/ Chapter 3.1 (Protection of Underground Infrastructure), Article 3, Sections 4215-4216.9, CGC.

"Except in an emergency, every person planning to conduct any excavation shall contact the appropriate regional notification center, at least two working days, but not more than 14 calendar days, prior to commencing that excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated." As further indicated in Section 4216.9(a) of the CGC: "No permit to excavate issued by any local agency, as defined in Section 4216, or any State agency, shall be valid unless the applicant has been provided an initial inquiry identification number by a regional notification center pursuant to Section 4216.2."[11]

- **Health and Safety Code**. The H&SC contains numerous provisions that relate to hazards and hazardous materials. A number of potentially applicable provisions are summarized below.

  - ◊ **Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)**. California's Proposition 65 (The Safe Drinking Water and Toxic Enforcement Act of 1986) was a voter initiative passed to address concerns about exposure to substances that cause cancer or reproductive toxicity. Proposition 65 requires the Governor to publish and annually update a list of chemicals that are known to the State to cause cancer, birth defects, or other reproductive harm. The list includes about 750 chemicals, many of which are additives or ingredients in pesticides, common household products, food, drugs, des, solvents, building materials, and other sources found inside. Businesses are required to provide a "clear and reasonable" warning when their products or actions may result in a release of chemicals above a specified threshold level so that members of the public are aware they may be exposed to harmful chemicals.

    As required, "no person in the course of doing business shall knowingly discharge or release a chemical known to the State to cause cancer or reproductive toxicity into water or onto or into land where such chemical passes or probably will pass into any source of drinking water, notwithstanding any other provision or authorization of law except as provided in Section 25249.5" (Section 25249.5, H&SC). The law stipulates that "no person in the course of doing business shall knowingly and intentionally expose any individual to a chemical known to the State to cause cancer or reproductive toxicity without first giving clear and reasonable warning to such individual" (Section 25246.6, H&SC).

    Companies subject to the act include those with 10 or more employees that discharge listed chemicals into sources of drinking water or expose individuals to such chemicals. Exposures can occur through the manufacture, distribution, or sale of consumer or commercial products; industrial or commercial operations that discharge chemicals into the environment; and/or occupational exposures to listed chemicals.

[11]/ As defined in Section 4216(h) of the CGC, a "regional notification center" is defined to mean "a nonprofit association or other organization of operators of subsurface installations which provides advance warning of excavations or other work close to existing subsurface installations, for the purpose of protecting those installations from damage, removal, relocation, or repair."

Businesses exempt from Proposition 65 requirements include those with fewer than 10 employees, those that can prove that the exposure falls below the level for which a warning is required or cause exposures where federal law preempts state warning requirements, and State and local governmental entities. For carcinogens, the exposure threshold is defined as exposures that will not cause more than 1 excess lifetime case of cancer per 100,000 individuals exposed. For reproductive toxins, the exposure threshold is defined as exposures that are less than 1/1000 of the level at which there is no observable effect.

◊ **Unified Hazardous Waste and Hazardous Materials Management Regulatory Program**. In 1993, SB 1082 added Chapter 6.11 to Division 11 of the H&SC, requiring the CalEPA to develop and implement a "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program).[12] The Unified Program consolidated, coordinated, and made consistent six existing programs[13] regulating hazardous waste and hazardous material management. The program is implemented at the local level by Certified Unified Program Agencies (CUPAs). In the County, the San Bernardino County Fire Department's Hazardous Materials Division is designated by the CalEPA as the CUPA for the County. As the CUPA, SBCFD manages six hazardous material and hazardous waste programs. In the County, those facilities that handle hazardous materials or generate hazardous wastes require a CUPA permit that includes each applicable CUPA program element.

The purpose of the CUPA program is to provide information regarding hazardous materials at facilities to emergency responders and to the general public and to coordinate reporting of releases and spill response among businesses and local, State, and federal government authorities. Facilities are required to disclose all hazardous materials and wastes above certain designated quantities which are used, stored, or handled at their facility. The plans must be updated by March 1st of each year or within 30 days of a substantial change.

As required under Chapter 6.95, Division 20, Article 1 of the H&SC (Hazardous Materials Release Response Plans and Inventory Law of 1985), businesses are required to develop a "release response plan" for hazardous material emergencies if they handle more than 500 pounds, 55 gallons, or 200 cubic yards of hazardous materials. In addition, the business must prepare a "hazardous material inventory" of all hazardous materials stored or handled at the facility over those thresholds and all hazardous materials must be stored in a safe manner. An exemption exists for facilities (retail stores) handling hazardous materials contained solely in a consumer product and pre-packaged for direct distribution to and for use by the general public. Before a new certificate of occupancy is issued to a business that must comply with this law, the local agency must find that the business is in compliance with the law or the certificate

[12]/ The CalEPA adopted implementing regulations in January 1996 (Title 27, Division 1, Subdivision 4, Chapter 1, CCR).

[13]/ The six program elements of the Unified Program are: (1) hazardous waste generators and hazardous waste on-site treatment; (2) underground storage tanks; (3) above ground tanks (Spill Prevention Countermeasure Control Plan); (4) Hazardous Material Release Response Plans and Inventories; (5) Risk Management and Prevention Programs; and (6) Uniform Fire Code Hazardous Materials Management Plans and Inventories.

is to be denied. Both the "release response plan" and "hazardous materials inventory" must be supplied to the CUPA.

◊ **Medical Waste Management Act of 1990**. The Medical Waste Management Act of 1990 (MWMA) was enacted to regulate, manage, and control the treatment and disposal of medical waste in a safe and proper manner. It includes provisions for the treatment of all regulated medical waste prior to landfilling and for the permitting of on-site and off-site medical treatment facilities. Within the regulatory framework of the MWMA, CDPH's (formally DHS) Medical Waste Management Program ensures the proper handling and disposal of medical waste throughout California. As indicated under the MWMA, waste must satisfy the following three criteria in order to be classified as medical waste[14]: (1) the material must actually be a waste product; (2) the waste must be either biohazardous or sharps waste; and (3) the waste must be produced as a result of a specific action in the delivery of health care. As required under the MWMA, medical waste shall be contained separately from other waste at the point of origin in the producing facility (Section 118275, H&SC).

If a facility generates less than 200 pounds of medical waste per month and does not treat medical waste on the site, the facility is classified a small-quantity generator (SQG), as defined in Section 117760 of the H&SC.[15] The MWMA requires generators of medical waste that generate more than 200 pounds per month to register as large-quantity generators (LQG), as defined in Section 117680 of the H&SC. Separate regulations are established for both SQGs (Sections 117915-117945, H&SC) and LQGs (Section 117950-117995, H&SC).

▪ **California Code of Regulations**. A number of potentially applicable CCR provisions addressing hazards and hazardous wastes are summarized below.

◊ **California Hazardous Waste Control Law**. The California Hazardous Waste Control Law (HWCL), codified in Title 22, Chapter 6.5 of the CCR, is the basic hazardous waste regulation in the State. The HWCL implements the RCRA as a "cradle-to-grave" waste management system in California. HWCL specifies that generators have the primary duty to determine whether their wastes are hazardous and to assure its proper management and disposal. The HWCL

[14]/ Section 117690 of the H&SC defines "medical waste" as "waste that meets both of the following requirements: (1) the waste is composed of waste that is generated or produced as a result of any of the following actions: (a) diagnosis, treatment, or immunization of human beings or animals, (b) research pertaining to the activities specified in subparagraph (a), (c) the production or testing of biologicals, (d) the accumulation of properly contained home-generated sharps waste that is brought by a patient, or member of the patient's family, or by a person authorized by the enforcement agency, to a point of consolidation approved by the enforcement agency pursuant to Section 117904 or authorized pursuant to Section 118147 of the H&SC, and/or (e) removal of a regulated waste, as defined in Section 5193 of Title 8 of the California Code of Regulations, from a trauma scene by a trauma scene waste management practitioner; and (2) the waste is either of the following: (a) biohazardous waste, or (b) sharps waste." "Biologicals" means medicinal preparations made from living organisms and their products including, but not limited to, serums, vaccines, antigens, and antitoxins.

[15]/ The MWMA contains requirements to use registered hazardous waste haulers for transporting medical waste but contains provisions to allow SQGs to transport small quantities (less than 20 pounds at one time) of medical waste. SQGs must prepare information documents on the management of their medical wastes, keep records of medical waste transported off the site, comply with containment and storage requirements, file a medical waste management plan, allow on-site inspections, and provide workers who handle medical wastes with safety equipment and protective clothing.

exceeds federal requirements by mandating source reduction planning, recycling, treatment, or incineration of certain wastes and permitting for facilities that treat hazardous waste. HWCL also regulates a number of types of wastes that are not covered by the federal law under RCRA. The DTSC is the agency responsible for enforcing the HWCL. In 1992, California was granted authorization by the USEPA to also enforce the federal RCRA hazardous waste laws and regulations.

◊ **Universal Waste Rule**. "Universal wastes"[16] are hazardous wastes that are more common and pose a lower risk to people and the environment than other hazardous wastes. Federal and State regulations identify universal wastes and provide simple rules for their handling, recycling, and disposal. The regulations, called the "Universal Waste Rule," are codified in Title 22, Division 4.5, Chapter 23 of the CCR. Universal wastes include mercury thermostats, batteries, fluorescent tubes, non-empty aerosol cans, mercury switches, mercury thermometers, pressure or vacuum gauges that contain mercury, dilators and weighed tubing, rubber flooring containing mercury, dental amalgam, consumer electronic devices, and cathode ray tubes. Universal waste batteries, thermostats, lamps, and consumer electronic devices generated by people maintaining their private residents are exempt from the Universe Waste Rule.[17]

◊ **School Facilities Construction**. Title 5 (Division 1, Chapter 13, Subchapter 1) of the CCR contains general and specific standards for school site selection. As specified in Section 14010 therein, with regards to school facility siting: (1) the property line shall be at least the following distance from the edge of respective power line easements: (a) 100 feet for 50-133 kV line, (b) 150 feet for 220-230 kV line, and (c) 350 feet for 500-550 kV line; (2) if the proposed site is within 1,500 feet of a railroad track easement, a safety study shall be done; (3) the site shall not be adjacent to a road or freeway that any site-related traffic and sound level studies have determined will have safety problems or sound levels which adversely affect the educational program; (4) pursuant to Sections 17212 and 17212.5 of the California Education Code (CEC), the site shall not contain an active earthquake fault or fault trace; (5) pursuant to Sections 17212 and 17212.5 of the CEC, the site is not within an area of flood or dam flood inundation unless the cost of mitigating the flood or inundation impact is reasonable; (6) the site shall not be located near an aboveground water or fuel storage tank or within 1,500 feet of the easement of an aboveground or underground pipeline that can pose a safety hazard as determined by a risk analysis study; and (7) the site is not subject to moderate to high liquefaction or landslides.

Consistent with Section 14010, the California Department of Education (CDE) requires minimum distances between new schools and the edge of transmission line rights-of-way. These standards are not based on specific biological evidence but on the rationale that the electric field drops to background levels at the

[16]/ Under federal regulations (40 CFR 273.9), "universal waste" means any of the following hazardous waste that are subject to the universal waste requirements outlined in 40 CFR Part 273: (1) batteries (as described in 40 CRF 273.2); (2) pesticides (as described in 40 CFR 273.3); (3) thermostats (as described in 40 CFR 273.4); and (4) lamps (as described in 40 CFR 273.5).

[17]/ California Department of Toxic Substances Control, Managing Universal Waste in California, Fact Sheet, June 2003.

specified distances.[18] With regards to aboveground water or fuel storage tanks and pipelines, the CDE also applies the Section 14010 standard to joint-use acreage not acquired by the local education agencies (LEAs) but used for school purposes.[19]

In selecting a school site, the CDE's School Facilities Planning Division (SFPD) has identified safety factors that should be considered. Included in these safety factors is the proximity of high-pressure pipelines that transport petroleum, petroleum products, natural gas pipelines, or other hazardous substances that could present a safety hazard to the proposed school campus site. For the CDE requirements, a high-pressure pipeline is defined as a pipeline operating at a pressure of 80 pounds per square inch gage (psig). The requirement also includes high-volume water lines, regardless of pressure.[20]

- **California Vehicle Code**. All motor carriers and drivers involved in transportation of hazardous materials in California must comply with the requirements contained in federal and State regulations and must obtain a hazardous materials transportation license (Section 32000.5, CVC) from the California Highway Patrol (CHP). The CHP is the law enforcement agency with Statewide oversight and transportation enforcement authority for hazardous materials. CHP programs includes licensing, high priority random cargo tank inspection, roadside inspections, compliance reviews, biennial terminal inspections, records inspections, and inspections of carrier hazmat and driver records. The program applies to placarded quantities of three types of hazardous materials: (1) explosives; (2) poison-by-inhalation materials; and (3) radioactive materials. Routing is required for these materials by State statute. Separate routing guides are issued to carriers for each type of material subject to routing (Section 31303-31308, CVC).

- **California Education Code**. Section 17213 of the California Education Code (CEC) specifies that a school district may not approve a project involving the acquisition of a school site unless it determines that the property to be purchased or built upon does not contain a pipeline situated underground or aboveground that carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line used only to supply that school or neighborhood.

- **California Government Code**. As stipulated in Section 51010 of the CGC, the State Fire Marshal shall exercise exclusive safety regulatory and enforcement authority over intrastate hazardous liquid pipelines and, to the extent authorized by agreement between the State Fire Marshal and the United States Secretary of Transportation, may act as agent for the United States Secretary of Transportation to implement the federal Hazardous Liquid Pipeline Safety Act (49 U.S.C. 2001 et seq.) and federal pipeline safety regulations as to those portions of interstate pipelines located within California, as necessary to obtain annual federal certification.

[18]/ California Department of Health Services, Electric and Magnetic Fields Measurements and Possible Effects on Human Health – What We Know and What We Don't Know in 2000, California Electric and Magnetic Fields Program, December 2000, p. 7; California Department of Health Services, Electric and Magnetic Fields in California Public Schools, California Electric and Magnetic Fields Program, April 2001, p. 4.

[19]/ *Op. Cit*., Guidance Protocol for School Site Pipeline Risk Analysis, Volume I – User's Manual, p. 1-2.

[20]/ *Ibid*., p. 1-1.

4.11.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **County of San Bernardino General Plan**. The County General Plan acknowledges that "[p]roper hazardous waste management constitutes one of the State's major environmental concerns."[21] In the context of the proposed project, those hazards and hazardous material goals, objectives, and programs presented in the County General Plan that appear most closely related to the unincorporated County portion of the project site are presented below.

  - Goal CI11. The County will coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high quality water supply for all residents and ensure prevention of surface and ground water pollution.

    - ◊ Policy CI11.2. Support the safe management of hazardous materials to avoid the pollution of both surface and ground waters. Prohibit hazardous waste disposal facilities within any area known to be or suspected of supplying principal recharge to a regional aquifer.[22]

  - Goal S2. The County will minimize the generation of hazardous waste in the County to reduce the risk posed by storage, handling, transportation, and disposal of hazardous wastes.

    - ◊ Policy S2.1. Because reducing the amount of waste generated in this County is an effective mechanism for reducing the potential impact of these wastes on the public health and safety and the environment, and because legislation encourages the reduction, to the extent feasible, of hazardous wastes, this jurisdiction will encourage and promote practices that will, in order of priority: (1) reduce the use of hazardous materials and the generation of hazardous wastes at their source; (2) recycle the remaining hazardous wastes for reuse; and (3) treat those wastes that cannot be reduced at the source or recycled. Only residuals from waste recycling and treatment will be land disposed.

    - ◊ Policy S2.3. Ensure that environmental review is conducted for projects proposed on sites that have been identified as contaminated.

    - ◊ Policy S2.4. Protect vital ground water resources and other natural resources from contamination for present and future beneficial uses.

[21]/ *Op. Cit*., County of San Bernardino 2007 General Plan, Safety Element, p. VIII-7.
[22]/ *Ibid*., Circulation and Infrastructure Element, pp. III-13 and III-14.

◊ Policy S2.5. Minimize the risk of exposure to hazardous substances by residential and other sensitive receptors through the application of program review and permitting procedures.[23]

- **County of San Bernardino Development Code**. As indicated in Section 82.16.010 (Purpose) in Chapter 82.16 (Hazardous Waste Overlay) of the County Development Code, a hazardous waste overlay is created to: (1) ensure that hazardous waste facilities are sited in areas that protect public health, safety, welfare, and the environment; (2) buffer hazardous waste facilities so that incompatible uses cannot be permitted in the future; (3) identify permitted uses within the overlay; and (4) outline applicable permit review procedures. The hazardous waste overlay shall be applied to areas where a hazardous waste facility is being approved (Section 82.16.020). Within hazardous material overlay districts, prohibited uses include agricultural uses of any type, residential uses of any type, and facilities with a high concentration of people and/or an immobile population, including schools, hospitals, auditoriums, amphitheaters, and jails (Section 82.16.030[c]). The project site is not included within a County-designated hazardous waste overlay district.

As specified in Section 4.108(tt) in Chapter 1 (Uniform Fire Code) in Division 3 (Fire Protection and Explosives and Hazardous Materials) in Title 2 (Public Morals, Safety and Welfare) of the County Development Code, Subsection 80.109 of the Uniform Fire Code is hereby amended, in part, to read as follows: "(a) Parking on Thoroughfare. Any vehicle containing hazardous materials shall not be left unattended on any residential street nor in or within five hundred (500) feet of any residential area, apartment or hotel complex, educational, hospital or care facility at any time; or at any other place that would, in the option of the Chief [of the Fire Department], present an extreme life hazard. In locations other than those specified in Section 80.112(a), a driver shall not leave the vehicle unattended on any street, highway, avenue or alley. . .(b) Parking Off Thoroughfare. Any vehicle containing hazardous materials shall not be left unattended within five hundred (500 feet of any residential area, apartment or motel complex, educational, hospital or care facility at any time; or at any other place that would, in the opinion of the Chief, present an extreme life hazard. Any vehicle containing hazardous materials shall not be parked at any one point for longer than one hour except: (1) Off a street, highway, avenue or alley; (b) Inside a bulk plant and twenty-five (25) feet from the property line or within a building approved for such use. (3) At other approved locations not less than fifty (50) feet from any building except those approved for the storage or servicing of such vehicles; (4) When, in the case of breakdown or other emergency, the operator must leave to take necessary action to correct the emergency."

4.11.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

[23]/ *Ibid*., Safety Element, pp. VIII-11 and VIII-12.

- **City of Rialto General Plan**. The City General Plan acknowledges that proper hazardous waste management constitutes one of the State's major environmental concerns.[24] In the context of the proposed project, those hazards and hazardous materials goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

  - Goal 5.4. Ensure that all businesses in the City of Rialto that use hazardous materials and generate hazardous waste properly manage these substances.

    - ◊ Policy 5.4.5. Require new or modified businesses to complete a business plan, waste minimization plan, and if applicable, a risk management and prevention program (RMPP) prior to final approval of a land use permit for a new business or modification of an existing business. The requirements specified in AB 3777 (Chapter 1260, Statutes of 1986) and AB 3205 (Chapter 15, Statutes of 1988) regarding the applicability of the RMPP shall be identified in the amendment.

  - Goal 5.6. Minimize the generation of hazardous waste in Rialto.

    - ◊ Policy 5.6.1. The City shall encourage and promote practices that will, in order of priority: (1) reduce the use of hazardous materials and the generation of hazardous waste at their source; (2) recycle the remaining hazardous wastes for reuse; and (3) treat those wastes which cannot be reduced at the source or recycled. Only residuals from waste recycling and treatment shall be land disposed.

  - Goal 5.7. Reduce the risks associated with the storage of hazardous materials and their threats of contamination of groundwater.

    - ◊ Policy 5.7.4. The City shall prohibit businesses from storing hazardous materials for commercial use in residential areas.

  - Goal 5.8. Reduce the threat of hazardous materials and wastes to residential areas.

  - Goal 5.10. Ensure the safe transportation of hazardous materials and waste in and through the City of Rialto.

    - ◊ Policy 5.10.1. Specified hazardous materials and wastes shall be transported on routes that can safely accommodate additional truck traffic, do not pass through residential areas, and use interstate or State divided highways as major routes.[25]

Applicable or potentially applicable hazards and hazardous materials policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

[24]/ *Op. Cit*., City of Rialto General Plan, Safety Element, p. XII-9.
[25]/ *Ibid*., pp. XII-10 through XII-16.

- **City of Rialto Municipal Code**. As specified in Section 18.47.010 (Purpose) in Chapter 18.47 (Hazardous Waste Overlay Zone) in Title 18 of the City Municipal Code, the City has established a Citywide "hazardous waste overlay zone" for the purpose of regulating the disposal, storage, generation transfer, treatment, handling and transportation of hazardous waste, materials and substances as defined in Section 18.47.030 and providing specific requirements applicable to the siting or expansion of a hazardous waste facility in order to safeguard life, health, property and the public welfare. As indicated in Section 18.47.040 (Hazardous Waste Facilities Prohibited in Certain Zoning Districts and Specific Plan Areas) "Notwithstanding any other provision of this chapter any business whose function it is to generate, store transfer, dispose, treat, handle or transport any hazardous waste, material or substance as defined in Section 18.47.030 shall be prohibited in the following zoning districts and specific plan areas. . .Other zoning districts or specific plan areas adopted after adoption of the hazardous waste overlay zone." As defined in Section 18.47.030 (Definitions) therein, a "hazardous waste facility" means "any structure, other appurtenances and improvements on the land and all contiguous land used for treatment, transfer storage resource recovery, disposal or recycling of hazardous waste (California Health and Safety Code, Section 25117.1)."

4.11.3 Environmental Setting

4.11.3.1 Regional Setting

The USDOT's Office of Pipeline Safety (OPS) figures show that in 2000 there were 288,586 miles of liquid pipelines in operation. In 2000, eighty incidents were reported that had a fatality or injury or resulted in property damage, producing an incident rate of one per 3,607 miles. The causes of the 80 reported incidents were corrosion[26] (39 percent), unspecified cause (28 percent), damage by outside force[27] (25 percent), and construction/material defect (9 percent).
As reported by the Pipeline and Hazardous Materials Administration (PHMSA), in California there are 121,686 total pipeline miles, including hazardous liquid lines (718 miles), gas transmission lines (12,001 miles), gas gathering lines (438 miles), and gas distribution lines (102,686 miles). Between 1998 and 2007, in California, there were a total of 194 significant and serious incidents,[28] including nine fatalities and 32 injuries (representing a 10-year average of 19 incidents, 1 fatality, and 1 injury per year).[29]

As reported by California's Office of the State Fire Marshal (SFM), based on data assembled between 1984 and 1992, for reported natural gas transmission and gathering line leaks, the following approximate rates have been identified: 0.260 incidents per 1,000 miles/year, 0.061

[26]/ Internal and external corrosion is the leading cause of pipeline accidents. The primary causes of internal corrosion are the naturally high water content of liquid when it is pumped from a well and the presence of naturally occurring hydrogen sulfide often found in liquid sources. External corrosion causes also include soil moisture and microbes.

[27]/ Damage by outside forces or third-party dig-ins are defined as pipeline damage caused by an entity (e.g., construction contractor) other than the pipeline owner. Incidents in this category generally occur during construction and maintenance projects that include subsurface excavation and result from inaccurate or incomplete knowledge about the subsurface alignment of the pipeline.

[28]/ Significant Incidents are those incidents reported by pipeline operators with any of the following conditions are met: (1) fatality or injury requiring in-patient hospitalization; (2) $50,000 or more in total costs, measured in 1984 dollars: (3) highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more; or (4) liquid releases resulting in an unintentional fire or explosion.

[29]/ Pipeline and Hazardous Materials Safety Administration, California Significant Incidents and Mileage Overview (http://primis.phmsa.dot.gov/comm/reports/safety/CA_detail1.html?nocache=4194#_OuterPanel_tab_3).

injuries per 1,000 miles/year, and 0.018 fatalities per 1,000 miles/year.[30] Based on data assembled between 1986 and 1992, for reported hazardous liquid pipeline leaks, the following approximate rates have been identified: 1.31 incidents per 1,000 miles/year, 0.149 injuries per 1,000 miles/year, and 0.017 fatalities per 1,000 miles/year.[31,32]

The SFM regulates the safety of interstate hazardous liquid transportation pipelines and acts as an agent of the federal Office of Pipeline Safety concerning interstate pipeline inspection. Hazardous liquid pipelines are periodically tested for integrity using procedures approved by SFM. The SFM also maintains Geographic Information System (GIS)-based maps of all regulated pipelines and has been named as a state repository for pipeline data by the National Pipeline Mapping System (NPMS).[33] The CPUC regulates[34] natural gas utility service for regulated utilities (e.g., SoCalGas), including in-State transportation over the utilities' transmission and distribution pipelines, storage, and procurement.

With regards to construction-term safety hazards associated with excavation activities in proximity to underground facilities, in 1999, the USDOT sponsored the "Common Ground Study."[35] The purpose of the "Common Ground Study" was to identify and validate existing best practices performed in connection with preventing damage to underground facilities. In 2000, the Common Ground Alliance (CGA) was formed to further the work completed during the "Common Ground Study." In March 2008, the CGA published an updated "Best Practices Version 5.0,"[36] outlining those practices that, when implemented, would reduce potential safety hazards associated with excavation activities.

4.11.3.2 Local Setting

Environmental Site Assessment

As presented in Appendix III-L (Phase I Environmental Site Assessment), a Phase I environmental site assessment (ESA) was conducted for the entire project site and included both a database review and site reconnaissance survey conducted in March 2008.[37] The ESA also served as a compilation of four previous Phase 1 reports prepared by the same firm

[30]/ The criteria for incidents to be reported to the USDOT for inclusion in this data were as follows: (1) events which involved a release of gas from a pipeline or a liquefied natural gas (LNG) or gas from an LNG facility which caused (a) a fatality or personal injury necessitating inpatient hospitalization or (b) estimated property damage, including costs of gas lost by the operator or others or both of $50,000 or more; (2) an event which resulted in an emergency shut-down of an LNG facility; and/or (3) an event that was significant in the judgment of the operator, even though it did not meet the criteria above.

[31]/ The criteria for incidents to be reported to the USDOT for inclusion in this data were as follows: (1) explosion or fire not intentionally set by the operator; (2) loss of more than 50 barrels of liquid or carbon dioxide; (3) escape to the atmosphere of more than five barrels per day of highly volatile liquid; (4) death of any person; (5) bodily harm to any person resulting in loss of consciousness, necessity to carry the person from the scene, or disability which prevents the discharge of normal duties or normal activities beyond the day of the accident; and/or (6) estimated property damage to the property of the operator or others or both exceeding $5,000.

[32]/ California Office of the State Fire Marshal, An Assessment of Low Pressure Crude Oil Pipelines and Crude Oil Gathering Lines in California, April 1997, pp. 27 and 29.

[33]/ *Op. Cit.*, Guidance Protocol for School Site Pipeline Risk Analysis, Volume I – User's Manual, p. G-1.

[34]/ The CPUC regulates natural gas pipelines under 49 CFR Part 192 and CPUC General Order No. 112-E.

[35]/ United States Department of Transportation, Common Ground Study of One-Call Systems and Damage Prevention Best Practices, August 1999.

[36]/ Common Ground Alliance, Best Practices Version 5.0, March 2008.

[37]/ C.H.J., Incorporated, Summary Report: Site Reconnaissance and Database Review Related to Hazardous Materials – Proposed Lytle Creek Ranch Project, 2,450± Acres, Lytle Creek Area, San Bernardino County, California, Prepared for Lytle Development Company, April 11, 2008.

examining individual sections of the larger project site. In addition to the properties examined in the earlier reports, the Monier Lifetile facility (3511 N. Riverside Avenue) was also considered. Organizationally, the compilation report included separate descriptions of the vacant land, the El Rancho Verde Royal Vista Golf Course, and Monier Lifetile. The following descriptions reflect the observed site conditions at the time the site reconnaissance surveys were conducted.

- **Vacant land**. Presented below are separate descriptions of those vacant lands located to the west of the I-15 Freeway, east of the I-15 Freeway, and Lytle Creek Wash.

  - ◊ **West of the I-15 Freeway**. The northern portion of the project site, located west of the I-15 Freeway, consists primarily of vacant land with natural vegetation in the mouth of Sycamore Canyon, bounded by the rugged terrain of the SBNF. The central portion of the site is vacant with natural vegetation. The southern portion of the site is wash area. At the southwest boundaries of the site, placards indicating the presence of underground SCE facilities were evident along Lytle Creek Road. Two water wells, an off-site water reservoir, and high-voltage power lines are located in the wash area. Reconstruction of Glen Helen Parkway had recently been completed. Previous pipeline construction had been completed and a riprap channel was noted adjacent to Glen Helen Road.

  - ◊ **East of the I-15 Freeway**. The majority of the site east of the I-15 Freeway consists of vacant land. Previous grading and roadway construction has been completed, resulting in Clearwater Parkway. The area west of Clearwater Parkway consists of rugged terrain with natural vegetation. A borrow area is located in the southeast portion of this area. The area west of Clearwater Parkway is generally a low-lying area with natural vegetation. A high-pressure natural gas line is marked in a northeast-southwest alignment through the low-lying area.

  - ◊ **Lytle Creek Wash**. A major portion of this area consists of vacant, undeveloped land located within the wash area of Lytle Creek. Two main wash areas are divided by the Cemex USA facility. The area west of the existing quarry consists of generally vacant and undeveloped land. Numerous dirt access roads cross this portion of the site. Three earthen flood control levees, with associated access roads, exist in this area. Minor quantities of household trash and debris was noted along several of the dirt roads. The area east of the Cemex USA facility (north of the golf course) also consists of generally vacant and undeveloped land within the wash. An earthen water reservoir and several municipal water wells are located within this area. Placards paralleled the west boundary of the site indicate an underground petroleum pipeline adjacent to the Cemex USA facility. Numerous dirt roads cross this portion of the site, some of which led to water wells. Minor quantities of household trash and debris was noted along several of the dirt roads.

- **El Rancho Verde Royal Vista Golf Course**. The golf course consists of the course, a clubhouse, parking area, cart barn, driving range building, two tennis courts, an auxiliary office building, and current maintenance facilities located to the northwest of the other structures near the northern golf course boundary. No evidence of current underground storage tanks (USTs) or other undocumented subsurface structures were observed on the golf course portion of the site. No significant soil staining or distressed vegetation

was noted. There is no evidence that substantial quantities of hazardous materials have been mishandled or disposed of in the area.

The grounds maintenance building, which included a mechanic shop and garage area, is used for the storage of chemical pesticides and herbicides, consisting of typically regulated products used in the industry. No spills or leaking containers were noted. A hot aqueous parts cleaning station, consisting of a metal tub with a drain situated on top of an open 30-gallon drum used to collect used detergent solution, was noted in the maintenance garage. Two 55-gallon drums used to store waste oil were located in the garage. Moderate oil stains was noted on the concrete surrounding the drum storage area. Four sewer access points are located along the west portion of the concrete pad. An aboveground storage tank (AST) is located on a concrete pad within a cinder block structure and 6-inch concrete berm in the maintenance area. The AST is a single tank divided into two approximately 500-gallon compartments for unleaded gasoline and diesel fuel. No indication of leakage was observed.

A portion of the site area east of the golf course is vacant and undeveloped with natural vegetation. Placards indicating the presence of several utility lines were noted. A dirt road, beginning at the northern end of North Oakdale Avenue, extended northwesterly onto the site. The road forked toward the northeast to two West Valley Water District (WVWD) well sites. The well sites are fenced and are not considered a part of the project site. Several piles of debris were noted along the dirt road. The area between the dirt road and the southwest site boundary shows evidence of being used as a paintball playing field.

- **Monier Lifetile**. The site generally consisted of an asphalt concrete (AC) or concrete paved product storage area and included a production building and several associated buildings for storage, material testing, and color mixing. Supply silos for the sand and cement products, as well as ASTs for the sealer and mold releasing agency (methyl ester) were located on the side of the production building. A water filtration and recycling area was located adjacent to the building. One 500-gallon diesel AST, with a secondary containment structure, was located in the northern portion of the site. No evidence of USTs or other undocumented underground structures were observed on the facility. No significant surface staining, soil staining, or distressed vegetation was noted. There was no evidence that substantial quantities of hazardous materials have been disposed of on the facility.

The project site is not listed in or in proximity to a USGS and/or California Department of Conservation listed inventory of oil and gas seeps,[38] regional wildcat wells,[39] or oil, gas, and geothermal fields.[40] No evidence of hydrocarbon production or extraction exists on the site.

A database search was conducted for sites located within one mile of the project boundary. The records search indicated that the El Rancho Verde Royal Vista Golf Course, located in the southwestern portion of the project site, was identified with County permits for hazardous

[38]/ United States Geological Survey, Oil and Gas Seeps in California, San Bernardino Quadrangle, June 25, 1999 (http://seeps.wr.usgs.gov).

[39]/ California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, Regional Wildcat Map W1-4, August 7, 2003 (www.conserv.ca.gov/dog/maps/indix_map.htm).

[40]/ California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, Oil, Gas, and Geothermal Fields in California, 2001 (ftp://ftp.consrv.ca.gov/pub/oil/maps/Map_S-1.pdf).

materials handling and generation, as related to waste oil collection and the diesel AST in the maintenance area. A number of leaking underground storage tank (LUST) facilities were identified. Due to case type and status, as well as ground water flow patterns and ground water barriers, the identified contamination cases are considered unlikely to have the potential to impact the soils or groundwater of the subject site.

Information regarding known perchlorate groundwater contamination southwest of the project site was reviewed. The Rialto-Colton Plume has been mapped as a southeast-trending plume flowing generally parallel to Riverside Avenue, approximately 1,500-2,000-feet south of Riverside Avenue. Since the plume is confined south of the San Jacinto fault and is mapped off the subject property, it is considered unlikely to have the potential to impact ground water directly beneath the project site and is not further addressed herein.

Calnev Interstate Pipeline

The Calnev (Kinder Morgan) interstate pipeline was constructed during 1969 and 1970. The approximately 248-mile long pipeline, which transports petroleum products (including gasoline, jet fuel, and No. 2 diesel fuel), originates at the Colton Pump Station (Colton, California) and terminates at Las Vegas, Nevada.[41] As reported by the Federal Energy Regulatory Commission (FERC): "In terms of capacity, the current Calnev pipeline configuration can, depending on the mix of products moved, transport 143,200 barrels per day (bpd), moving about 113,200 bpd on the 14-inch pipeline and 30,000 bpd on the 8-inch pipeline. With installation this year [2007] of a booster pump at the Cajon Station, the overall pipeline transportation capacity should rise to about 157,000 bpd. Calnev states that the Cajon booster is the last capacity increase that is economically feasible with the existing pipeline configuration. However, upon completion of the expansion project, the total capacity of Calnev would rise to approximately 186,000 bpd."[42]

In an unrelated incident, independent of the proposed project and occurring along a segment of the right-of-way separate from that which occurs on or adjacent to the project site, a rupture of the Calnev (Kinder Morgan) interstate pipeline occurred on May 25, 1989. The rupture occurred in the City of San Bernardino (Milepost 486.8), about 1.4 miles southeast of the project site.

As reported by the National Transportation Safety Board (NTSB): "About 7:36 AM, Pacific daylight time, on May 12, 1989, Southern Pacific Transportation Company freight train I-MJLBP-111, which consisted of a four-unit locomotive on the head end of the train, 69 hopper cars loaded with trona, and a two-unit helper locomotive on the rear of the train, was destroyed as a result of the derailment. Seven homes located in the adjacent neighborhood were totally destroyed and four others were extensively damaged. . .About 8:05 AM, on May 25, 1989, 13 days after the train derailment, the 14-inch pipeline ruptured at the site of the derailment, released its product, and ignited. As a result of the release and ignition of gasoline, 2 residents were killed, 3 received serious injuries, and 16 reported minor injuries. Eleven homes in the adjacent neighborhood were destroyed, 3 received moderate fire and smoke damage, and 3 received smoke damage only. In addition, 21 motor vehicles were destroyed. Residents within a four-block area of the rupture were evacuated by local officials."[43]

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[41]/ National Transportation Safety Board, Railroad Accident Report – Derailment of Southern Pacific Transportation Company Freight Train on May 12, 1989 and Subsequent Rupture of Calnev Petroleum Pipeline on May 25, 1989, San Bernardino, California, NTSB/RAR-90/02, June 19, 1990, p. 54.

[42]/ Federal Energy Regulatory Commission, Order on Petition for Declaratory Order, Docket No. OR07-10-000, Issued July 20, 2007, p. 2.

[43]/ *Ibid*., p. vi.

The NTSB concluded that "the probable cause of the pipeline rupture on May 25, 1989, was the inadequate testing and inspection of the pipeline following the derailment that failed to detect damage to the pipe by earth-moving equipment. Contributing to the cause of the pipeline rupture was the severity of the train derailment that resulted in extensive wreckage and commodity removal operations. Contributing to the severity of the damage resulting from substation product release was Calnev's failure to inspect and test check values to determine that they functioned properly, particularly after the train derailment."[44]

Among the recommendations offered by the NTSB, as directed toward the National Association of Counties and the National League of Cities: "Inform your members of the land-use guidance for enhancing public safety contained in the National Research Council's Special Report 219, 'Pipeline and Public Safety,' and encourage them to develop and implement policies to protect public safety for lands adjacent to pipelines and railroads."[45]

Although no formal recommendations are presented concerning setbacks from pipelines, as indicated, in part, in "Special Report 219": "Information provided by liquid pipeline operators to the American Petroleum Institute suggests that as much as a 300-foot clear path (150 feet on either side of the centerline of the pipe) may be necessary to significantly reduce casualties and property damage in the event of a pipeline failure. The damage radius for highly volatile liquids pipeline accidents may extend even farther, up to several miles."[46]

SoCalGas Natural Gas Transmission Pipeline

In California, the CPUC regulates natural gas utility service to about 10.5 million customers that receive natural gas from Southern California Gas Company (SoCalGas) and from other regulated utilities (i.e., Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southwest Gas, and several smaller gas utilities). The CPUC has regulatory jurisdiction over about 100,000 miles of utility-owned natural gas pipelines, which transported 78 percent of the total amount of natural gas delivered to California's gas consumers in 2005.

Natural gas from out-of-State production basins is delivered into California via the interstate natural gas pipeline system, including the Western Canadian Sedimentary, Rocky Mountains, Anadarko Basin, Permian, and the San Juan Basins.[47] Natural gas from out-of-State production basins is delivered into California via the interstate natural gas pipeline system. The five major interstate pipelines that deliver out-of-State natural gas to California customers are the Gas Transmission Northwest and Tuscarora, Kern River, Transwestern, El Paso, and Mojave Pipelines. Most of the natural gas transported via the interstate pipelines, as well as some of the California-produced natural gas, is delivered into SoCalGas' intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered into the local transmission and distribution pipeline systems or to natural gas storage fields. Some large non-core customers take natural gas directly off the high-pressure backbone pipeline

[44]/ *Ibid*., p. 124.
[45]/ *Ibid*., p. 127.
[46]/ National Research Council, Special Report 219: Pipelines and Public Safety: Damage Prevention, Land Use, and Emergency Preparedness, 1988. p. 72.
[47]/ California Energy Commission, Natural Gas Infrastructure Issues, Commission Final Report, P200-01-001, October 2001, p. 35.

systems, while core customers and other non-core customers take natural gas off the utilities' distribution pipeline systems.[48]

As illustrated in Figure 4.11-1 (Southern California Gas Company Backbone Pipeline System),[49] the Mojave Pipeline delivers natural gas to SoCalGas' "backbone" natural gas pipeline system at Hector Road and the Kern River Pipeline delivers natural gas to SoCalGas at Wheeler Ridge.

Following a 1992 rail accident in the Cajon Pass that resulted in a fire involving a fuel pipeline and which subsequently impacted other co-located utilities, FEMA undertook a number of studies involving lifeline facilities.[50] As indicated in those studies, with regards to the SoCalGas natural gas backbone lines, as of that time (1992), piping wall thicknesses were in accordance with the CPUC's General Order No. 112-D 341.[51] Spacing between the pipeline valves and, separately, the pipe wall thickness were controlled by criteria which, in turn, were controlled by the population density of the area.

As further indicated by FEMA, in the project area, the westernmost transmission line (Line 4000) was installed in 1966 using X-60 grade pipe with wall thicknesses ranging from 0.375-0.438 inches. Line 4000 operates between the Newberry Compressor Station to the north and the Fontana Pressure Limiting Station to the south. The eastern-most transmission line (Line 4002) was installed in 1960 using X-52 and X-60 grade pipe with wall thicknesses ranging from 0.375-0.500 inches. Line 4002 operates between the Cajon Summit valving station to the north and east of the Cajon Junction and the Fontana Station to the south. Lines 4000 and 4002 (in combination with Line 1185) operate at about 845 psig supply about 90 of the Company's natural gas to the Los Angeles Basin. The transmission lines in the study area presently provide about 750 million cubic feet of natural gas each day, although their combined total capacity is up to 1 billion cubic feet per day. Maintenance staff and supplies are maintained in the Los Angeles Basin and in Victorville. The emergency planning assumes that up to ½-mile of pipeline on either side of the San Andreas fault zone could fail during a major earthquake. SoCalGas maintains prepositioned material to replace that piping.[52]

SoCalGas' two 36-inch diameter pipeline cross the San Andreas fault zone north and west of the Cajon Pass. On the project site, the pipelines pass under the SCE's 500-kV transmission line. The two buried high pressure gas lines cross Lytle Creek perpendicular to the centerline, approximately 1,500 feet downstream of the northbound I-15 Freeway bridge over Lytle Creek. The existing and proposed high-velocity flows in Lytle Creek have the potential to damage these

[48]/ Most of California's natural gas customers are residential and small commercial customers (referred to as "core" customers) and account for about 40 percent of the natural gas delivered to California. Large customers, such as electric generators and industrial customers (referred to as "non-core" customers) account for about 60 percent of the natural gas delivered to California.

[49]/ San Diego Gas & Electric Company and Southern California Gas Company, Proposals of San Diego Gas and Electric Company (U 902 E) and Southern California Gas Company (U 904 G), Order Instituting Rulemaking to Establish Policies and Rules to Ensure Reliable, Long-Term Supplies of Natural Gas to California, R.04-01-025, California Public Utilities Commission, February 24, 2004.

[50]/ Federal Emergency Management Agency (Intec, Inc.), Inventory of Lifelines in the Cajon Pass, California, FEMA 225, Earthquake Hazard Reduction Series 60, February 1992; Federal Emergency Management Agency (Intec, Inc.), Collocation Impacts on the Vulnerability of Lifelines during Earthquakes with Applications to the Cajon Pass, California, FEMA 226, Earthquake Hazard Reduction Series 61, February 1992.

[51]/ California Public Utilities Commission Decision No. 90372 (June 5, 1979) resulted in the adoption of General Order (GO) 112-E. In response to changes in Federal Pipeline Safety Regulations, specifically provisions of Title 49 of the Code of Federal Regulations (49 CFR) as issued by the United States Department of Transportation, Decision D95-08-053 (August 11, 1995) revised GO 112-D to GO 112-E.

[52]/ Federal Emergency Management Agency (Intec, Inc.), Inventory of Lifelines in the Cajon Pass, California, FEMA 225, Earthquake Hazard Reduction Series 60, February 1992, pp. 48-49.

gas lines. A soil cement over-pour structure is proposed to be constructed over the gas lines to protect them from undermining and erosion related damage.

SCE 500-kV Transmission Line

An electric field is created when voltage is established on a wire and magnetic fields are created with the flow of current. These electric and magnetic fields are widespread and generated by all electric items, including common household appliances.

SCE is regulated by the CPUC. SCE's Lugo-Mira Loma 500-kV Transmission Line high-voltage transmission lines generate electromagnetic fields (EMFs). After investigating EMFs, the CPUC found that available scientific research does not support the conclusion that exposure to low-frequency fields is a health risk. The CPUC, however, recognizes that some public concern and scientific uncertainty exists regarding a potential health risk associated with EMFs. As a result, the CPUC issued Decision 93-11-013 (November 2, 1993). In that order, the CPUC directed California's utilities to develop standardized guidelines to reduce EMFs in the design, operation, and maintenance of transmission lines. No general EMF guidelines affecting the siting of residential uses relative to transmission lines have been developed by the CPUC to address real or perceived risk. Guidelines have, however, been established for the siting of new school facilities. As specified, "[t]he property line of the [proposed school] site even if it is a joint use agreement as described in subsection (o) of this section shall be at least the following distance from the edge of respective power line easements: (1) 100 feet for 50-133 kV line. (2) 150 feet for 220-230 kV line. (3) 350 feet for 500-550 kV line" (5 CCR 14010[c]).

4.11.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant hazards and/or hazardous material impact if the project or if project-related activities were to:

- Create a significant[53] hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Section 65962.5 of the CCR and create a significant hazard to the public health or the environment.
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.[54]

[53]/ Certain terms, such as "significant," are neither defined in CEQA nor in the State CEQA Guidelines and require a local determination whether a proposed action would meet or exceed the stated standard.
[54]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section VII (Hazards and Hazardous Materials).

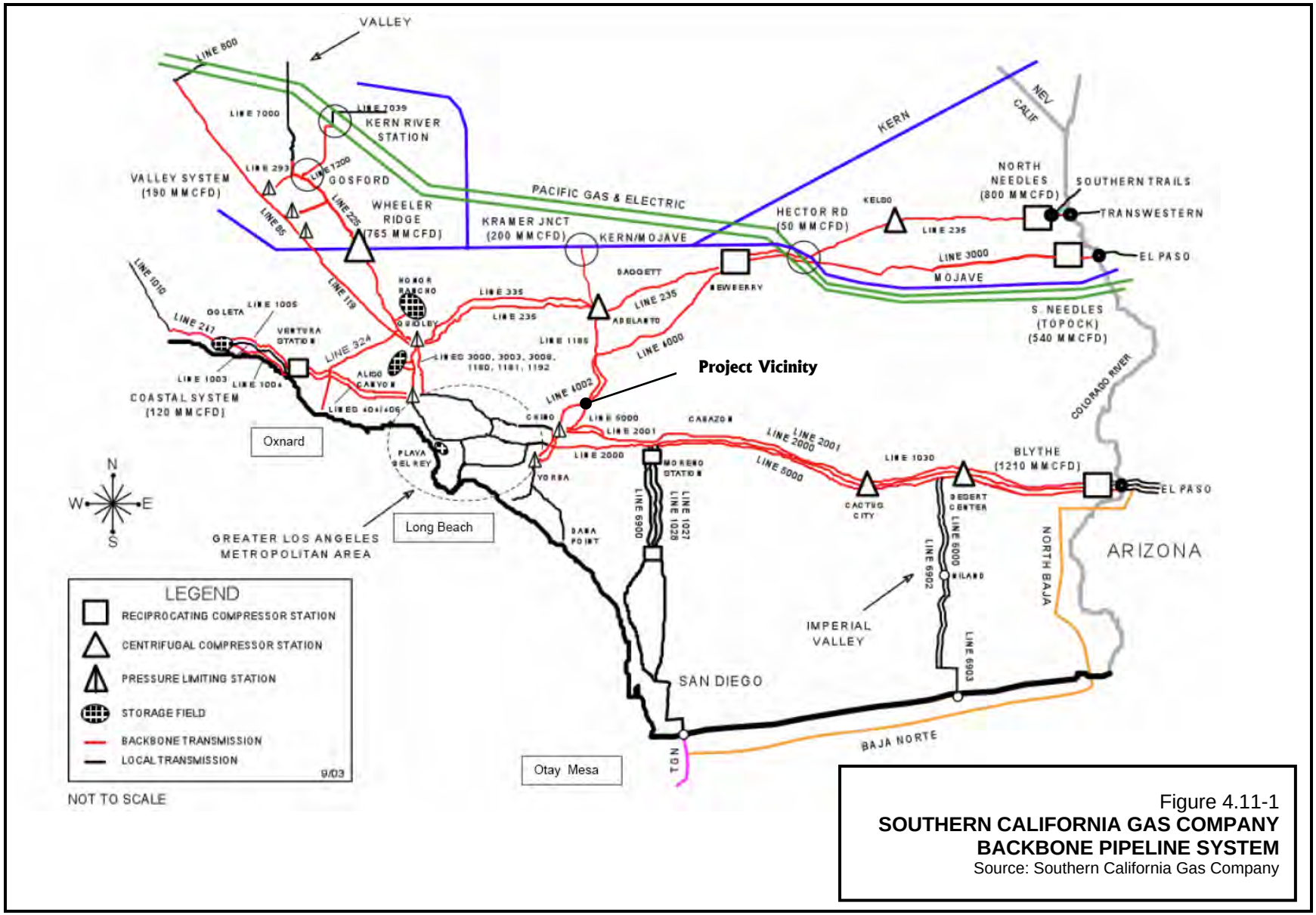

Figure 4.11-1
SOUTHERN CALIFORNIA GAS COMPANY BACKBONE PIPELINE SYSTEM
Source: Southern California Gas Company

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Section 66261 in Title 22, Chapter 11, Article 2 of the CCR includes the following definition of hazardous materials: "A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed." In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant impact if the project or if project-related activities were to:

- Result in the release of hazardous materials or substances which, because of their quantity, concentration, or physical, chemical or infectious characteristics, would cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

A number of the "additional indicators" have been identified by the SCAQMD and are presented in Section 4.7 (Air Quality) and may have application herein. In recognition of those "additional indicators" that appear relevant to this topic issue, the proposed project would normally be deemed to produce a significant or potentially significant hazards and/or hazardous material impact if the project or if project-related activities were to:

- Emit an air toxic contaminant regulated by SCAQMD rules or that is on a federal or State air toxic list.[55]
- Be occupied by sensitive receptors within a quarter mile of an existing facility that emits air toxics identified in SCAQMD Rule 1401 or near CO hot spots.
- Emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.[56]
- Result in the accidental release of air toxic emissions or an acutely hazardous material posing a threat to the public health and safety.[57]

With regards to electromagnetic fields (EMFs), studies of the potential for adverse public health effects remain inconclusive. A statement or conclusion of public health impacts would, therefore, be speculative and outside the scope of CEQA (14 CCR 15145). No health-related threshold standards can, therefore, be identified and no conclusions concerning the significance of health-related impacts from EMFs reached.[58] As a result, EMFs are not further addressed herein.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable

[55]/ The referenced threshold standard neither contains a quantification of the quantity of toxic air contaminant emissions so released nor equates those emissions to a specific health-based standard or threshold. As such, the threshold appears overly restrictive but has been retained in the form presented in the SCAQMD Handbook and is presented herein for information and disclosure purposes. Regulations promulgated by the California Health and Welfare Agency, under Proposition 65, define a significant cancer risk as any risk exceeding ten in one million (10×10^{-6}). The threshold standard used herein is, therefore, ten excess cancer risks per 1,000,000 exposed individuals over a continuous 70-year period.

[56]/ *Op. Cit*., CEQA Air Quality Handbook, pp. 6-2 and 6-3.

[57]/ *Ibid.*, pp. 6-6 and 6-7.

[58]/ City of San Diego, California Environmental Quality Act Significance Determination Thresholds, August 2006, p. 31.

standards that can appropriately be extracted from other related policy or environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative hazards and/or hazardous materials impacts.

4.11.5 Impact Analysis

4.11.5.1 Construction Impacts

Environmental Impact 11-1*. Construction activities involving the transport, storage, use, and consumption of small quantities of flammable, corrosive, and/or explosive materials, including petroleum products, will occur in close proximity to existing residential areas and other sensitive receptors.*

Preliminary Determination 11-1*. Less-than-significant Impact.*

Small quantities of hazardous materials may be transported, stored, used, and handled during construction activities, including small volumes of hydrocarbons and their derivatives (e.g., gasoline, hydraulic fluids) as may be required to operate the associated construction equipment. These materials could be potentially released into the environment as accidental spills. Although the types and quantities of hazardous materials used during construction are not considered acutely hazardous and would not pose a substantial risk to human health and/or safety, the release of such materials without substantial containment and cleanup could result in harm to the environment and to nearby receptors.

All significant hazardous material spills or threatened releases, including petroleum products (such as gasoline, diesel, and hydraulic fluid), regardless of quantity spilled, must be immediately reported if the spill has entered waters of the State, including streams and storm drains, or has caused an injury to a person or threatened injury to public health (Section 25507, H&SC). For non-petroleum products, additional reporting may be required if the release exceeds federal reportable quantity thresholds[59] over a release period of twenty-four hours, as detailed in Section 25394.3 of the H&SC and 40 CFR 302.4. Spill notification guidance is summarized in the Governor's Office of Emergency Services - Hazardous Materials Unit's "California Hazardous Material Spill/Release Notification Guidance."[60] Additional guidance concerning federal notification is also provided therein.

Sufficient best management construction practices and regulatory controls are now in place to both minimize the potential discharge of hazardous materials into the environment during construction operations and, should discharge occur, to provide appropriate notification and institute appropriate cleanup and disposal actions. Construction-term impacts associated with the potential release of hazardous materials will, therefore, not manifest as a significant impact.

Environmental Impact 11-2*. Construction activities could result in damage to existing high priority subsurface installations[61] and/or other facilities, resulting in the discharge of*

[59]/ Reportable quantities for federal hazardous substances can be found in Table 302.4 in 40 CFR 302.3.

[60]/ State of California, Governor's Office of Emergency Services, Hazardous Materials Unit, California Hazardous Material Spill/Release Notification Guidance, January 2002.

[61]/ As defined in Section 4216(e) of the CGC: "'High priority subsurface installation' means high-pressure natural gas pipelines with normal operating pressure greater than 415kPA gauge (60 psig) or greater than six inches nominal pipe diameter, petroleum pipelines, pressurized sewer pipelines, high-voltage electric supply lines, conductors, or cables that have a potential to ground of greater than or equal to 60kv, or hazardous materials pipelines that are potentially hazardous to workers or the public if damaged."

hazardous materials and petroleum products, creating a risk of fire, explosion, and electrocution, and disrupting the delivery of those products and commodities which are transported through those systems.

***Preliminary Determination 11-2**. Less-than-significant impact.*

Although others may exist, KMEP's Calnev Interstate Pipeline and SoCalGas' natural gas transmission pipelines both transport liquid or gaseous fuels and traverse the project site. KMEP's 14-inch diameter liquid fuel pipeline, which transports gasoline, jet fuel, and No. 2 diesel fuel, is located to the east of the Cemex USA's Lytle Creek. Separate environmental analysis is presently being conducted by the BLM and other agencies with regards to the proposed expansion of this facility, including the installation of a new 16-inch diameter pipeline within the same ROW. SoCalGas' two 36-inch diameter natural gas transmission pipelines (Lines 4000 and 4002), cross the project site in generally a northeast-southwest direction. Liquid fuels and natural gas are potentially flammable, explosive, and/or toxic.

As reported by the TRB, the single largest cause of pipeline failure is damage from outside forces which represent 40 percent of all reported failures. Two-thirds of the reported outside failures were caused by excavation damage by a party other than the pipeline operator. Natural causes, such as land subsidence, account for most other reported outside force failures.[62]

Construction activities could potentially disrupt services provided by underground and overhead utilities. As indicated in the "Common Ground Study," damage to underground facilities are usually preventable and most frequently occur due to a breakdown in the damage prevention process. Damage to underground facilities can affect the vital services and products delivered through those facilities. Underground facility damage can result in injury and death, as well as severe property damage and loss of vital services and products, such as telecommunications, water and sewer, electric power, cable television, and the flow and supply of liquid petroleum and natural gas. Damage can cause vital facility outages for homes, businesses, hospitals, and emergency service providers.

A key to damage prevention is improved information accuracy and consistency in communication between excavators and operators of underground facilities. One-call systems provide a reliable and efficient process for excavators to notify facility owners and operators of planned excavation. The one-call process allows operators with facilities in the vicinity of a proposed excavation site to mark the location of their equipment and facilities in advance of the excavation.[63]

As required under Section 4216-4216.9 (Protection of Underground Infrastructure) of the CGC, in order to avoid potential conflicts and hazards, the Applicant is required to notify Underground Service Alert (also known as the Underground Service Alert "One Call" Law, USA, or Dig Alert) at least two days prior to any ground disturbance activities in order to verify specific locations of existing underground utilities within 1,000 feet of the area of such disturbance. Prior to initiating such actions, overhead lines in the general vicinity would also be identified for the purpose of avoidance. In addition, AB 463 (amending Section 4216.4 of the CGC) and SB 1359 (amending Sections 4216, 4216.2, 4216.3, 4216.4, and 4216.7 of the CGC), as adopted in 2006, specify:

[62]/ *Op. Cit.*, Pipeline and Public Safety – Damage Prevention, Land Use, and Emergency Preparedness, Special Report 219, p. 2.
[63]/ *Op. Cit.*, Common Ground Study of One-Call Systems and Damage Prevention Best Practices, p. 1.

- Before excavation within 10 feet of a high-pressure utility line, the owner of the utility must notify the excavator of the existence of the high-pressure utility. The utility owner and excavator are required to meet on the site to determine any actions or activities necessary to verify the location of the high-pressure line before excavation (Section 4216.2, CGC);
- The owners of high-pressure underground utility lines are required to maintain and preserve all plans and records of the installation of such utilities (Section 4216.3[a][4], CGC);
- Only a person who has completed a training program that is in accordance with the requirements of 8 CCR 1509 and that meets the minimum training guidelines and practices of Common Ground Alliance current best practices may locate underground utilities. That person is required, at a minimum, to use a single-frequency utility locating device and should have access to other devices for verification if necessary (4216.3, CGC);
- A person who performs excavation around underground utilities may use vacuum excavation or power-operated or power-driven excavating and boring equipment to locate the underground utilities. To do so, however, the excavator must give the utility owner documented notice of intent to use this equipment, and the utility owner must agree to the use of that equipment (Section 4216.4[a], CGC); and
- If an excavator discovers or causes damage to an underground utility, including any breaks, leaks, nicks, dents, gouges, grooves, or other damage to subsurface lines, conduits, coatings, or cathodic protection, it must immediately notify the utility owner or call 911 emergency services (Section 4216.4, CGC).

As evidenced by these statutory requirements, sufficient controls are in place to ensure that excavation activities and work in proximity to underground pipelines has minimal potential to damage and/or disrupt high priority subsurface installations and/or other facilities.

4.11.5.2 Operational Impacts

Environmental Impact 11-3*. Excluding those exempt facilities that handle hazardous materials contained solely in a consumer product and pre-packaged for direct distribution to and for use by the general public (household hazardous wastes), certain permitted non-residential land uses may transport, store, use, and/or consume hazardous materials as part of their routine operation. In addition, the routine operation of certain permitted land uses may result in the release or potential release of toxic air contaminants (TACs). Since the specific plan allows for the proximal siting of residential and non-residential development and allows for a variety of land uses to occur therein, non-residential uses that utilize hazardous materials above household levels or emit TACs could be located in close proximity to homes and other sensitive receptors.*

Preliminary Determination*. Potentially significant unless mitigation incorporated.*[64]

[64]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; (2) create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; (3) result in the accidental release of air toxic emissions or an acutely hazardous material posing a threat to the public health and safety; and (4) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Other than through the exclusion of heavy-industrial uses and the presence of existing federal and State laws and regulations relating to the transport, storage, use, and consumption of hazardous materials, the specific plan contains no prohibitions or use restrictions regarding hazardous materials and/or the generation and disposal of hazardous, medical, universal, or mixed wastes.[65] In addition, the specific plan contains no standards or specifications regarding the creation of physical or spatial separation distances between those permitted uses that may possess those materials (e.g., health service facilities) or may release TACs (e.g., dry cleaners) and both residences and other sensitive receptors.

With regards to air quality, major and minor stationary sources of air emissions can be located in proximity to sensitive receptors. The CARB's minimum separation distance recommendations are presented in Table 4.7-5 (California Air Resources Board – Recommendations on Siting Sensitive Land Uses).[66] For example, CARB recommends that a minimum distance of 50 feet be provided between sensitive receptor locations and small gasoline facilities. For distribution centers, the CARB recommends that agencies avoid siting new sensitive land uses within 1,000 feet of a distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU units operations exceed 300 hours/week.

Based on the generalized nature of each of the permitted land uses authorized under the proposed LCRSP, presented in Table 4.1-4 (Land-Use Compatibility Matrix) is a matrix depicting the type of issues that may need to be considered at the project-level based on the typical operational characteristics of those uses and the associated performance expectations of other uses that may exist within the LCRSP in the future. As noted therein, potential hazard-related issues could exist when light industrial, general warehousing, distribution center, and heavy commercial uses are proposed adjacent to single-family residential, multi-family residential, and/or institutional uses or when any of those potential sensitive uses are proposed adjacent to any of those existing non-residential land uses.

In recognition of the potential land-use compatibility impacts associated with both the placement of certain permitted or conditionally permit land uses adjacent to other existing uses within and adjacent to the specific plan area, a mitigation measure (Mitigation Measure 1-1) is recommended which, when implemented, will reduce potential land-use compatibility conflicts to a less-than-significant level. In addition, a mitigation measure (Mitigation Measure 7-16) has been formulated specifying certain disclosure requirements for properties within 500 feet of the I-15 Freeway, Cemex USA quarry, and/or Vulcan Materials Company plant. Also, a mitigation measure (Mitigation Measure 7-17) has been formulated specifying the use of air filtration systems within 500 feet of the I-15 Freeway right-of-way, Cemex USA quarry, and/or Vulcan Materials Company plant.

***Environmental Impact 11-4**. An overhead lattice transmission tower, associated with SCE's Lugo-Mira Loma 500-kV Transmission Line, could fail or collapse as a result of wind, fatigue, liquefaction of the underlying materials, fire, or other causes.*

[65]/ As defined in the MWMA, a "mixed waste" mean any mixture of medical and non-medical waste. Mixed waste is medical waste, except for all of the following: (1) medical waste and hazardous waste is hazardous waste and is subject to regulations as specified in the statutes and regulations applicable to hazardous waste; (2) medical waste and radioactive waste is radioactive waste and is subject to regulations as specified in the statutes and regulations applicable to radioactive waste; and (3) medical waste, hazardous waste, and radioactive waste is radioactive mixed waste and is subject to regulations as specified in the statutes and regulations applicable to hazardous waste and radioactive waste (Section 117730, H&SC).

[66]/ *Ibid*., Tables 1-1 and 1-2, pp. 4, 6 and 7.

***Preliminary Determination 11-4**. Less-than-significant impact.*

Existing overhead steel lattice transmission towers, associated with SCE's Lugo-Mira Loma 500-kV transmission line, currently traverse the project site. Overhead transmission lines consist of a system of support structures and interconnecting wire that is inherently flexible. Industry experience has demonstrated that under earthquake conditions, structure and member vibrations generally do not occur or cause design problems.

Clearance activities between vegetation and transmission lines must be maintained in accordance with Section 304.4.3.1 (Trimming Clearance) in Chapter 15.28 (Fire Code) in Title 15 (Building and Construction) of the City Municipal Code.

CPUC design guidelines and other applicable requirements provide detailed engineering standards designed to prevent impacts to those towers from wind, earthquake, and fire. Transmission support structures are designed to withstand different combinations of loading conditions, including extreme winds. Overhead transmission lines are designed for dynamic loading under variable wind conditions that generally exceed earthquake loads. These design requirements include use of safety factors that consider the type of loading as well as the type of materials use and the tension of the wire between adjoining towers. As a result, the failure of transmission line support structures is extremely rare and typically the result of anomalous loading conditions. Although rare, structure failure of transmission towers is possible.[67]

Failure of the transmission tower at its base or of its anchorage to the foundation would create a hemispherical hazard zone with a radius approximately equal to the tower height. The resulting hazard zone (fall zone) associated with transmission towers can thus be defined as an area extending the height of the lattice tower, as measured outward from its centerline. Persons and property within that hazard zone could be at risk of being struck by the falling tower or electrocuted by an active high-voltage line should it not de-energized upon the tower's failure.

Typically, the width of the SCE right-of-way is, at minimum, equal to twice the height of the lattice tower, such that, in the event of a tower collapse, the arc of the tower's dissent would be confined to the existing easement. As such, unless a joint use of the SCE right-of-way were to be authorized (e.g., park-and-ride facility), neither the public nor privately owned structures would not be placed at risk in the event of a structural failure of the steel towers.

Any joint use of the SCE easement would be dependent upon formal CPUC authorization. As such, subsequent environmental review would be required prior to any such authorization. Through that process, the site user would be required to ensure that public or other use of the right-of-way would not adversely affect the structural integrity of the existing towers or introduce significant public safety hazards. Hazard-related impacts associated with SCE's existing Lugo-Mira Loma 500-kV transmission line would, therefore, be less than significant.

***Environmental Impact 11-5**. The failure of an existing natural gas transmission line or liquid petroleum pipeline could result in the discharge of hazardous and/or flammable materials that could prove hazardous to people and property located in proximity to a pipeline rupture or leak.*

[67]/ California Public Utilities Commission (Aspen Environmental Group), Final Environmental Impact Report/Final Environmental Impact Statement – Antelope-Pardee 500-kV Transmission Project, Application No. A.04-12-007, December 2006, Appendix B, p. Ap.8B-104.

***Preliminary Determination 11-5**. Potentially significant unless mitigation incorporated.*[68]

Based on historic experience, the main causes of pipeline leaks or ruptures can be classified as: (1) corrosion (internal and external); (2) excavation damage; (3) natural forces (e.g., ground movement, flooding displacement; (4) material and weld defects; (5) equipment and operations (such as overpressuring an inadequately protected system through inappropriate operating settings; and (6) other (not included in any of the above or unknown).[69]

As reported by the Transportation Research Board (TRB): "There are many causes and contributors to pipeline failures, including construction errors, material defects, internal and external corrosion, operational errors, malfunctions of control systems or relief equipment, and outside force damage (e.g., by third parties during excavation). Of these, excavation and construction-related damage to pipelines are the leading causes of pipeline failure. Including operator excavation, third-party excavation, vandalism, and other outside forces, such failures in 2003 were estimated by USDOT to contribute 22 and 24 percent of hazardous liquids and natural gas transmission pipeline incidents, respectively. With increasing urbanization, land development activity near transmission pipelines, and the addition of new facilities to serve growing populations, the likelihood of construction-related pipeline damage may increase, and more people and property may be exposed to pipeline failures."[70]

The major hazards associated with products transported by pipelines are flammability and toxicity. Natural gas and liquid fuel products are flammable and can result in fire or explosions under certain conditions. A pipeline failure can result in a release with an un-ignited dispersion of gas or liquid vapors or a fire or an explosion that harms persons within an impact zone defined by harmful intensity levels of the physical effects. In general, the larger the pipeline, the higher the pressure, and the closer it is to people, the greater the potential severity of the consequences.[71]

Buried pipelines are vulnerable to permanent ground deformation and wave propagation (shaking). Ground deformation can include fault rupture, landslide, and liquefaction and associated lateral spreading and settlement. Pipe damage mechanisms include compression/ wrinkling, joint weld cracking/separation, bending/shear resulting from localized wrinkling, and tension. If a pipeline does fail, the consequences are dependent on its contents, diameter, and pressure of its contents. The two general categories of contents are "product" (including liquid fuels that could be gasoline, jet fuel, diesel fuel, or other liquid fuels) and natural gas. The operating pressure in natural gas pipelines can approach 1,000 pounds per square inch (psi).

[68]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; (2) result in the release of hazardous materials or substances which, because of their quantity, concentration, or physical, chemical or infectious characteristics, would cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed; (3) result in the accidental release of air toxic emissions or an acutely hazardous material posing a threat to the public health and safety; and (4) have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

[69]/ *Op. Cit*., Guidance Protocol for School Site Pipeline Risk Analysis, Volume I – User's Manual, p. 2-5.

[70]/ Transportation Research Board, Transmission Pipelines and Land Use: A Risk-Informed Approach, , Committee for Pipeline and Public Safety: Scoping Study on the Feasibility of Developing Risk-Informed Land Use Guidance near Existing and Future Transmission Pipelines, Special Report 281, 2004, p. 19.

[71]/ *Op. Cit*., Guidance Protocol for School Site Pipeline Risk Analysis, Volume I – User's Manual, pp. 2-10 and 3-1.

Gas released through failures in small diameter low-pressure gas mains (distribution mains) will generally dissipate quickly. Failure of large diameter high-pressure natural gas pipelines can result in an explosion that can blast a crater in the surrounding soil and damage nearby and overhead structures and facilities (such as power transmission lines). In any case, an ignition source is required to initiate the explosion (e.g., vehicle ignition system, cigarette lighter, or spark from a metal or stone impact). There is speculation that pipelines running parallel to overhead transmission lines carry an induced current that could cause a spark if the pipeline was ruptured. As such, there is a high probability that there will be an ignition source in the event of a rupture of a high-pressure pipeline. For some liquid fuels, such as diesel, the potential for fire is low but a rupture would result in environmental contamination.[72]

In 2008, in recognition of existing seismic hazards is southern California, the USGS, the California Geological Survey, and the Southern California Earthquake Center, conducted an assessment of the public health and safety hazards associated with a magnitude 7.8 earthquake on the southern San Andreas fault. As indicated in the resulting "ShakeOut Scenario," the USGS concluded that "scientists have determined that this is the most likely source of a large earthquake in all of California."[73] One aftershock scenario involved a magnitude 7.2 event, seventeen hours after the mainshock, on the Cucamonga fault, rupturing along the front of the San Gabriel Mountains. The total rupture area of this event extends about 50 km from Lytle Creek west to near Monrovia.[74] The hypothetical analysis included the assumption that two SCG's transmission pipelines at Cajon Pass would rupture during the mainshock event where the offset causes 6.2 meters of compression in the pipe. A subsequent explosion, possibly as a result of arcing from current within the pipeline (induced by overhead power lines), would then occur. The CalNev 14-inch product pipeline would also rupture as a result of significant ground displacement. The CalNev pipeline is transporting gasoline, adding to the fire. The fire reaches the overhead power lines, causing them to break.[75]

With regards to liquid petroleum pipelines, a fire scenario could result from a pipeline spill and a nearby ignition source. The risk of petroleum product fire is substantial because components of refined products, such as gasoline, evaporate quickly and can form flammable vapor clouds. In the event that a pipeline accident was to result in a rupture or large leak, there is a likelihood that the product could ignite should there be a high concentration of flammable hydrocarbons released and should an ignition source be present.

The failure of a high-pressure natural gas pipeline can lead to various outcomes, some of which can pose a significant threat to people and property in the immediate vicinity of the failure location. For a given pipeline, the type of hazard that develops and the damage or injury potential associated with the hazard will depend on the mode of failure (i.e., leak vs. rupture) the nature of the gas discharged (i.e., vertical vs. inclined jet, obstructed vs. unobstructed jet), and the time to ignition (i.e., immediate vs. delayed). For a natural gas pipeline, the possibility of a significant flash fire resulting from delayed remote ignition is extremely low due to the buoyant nature of the vapor, which generally precludes the formation of a persistent flammable vapor cloud at ground level. The dominant hazard is, therefore, thermal radiation from a sustained jet or trench fire, which may be preceded by a short-lived fireball.

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[72]/ United States Geological Survey and California Geological Survey (MMI Engineering, Inc.), The Shakeout Scenario, Supplemental Study – Oil and Gas Pipelines, Open File Report 2008-1150, May 2008, pp. 3-4.

[73]/ *Op. Cit*., The ShakeOut Earthquake Scenario – A Story that Southern Californians are Writing, United States Geological Survey and California Geological Survey Special Report 207, Circular 1324, pp. 1-2.

[74]/ *Ibid*., pp. 5 and 88.

[75]/ *Ibid*., pp. 147-148.

In the event of a line rupture, a mushroom-shaped gas cloud could form and then grow in size and rise due to discharge momentum and buoyancy. This cloud, should one occur, would disperse rapidly and a quasi-steady gas jet or plume might then establish itself. If ignition were to occur before the initial cloud were to disperse, the flammable vapor might then burn as a rising and expanding fireball before decaying into a sustained jet or trench fire.[76] If ignition is slightly delayed, only a jet or trench fire would likely develop.[77]

Although a variety of analysis methodologies may be available, one often cited model (C-FER Model)[78] examines isometric thermal radiation distances to determine a burn radius and a one percent fatality radius from a natural gas pipeline break. The C-FER Model calculates the degree of harm to people due to thermal radiation by using a mode that relates the potential for bury injury or fatality to the thermal load received. A 30-second exposure time is assumed for people exposed to the fire in the open. In this interval, it is assumed that an exposed person will remain in a fixed position for between 1-5 seconds and then run at 5 mph in the direction of shelter. It is further assumed that an exposed person would find a shelter located within 200 feet of their initial position. It is offered that the heat flux that will cause burn injury is between 1,000 and 2,000 Btu/h/ft^2, depending on the burn injury criteria. The threshold level of heat flux for fatal injury is determined when the chance of mortality is one percent. The heat flux is calculated to be 5,000 Btu/h/ft^2. On the basis of thermal radiation levels, C-FER calculates the radius of a hazard area as a function of pipeline size (diameter) and operating pressure.

Figure 4.11-2 (Hazard Area Radius as a Function of Pipeline Diameter and Pressures)[79] depicts the resulting hazard area radius as a function of line diameter and operating pressure. As illustrated, a 36-inch diameter natural gas pipeline operating at a maximum pressure of 1,000 psi would have a hazard area radius of 750-800 feet. A 6-inch diameter pipeline operating at less than 500 psi would have a hazard area radius of less than 100 feet.[80]

The annual frequency of pipeline failure and product release is based on historic data from the Office of Pipeline Safety (OPS) Gas Pipeline Incident Database and Hazardous Liquid Pipeline Accident data (available at www.phma.dot.gov). These failure rates are based on historic data for significant releases specific to pipelines in California. As indicated in Table 4.11-1 (Normalized Pipeline Average Failure and Release Frequencies for California Pipelines [1984-

[76]/ A trench fire is essentially a jet fire in which the discharging gas jet impinges upon an opposing jet and/or the side of the crater formed in the ground. Impingement dissipates some of the momentum in the escaping gas and redirects the jet upward, thereby producing a fire with a horizontal profile that is generally wider, shorter, and more vertical in orientation than would be the case for a randomly directed and unobstructed jet. The total ground area affected can, therefore, be greater for a trench fire than an unobstructed jet fire because more of the heat-radiating flame surface will typically be concentrated near the ground surface.

[77]/ Stephens, Mark J., C-FER Technologies, A Model for Sizing High Consequence Areas Associated with Natural Gas Pipelines, GRI-00/0189, Gas Research Institute, October 2000, pp. 1-2.

[78]/ As noted by the USDOT: "The appropriateness of the C-FER model was the subject of considerable discussion at the public meetings held during the comment period on the proposed rule. As a result of these discussions and comments to the docket, RSPA/OPS has concluded that the C-FER model is sufficiently conservative for use in the screening process to identify HCAs. RSPA/OPS believes the model adequately reflects the distance, lateral to the pipeline, at which significant effects of accidents will occur" (Source: California Department of Education [URS Corporation], Guidance Protocol for School Site Pipeline Risk Analysis, Volume I – User's Manual, February 2007, p. C-1).

[79]/ *Ibid*., p. 11.

[80]/ *Op. Cit*., Transmission Pipeline and Land Use – A Risk-Informed Approach, Committee for Pipeline and Public Safety: Scoping Study on the Feasibility of Developing Risk-Informed Land Use Guidance near Existing and Future Transmission Pipelines, pp. 110-110.

2001 Period]),[81] for refined product pipelines, the failure probability of pipelines is estimated to be 1.3 x 10^{-3} (1.3E-03) or 0.0013 releases per mile per year.[82]

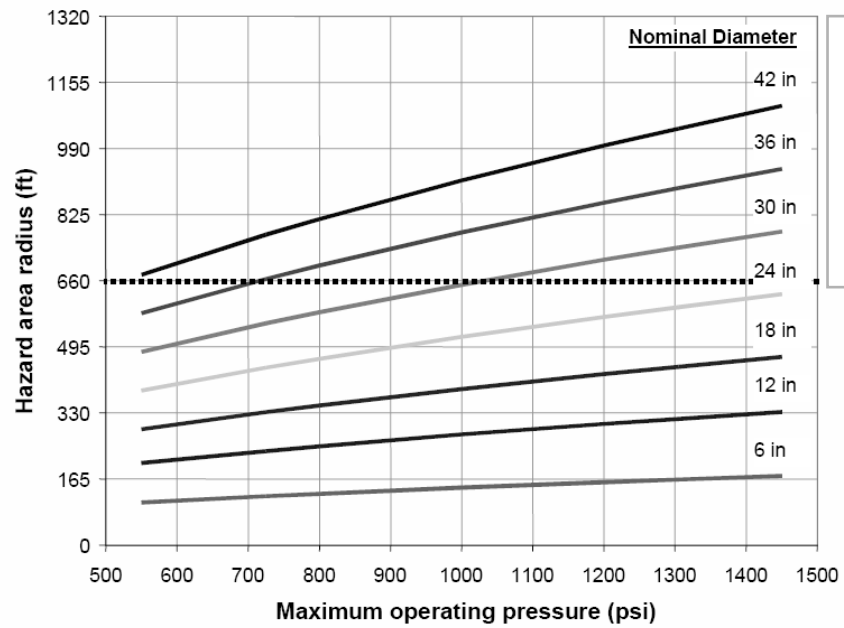

Figure 4.11-2
HAZARD AREA RADIUS AS A FUNCTION OF PIPELINE DIAMETER AND PRESSURES
Source: Gas Research Institute

Table 4.11-1
NORMALIZED PIPELINE AVERAGE FAILURE AND RELEASE FREQUENCIES FOR CALIFORNIA PIPELINES
(1984-2001 Period)

Pipeline Product	Pipeline Service Type[1]	Release Frequency (number of releases/mile-year)
Natural Gas	Transmission Line	1.2E-04 (0.00012)
Natural Gas	Gathering Line	2.1E-04 (0.00021)
Natural Gas	Distribution Main Line	4.6E-05 (0.000046)
Hazardous Liquids – All Commodity Types	Transmission Line	1.8E-03 (0.0018)
Crude Oil	Transmission Line	2.3E-03 (0.0023)
Refined Product	Transmission Line	1.3E-03 (0.0013)

Notes:
1. As defined in Office of Pipeline Safety regulations.

Source: California Department of Education

Prevention measures are used to control risks by reducing the likelihood of a risk event occurring. The Code of Federal Regulations (49 CFR Part 192) and other codes of practice broadly define prevention and mitigation measures for pipeline leaks. Most prevention measures are the responsibility of the pipeline operator. Some are implemented during the design and construction of the pipeline while other prevention measures are incorporated into the day-to-

[81]/ *Op. Cit*., Guidance Protocol for School Site Pipeline Risk Analysis, Volume I – User's Manual, Table 4-3, p. 4-21.

[82]/ *Ibid*., pp. 4-20 and 21.

day operations of the pipeline. An operator's own good practices, therefore, comprises reasonable prevention activities.[83]

A number of mitigation measures (Mitigation Measure 1-2 through Mitigation Measure 1-4) have been formulated which will ensure that the siting of specific land uses occurs in recognition of the presence of those facilities and the potential hazards associated therewith. In accordance with the recommended mitigation, with the exception of open space, prior to approving any land use within the "high consequence area" the Applicant shall provide the City a copy of the pipeline integrity management plan (as prepared by the pipeline operator pursuant to 49 CFR 192.907), if available. With regards to potential school sites and multi-use areas, a mitigation measure (Mitigation Measure 1-5) has been formulated to ensure that an appropriate "school site pipeline risk analysis" is conducted in accordance with CDE requirements and methodologies. Implementation of the above cited measures would reduce potential hazard-related impacts to a less-than-significant level.

Under each regulated operators' integrity management program, retrofits requiring more frequent valves and thicker wall pipes can be required by changes in the population density. Current pipeline safety requirements provide a greater safety margin against corrosion for gas pipelines located in populated areas. For example, the regulations require pipelines that are located in Class 3 and Class 4 locations (high population areas) to be of greater wall thickness than pipelines located in Class I and Class 2 locations. Operators must replace the existing pipe with thicker, stronger pipe when population densities increase (i.e., the class location changes). As a result, pipelines located in populated areas are less susceptible to corrosion-induced rupture because it takes longer for corrosion to penetrate the pipe to a depth where the corrosion could cause a concern (68 FR 4281).

In compliance with Federal Pipeline Safety Regulations (49 CFR Part 192), with certain exceptions, regulated pipeline operators must reassess HCAs on a 7-year cycle. Should populations intensities change in close proximity to regulated pipelines, higher safety factors are required and operators will be required to institute any requisite improvements.

4.11.5.3 Cumulative Impacts

Environmental Impact 11-6*. Implementation of the proposed project, in combination with other related projects, will result in the exposure of an increasing number of individuals and property improvements to existing hazards, including increased health and safety risks associated with exposure to hazardous materials.*

Preliminary Determination 11-6*. Less-than-significant impact.*

Hazards and hazardous material impacts are generally localized (site-specific) to the area of each identified hazard and/or material. Compliance with regulatory requirements will substantially ensure that known and related project-specific hazards are avoided or reduced to the maximum extent feasible, that workers and the general public operate in a relatively safe environment, and that hazardous materials are properly handling, transported, used, consumed, and storage during the construction and operation of the proposed project in combination with other related projects.

[83]/ *Ibid*., p. 2-6.

To the same extent that the potential hazards and hazardous materials impacts attributable to the proposed project can be effectively mitigated to a less-than-significant level, related project-specific actions can be formulated and instituted such that any known hazards associated with those projects can, themselves, be reduced to below a level of significance.

4.11.6 Recommended Mitigation Measures

- No additional mitigation measures are required or recommended.

4.11.7 Significant Unavoidable Adverse Effects

As mitigated, the approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative hazards or hazards materials impacts.

4.12 CULTURAL RESOURCES

4.12.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- PCR Services Corporation, Phase I Cultural and Paleontological Assessment - Lytle Creek Ranch Specific Plan, City of Rialto, California, March 2008 (see Appendix III-M-A).
- PCR Services Corporation, Phase II Cultural and Paleontological Assessment - Lytle Creek Ranch Specific Plan, City of Rialto, California, June 25, 2008 (see Appendix III-M-B).

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.12.2 Regulatory and Policy Setting

4.12.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **National Historic Preservation Act**. As stipulated in the National Historic Preservation Act of 1966 (16 U.S.C. 470, 36 CFR 60.4 and 36 CFR 800) (NHPA), "each federal agency shall initiate measures to assure that where, as a result of federal action or assistance carried out by such agency, a historic property is to be substantially altered or demolished, timely steps are taken to make or have made appropriate records, and that such records then be deposited, in accordance with section 101(a), in the Library of Congress or with such other appropriate agency as may be designated by the Secretary, for future use and reference" (Section 110[b]). Under federal criteria, in order for a building or structure to be significant, it must be found eligible for listing in the National Register of Historic Places[1] (NRHP or National Register). The NRHP comprises the nation's inventory of historic places and the national repository of documentation on the variety of historic property types, significance, abundance, condition, ownership, needs, and other information. Federal listing generally requires that a building or structure be at least fifty years of age and possess "the quality of significance in American history, architecture, archaeology, engineering and culture. . .present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, material, workmanship, feeling and association."[2]

[1]/ The federal criteria includes buildings and structures that: (1) are associated with events that have made a significant contribution to the broad patterns of our history; (2) are associated with the lives of persons significant in our past; (3) that embody the distinctive characteristics of a type, period, or method of construction that represents the work of a master or that possesses high artistic values or that represents a significant and distinguishable entity whose components may lack individual distinction; or (4) that have or are likely to yield information important in prehistory or history.

[2]/ 36 CFR Part 800.

Section 106, which is implemented through the Advisory Council on Historic Preservation's (Council) regulations, "Protection of Historic Properties" (36 CFR Part 800), stipulates that the State Historic Preservation Officer (SHPO) must be consulted to determine the eligibility of a site for listing in the National Register. Historic properties are defined as prehistoric or historic sites, buildings, structures, districts, and objects included in or eligible for inclusion in the NRHP and artifacts, records, and remains related to such properties. Cultural resources may be eligible for nomination to the NRHP if they "possess integrity of location, design, setting, materials, workmanship, feeling and association" and if those resources are: (A) associated with significant themes in our Nation's history; (B) significant persons in our Nation's historic; (C) embody distinctive construction characteristics or works of a master; or (D) have yielded or have the potential to yield information important to history or prehistory.[3]

- **National Trails System Act of 1968**. The National Trails System Act (Public Law 90-543) (16 U.S.C. 1241-1251) was enacted to "promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open air, outdoor areas and historic resources of the Nation." The act recognizes and commemorates historic travel routes associated with important events in our nation's history. As defined, national historic trails "follow as closely as possible and practicable the original trails or routes of travel of national historic significance" and "shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment." National scenic trails are "so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass." Two national historic trails (Juan Bautista De Anza National Historic Trail, Old Spanish National Historic Trail) and one national scenic trail (Pacific Crest National Scenic Trail) exist, in part, in southern California.

  Executive Order 13195 (Trails for the 21st Century), as signed by President Clinton on January 18, 2001, specifies, in part: "Federal agencies will, to the extent permitted by law and where practicable-and in cooperation with Tribes, States, local governments, and interested citizen groups-protect, connect, promote, and assist trails of all types throughout the United States. This will be accomplished by: (a) Providing trail opportunities of all types, with minimum adverse impacts and maximum benefits for natural, cultural, and community resources; (b) Protecting the trail corridors associated with national scenic trails and the high priority potential sites and segments of national historic trails to the degrees necessary to ensure that the values for which each trail was established remain intact. . .(i) Promoting trails for safe transportation and recreation within communities; (j) Providing and promoting a wide variety of trail opportunities and experiences for people of all ages and abilities."

  The Old Spanish Trail, located in proximity to the project site, is designated as a national historic trail, traveling more than 2,700 miles from Santa Fe, New Mexico through Colorado, Utah, Arizona, Nevada, and California.

The Secretary of the Interior is responsible for establishing professional standards and providing advice on the preservation and protection of all cultural resources listed in or eligible for listing in the National Register. The "Secretary of Interior's Standards for the Treatment of Historic

[3]/ 36 CFR 60.4.

Properties" (Secretary Standards) apply to all proposed development grant-in-aid projects assisted through the National Historic Preservation Fund and are intended to be applied to a wide variety of resource types, including buildings, sites, structures, objects, and districts and address the following four treatments: preservation, rehabilitation, restoration, and reconstruction. The treatment standards are codified as 36 CFR Part 68. The Secretary Standards are only regulatory for projects receiving federal grant-in-aid funds; otherwise the standards are intended only as general guidance for work on any historic building.[4]

A project that has been determined to conform with the Secretary Standards can generally be considered to be a project that will not cause a significant impact (Section 15126.4[b][1], CCR). In most cases, if a project meets those standards, the project can be considered categorically exempt from CEQA (Section 15331, CCR).[5]

4.12.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **California Government Code**. Sections 25373 and 37361 of the CGC authorize county and city governments to enact zoning ordinances for the protection and regulation of buildings and structures of special historical value. Section 65860 of the CGC enlarges the scope of those zoning powers to allow those agencies to regulate the use of buildings, structures, and land between business, industry, residential, and open space.

  With regards to California Native American traditional tribal cultural places,[6] SB 18, as approved by the Governor on September 29, 2004, stipulates that, subject to the limitations outlined therein, certain tribal consultation and notice requirements shall apply to local governments when adopting or amending general and specific plans. As specified in SB 18 and as outlined in the Governor's Office of Planning and Research's "Supplement to General Plan Guidelines – Tribal Consultation Guidelines"[7] (Tribal Consultation Guidelines), prior to adoption or amendment of a general or specific plan, the local government must: (1) notify the appropriate California Native American tribe[8] of the opportunity to conduct consultation for the purpose of preserving or mitigating impacts to cultural places; (2) refer the proposed action to those tribes that are on the Native American Heritage Commission (NAHC) contact list that have traditional lands within the agency's jurisdiction; and (3) send notice of a public hearing, at least ten days prior to the hearing, to tribes that have filed a written request for such notice. Pursuant

[4]/ Weeks, Kay. D. and Grimmer, Annie E., The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings, United States Department of the Interior, National Park Service, 1995.

[5]/ California Department of Parks and Recreation, Office of Historic Preservation, Technical Assistance Series #1 – California Environmental Quality Act and Historic Resources, May 23, 2001, p. 6.

[6]/ As defined in Sections 4097.9 and 5097.995 of the PRC.

[7]/ Governor's Office of Planning and Research, Supplement to General Plan Guidelines – Tribal Consultation Guidelines, April 15, 2005.

[8]/ Senate Bill 18 defines the term "California Native American tribe" as "a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the Native American Heritage Commission." "Federal recognition" is a legal distinction that applies to a tribe's rights to a government-to-government relationship with the federal government and eligibility for federal programs (Source: Governor's Office of Planning and Research, Supplement to General Plan Guidelines – Tribal Consultation Guidelines, April 15, 2005, p. 6).

to Section 65352.3, only if a tribe is identified by the NAHC and the tribe requests consultation after being contacted by a local government, must the local government consult with the tribe on the plan proposal.

- **California Public Resources Code**. Pursuant to Section 5020.1(k) of the PRC, a "historic resource" must be listed on a "local register of historical resources." A "local register" is a "list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution." Resources that are listed in a local historic register or deemed significant in a historical resource survey as provided under Section 5024.1(g) of the PRC are to be presumed historically or culturally significant unless "the preponderance of evidence" demonstrates they are not. Section 5020.1 establishes the threshold of "substantial adverse change" as inclusive of demolition, destruction, relocation, or other alteration activities that would impair the significance of the historic resource. Section 5097.5 of the PRC makes it a misdemeanor for anyone to knowingly disturb any archaeological, paleontological, or historical features situated on public lands.

  The California Native American Heritage Commission (NAHC), created by the California Legislature in 1976 (AB 4239) is the State trustee agency for the protection and preservation of Native American cultural resources, sacred sites on public land, and Native American burial sites. In fulfilling its legislative mandate, the NAHC facilitates consultation between California tribal governments, Native American organizations and Tribal Elders with local, State, and federal agencies, as dictated by federal and State tribal or Native American consultation requirements. Section 5097.95 of the PRC requires each State and local agency to cooperate with the NAHC in carrying out its duties.

  The California State Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation (DPR), implements the policies of the NHPA on a statewide level. OHP is mandated under Section 5024.6(n) of the PRC to maintain the State Historic Resources Inventory for planning and to maintain comprehensive records of historic resources pursuant to federal and State laws. Section 6254.10 of the CGC establishes that the records of the State Historic Resources Inventory relating to archaeological resources are exempt from disclosure requirements of the California Public Records Act (Sections 6250-6270, CGC).

  The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdiction. The criteria for eligibility for the California Register of Historic Resources (CRHR or California Register) are based upon NRHP criteria.[9] Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the NRHP.[10]

  To be eligible for the CRHR, a prehistoric or historic property must be significant at the local, state, and/or federal level under one or more of the following criteria: (A) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (B) is associated with the lives of persons

[9]/ California Public Resources Code § 5024.1(b).
[10]/ California Public Resources Code § 5024.1(d).

important in our past; (C) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (D) has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the CRHR must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR. Additionally, the CRHP consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The CRHR automatically includes the following: (1) California properties listed on the NRHP and those formally Determined Eligible for the National Register; (2) California Registered Historical Landmarks from No. 770 onward; and (3) those California Points of Historical Interest (PHI) that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register. Other resources that may be nominated to the CRHR include: (A) historical resources with a significance rating of Category 3 through 5[11]; (B) individual historical resources; (C) historical resources contributing to historic districts; and (D) historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

Section 101(b)(3)(c) of the NHPA instructs the SHPO to "prepare and implement a comprehensive Statewide historic preservation plan." In accordance therewith, the OHP prepared a "Comprehensive Statewide Historic Preservation Plan" (State Historic Preservation Plan) designed to ensure that historic properties are taken into consideration at all levels of planning and development. The State Historic Preservation Plan identifies the following Statewide preservation goals: (1) increase the number of private and public historic resources[12] that are protected and preserved in all geographical regions of the State; (2) increase the number of individuals and organizations who understand the value of historic preservation through education and community outreach programs; (3) improve California's economy by using historic preservation tools and incentives to promote jobs and stimulate investment in local communities; (4) expand and diversify the existing funding base for historic preservation programs while seeking dependable, long-term sources of economic support; (5) encourage and implement historic preservation as a regular component of public policy planning at all levels of government; (6) ensure that the identification of and information about historic and cultural resources in California is comprehensive, available in a consistent and complete format, and continually acquired; and (7) promote the preservation and the stewardship of cultural resources among a diversified State population representing all levels of the socio-economic spectrum.[13]

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[11]/ Properties identified as eligible for listing in the NRHP, the CRHR, and/or a local jurisdiction's register.

[12]/ As defined in Section 5020.1(j) of the PRC, "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

[13]/ California Department of Parks and Recreation, Office of Historic Preservation, Forging a Future with a Past – A Comprehensive Statewide Historic Preservation Plan for California, December 1997, p. 4; California Department of Parks and Recreation, Office of Historic Preservation, Comprehensive Statewide Historic Preservation Plan for California, 2000-2005, May 2001, p. 20.

- **California Environmental Quality Act**. As described in Section 21084.1 of the PRC and Section 15064.5(a)(4) of the CCR, "[t]he fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 [of the PRC] shall not preclude a lead agency from determining whether the resource may be a historical resource for purposes of this section."[14] Section 15064.5 of the CCR establishes general rules for the analysis of historical (including archaeological) resources in order to determine whether a proposed project may have a substantial adverse effect on the significance of that resource. Section 15064.5(a) of the CCR defines a "historic resource" (relying on the holding in League for Protection of Oakland's Architectural and Historic Resources v. City of Oakland to describe the relative significance of resources listed in the CRHR, listed in a local register or survey or eligible for listing, or that may be considered locally significant despite not being listed or eligible for listing).[15,16]

  As defined in Section 21083.2 of the PRC a "unique archaeological resource" is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; and/or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

  Section 15064.5 of the CCR broadens the approach to CEQA by using the term "historical resource" instead of "unique archaeological resource." The State CEQA Guidelines recognize that certain historical resources may also have significance. The State CEQA Guidelines recognize that a historical resources include: (1) resources in

[14]/ A "historic resource" includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant (pubic agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant); or (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

[15]/ A resource does not need to have been identified previously either through listing or survey to be considered significant under CEQA. In addition to assessing whether historic resources potentially impacted by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the CRHR criteria prior to making a finding as to a proposed project's impacts to historic resources (Section 21084.1, PRC; Section 15064.5[a][3], CCR).

[16]/ Section 15064.5(b) describes those actions that have or that may have substantial adverse effects and include the following: (1) physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired; (2) the significance of an historical resource is materially impaired when a project: (A) demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; (B) demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a "local register" of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or (C) demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register, as determined by a lead agency for purposes of CEQA.

the CRHR; (2) resources included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC; and (3) objects, buildings, structures, sites, areas, places, records, or manuscripts which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of the PRC and Section 15064.5 of the CCR then apply. If an archaeological site does not meet the criteria for a historical resource contained in the State CEQA Guidelines, then the site is to be treated in accordance with the provisions of Section 21083 of the PRC (which is as a "unique archaeological resource"). The State CEQA Guidelines note that if an archaeological resource is neither a "unique archaeological resource" nor a "historical resource," the effects of the project on those resources shall not be considered a significant effect on the environment.[17]

Paleontological resources are also afforded protection by environmental legislation under CEQA. The State CEQA Guidelines (Appendix G, Part V) provides guidance relative to significant impacts on paleontological resources and states that a project will normally result in a significant impact on the environment if it will disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study. Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains is a misdemeanor.

- **California Penal Code**. Under the provisions of the California Penal Code (CPC), it is a misdemeanor offense for any person, other than the owner, to willfully damage or destroy archaeological or historical features on public or privately owned land (14 CPC Part 1, Section 622.5). Section 622.5 of the California Penal Code sets the penalties for damage or removal of paleontological resources.

- **California Health and Safety Code**. Section 7050.5 of the H&SC stipulates that if human remains are discovered during construction, the project owner is required to contact the county coroner. No further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Section 5097.98 of the PRC. If the remains are determined to be prehistoric, the county coroner must notify the NAHC which will determine and notify a Most Likely Descendant (MLD). With the permission of the property owner, the MLD may inspect the site of the discovery (within 24 hours of notification by the NAHC). The MLD may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burial practices.

4.12.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such

[17]/ Section 15064.5(c)(4), CCR.

time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **San Bernardino County General Plan**. As indicated in the County General Plan, only 15 percent of the County has been surveyed for cultural resources. As a result, there exists a high potential for the discovery of previously unknown cultural resources. As further indicated therein, the County is host to numerous locales of "significant paleontological resources."[18] In the context of the proposed project, those cultural resource goals, policies, and programs presented in the County General Plan that would appear to be most closely related to the unincorporated County portion of the project site, if processing were to occur through the County, are presented below.

  - Goal CO3. The County will preserve and promote its historic and prehistoric cultural resources.

    - ◊ Policy CO3.1. Identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.

      Programs. Mitigation of impacts to important cultural resources will follow the standards established in Appendix K of the California Environmental Quality Act Guidelines, as amended to date.

    - ◊ Policy CO3.2. Identify and protect important archaeological and historic cultural resources in all lands that involves disturbance of previously undisturbed ground.

    - ◊ Programs. (1) Require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County's application acceptance for all land use applications in planning regions lacking cultural resource overlays and in lands located outside of planning regions. (2) Should the County's preliminary review indicate the presence of known cultural resources or moderate to high sensitivity for the potential presence of cultural resources, a field survey and evaluation prepared by a qualified professional will be required with project submittal. The format of the report and standards for evaluation will follow the "Guidelines for Cultural Resource Management Reports" on file with the San Bernardino County Land Use Services Department.

    - ◊ Policy CO3.4. The County will comply with Government Code Section 65352.2 by consulting with tribes as identified by the California Native American Commission on all general plan and specific plan actions.

    - ◊ Policy CO3.5. Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.[19]

[18]/ *Op. Cit.*, County of San Bernardino 2007 General Plan, Cultural Resources Element, pp. V-8 and V-9.
[19]/ *Ibid.*, pp. V-18 through V-22.

- **San Bernardino County Development Code**. As indicated in Section 81.01.020 (Purpose and Effect of the Development Code) in Chapter 91.01 (Purpose and Effect of Development Code), among other purposes, it is the declared purpose of the County Development Code, to conserve and protect the County's important agricultural, cultural, natural, open space, and scenic resources.

  The County has established a cultural resource overlay in order to provide for the identification and preservation of important archaeological and historic resources (Section 82.12.010). Applications for projects proposed within a cultural resource overlay district shall include a report, prepared by a qualified professional, that determines the presence or absence of archaeological and cultural resources on the project site and recommends appropriate data recovery and protection measures. The project site is not included within a County-designated cultural resource overlay district.

4.12.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. As indicated in the City General Plan, land that is now the City has been continuously occupied since prehistoric times. The earliest known residents were the Serrano Indians who located an important village on the Rialto Bench, with similar settlements scattered throughout the area. Archaeological and historic resources are an integral part of the City's heritage.[20] The City classifies cultural resources identified within their City limits into one of the following categories: archaeological resources, historic archaeological resources, and historic resources. Archaeological resources are physical properties in the environment resulting from human activities that predated recorded history, or until the Mission Era, circa 1769. These resources are attributed to the Serrano or Gabrielino Indians, who once occupied the region within the City limits and surrounding vicinity. Historical-period archaeological resources are resources that date from the 1769 to the beginning of the 20th century and are generally attributed to Euro-American settlement of the region. These resources are relatively rare in the Project vicinity. Historic resources refer to resources that date from the beginning of the 20th Century to 50 years ago and are attributed to the primary development of the City.

  As illustrated in Figure 4.12-1 (City of Rialto General Plan – Northern Portion of the Historic/Archaeological Resources Sensitive Map), the City has developed a Historic/Archaeological Resources Sensitivity Map based on the results of previous cultural resource studies that highlights areas where resources are more likely to be encountered than others.[21] According to the map, portions of the Neighborhoods II, III, and IV of the project site are located within a high sensitivity zone for prehistoric archaeological resources.

[20]/ *Op. Cit*., City of Rialto General Plan, Cultural and Historic Resources Element, p. IX-1.
[21]/ *Ibid*., Figure 4, *City of Rialto Historical/Archaeological Sensitivity Map,* on page 12.

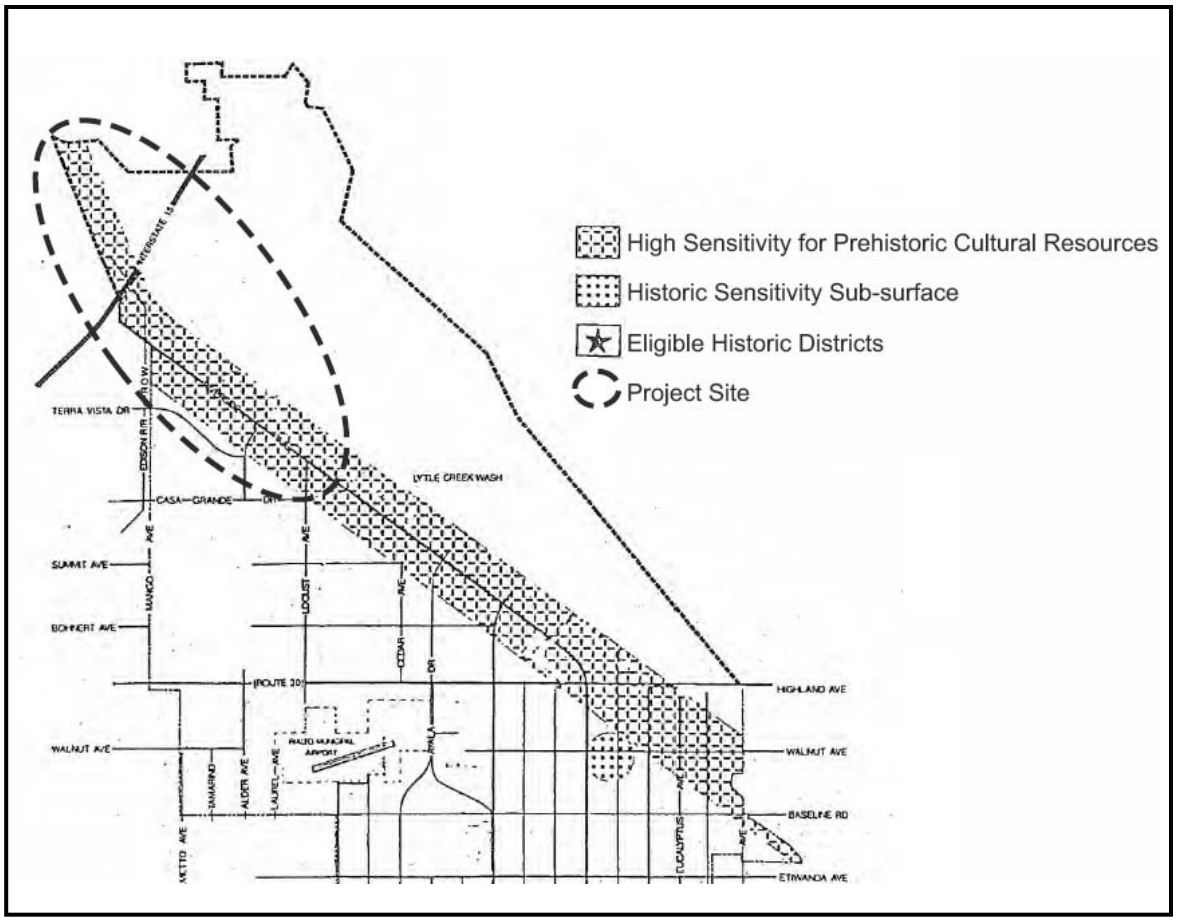

Figure 4.12-1
CITY OF RIALTO GENERAL PLAN - NORTHERN PORTION OF THE HISTORIC/ARCHAEOLOGICAL RESOURCES SENSITIVE MAP
Source: City of Rialto

In the context of the proposed project, those cultural resource goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

- Goal 4.1. Promote historic preservation efforts within the City of Rialto.
  - ◊ Policy 4.1.1. The City shall incorporate historically and architecturally significant buildings into new projects, whenever feasible. Developers will be encouraged to: renovate or restore historically significant structures; protect and enhance design features associated with historic Rialto, including street trees, gardens, and river rock walls; and develop new structures and renovate existing buildings within historic districts which use only those materials, architectural details and design techniques compatible with the City's architectural heritage.[22]

[22]/ *Op. Cit*., City of Rialto General Plan, Community Design Element, p. VIII-12.

- Goal 2.1. All significant archaeological resources in Rialto shall be surveyed, recorded and, where feasible, protected.

  - ◊ Policy 2.1.1. The City shall consult the Archaeological Information Center at the San Bernardino County Museum to document the findings from archaeological surveys previously conducted on undeveloped land in Rialto.

  - ◊ Policy 2.1.2. Prior to development, archaeological surveys will be required for all sites in archaeologically sensitive areas[23] where no previous surveys are recorded. Findings of these new surveys will be added to the City's survey documentation, and reported to the Archaeological Information Center at the San Bernardino County Museum.

  - ◊ Policy 2.1.3. Subsequent to surveys conducted in archaeological sensitive areas, any archaeological finds will be recorded and evaluated. Where appropriate, measures to mitigate adverse impacts on findings will be taken in accordance with the California Environmental Quality Act, the National Environmental Quality Act, and/or the National Historic Preservation Act.

  - ◊ Policy 2.1.4. All recovered specimens from archaeological sites shall be permanently curated at a qualified repository recommended by Archaeological Information Center at the San Bernardino County Museum.

- Goal 3.1. All significant historical resources within Rialto shall be surveyed, recorded and, where feasible, protected.

  - ◊ Policy 3.1.1. All archaeological surveys conducted pursuant to the policies of the City of Rialto shall be required to include historical archaeological surveys.

  - ◊ Goal 4.1. Preserve Rialto's significant historic resources as a source of community identity, stability, aesthetic character, and socioeconomic value.[24]

Applicable or potentially applicable cultural resource policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. As indicated, in part, in Section 18.71.010 (Purpose and Intent) in Chapter 18.71 (Historic Preservation) in Title 18 (Zoning) of the City Municipal Code, the State Legislature of California, pursuant to Sections 37361 and

[23]/ As illustrated in Figure IX-1 (Historic/Archaeological Resources Sensitivity) in the Cultural and Historic Resources Element of the City General Plan, an area of "high sensitivity for prehistoric and cultural resources" is illustrated south of Lytle Creek, extending along both sides of Riverside Avenue.

[24]/ *Op. Cit*., City of Rialto General Plan, Cultural and Historic Resources Element, pp. IX-2 through IX-5.

25373 of the CGC, has recognized the value of identifying protecting and preserving places buildings, structures, and other objects of historical, aesthetic, and cultural importance and has empowered cities to adopt regulations and incentives for the protection, enhancement, perpetuation and use of such places, buildings, structures and other objects. The City Municipal Code includes provisions of the establishment of a Historic Preservation Board. As indicated in Section 18.71.030 (Historic Preservation Board): "A historic preservation board is authorized to make recommendations, decisions and determinations concerning the designation, preservation, protection, enhancement, and perpetuation of these historical, and cultural resources which contribute to the culture and aesthetic values of the City."

4.12.3 Environmental Setting

4.12.3.1 Regional Setting

Regional Setting

It is reported that the project area's earliest residents were the Serrano Indians who lived in the valley during the cooler parts of the year and moved into the nearby mountain areas, including Lytle Creek canyon, during the hot summer months to gather acorns, fish, and hunt.[25]

European explorers during the 18th and 19th Centuries followed the "Mojave Indian Trail," used by Native American tribes as a trade route between the Mojave Desert and the Pacific Coast. Pedro Fagés' 1772 journey through the Cajon Pass is the first documented historic trip through the pass.[26] In 1776, Mojave Indian guides escorted Padre Francisco Garcés from the desert to the San Bernardino Valley. The path taken, which did not parallel the drainage of the Cajon, became known as the "Mojave Indian Trail."[27] The next notable traveler along the Mojave Indian Trail was Jedediah Smith in 1826 and 1827. Jedediah Smith's expedition "did for California what the expedition of Lewis and Clark did for the Pacific Northwest. . .It opened up the first of the great transcontinental routes to California."[28]

The project site is situated on the west side of the mouth of Cajon Pass which is a major passageway between the Mojave Desert and coastal southern California. The first European settler of the Cajon Pass was Englishman Michael White, a naturalized Mexican. In order to defend the region from Indian horse raiders from the Mojave Desert, who frequently attacked inland ranchos during the 1930's and 1940's, Governor Manuel Micheltorena granted Micheal White Rancho Muscupiable in 1843. In April 1948, Captain H.G. Boyle led veterans of the Mexican American War back to Salt Lake City, via the Cajon Pass. Mormon settlers passed though Cajon Pass in 1851, following the Salt Lake Trail southward to the San Bernardino

[25]/ Lytle is for Everyone Council, Lytle is Vital: Celebrating the Life of the Lytle Creek Watershed, Draft, October 2006, p.8.

[26]/ United States Army Corps of Engineers and the County of San Bernardino (URS Corporation), Final Environmental Impact Statement/Environmental Impact Report for the Proposed BNSF Cajon Third Main Track Summit to Keenbrook, March 2007, p. 3-215.

[27]/ From the desert, the Mojave Indian Trail followed the Mojave River up to its headwaters in the San Bernardino Mountains. From there, the trail led due south through Sawpit Canyon to a point currently called Pine Flat, then down the vast alluvial fan between Meyer and Cable Canyons to the bottom of Cajon Canyon where it cut west toward San Gabriel.

[28]/ Hoover, Mildre Brooke, Rensch, Eugene Hero, Rensch, Ethel Grace, Historic Spots of California, Third Edition, 1966, p. 317.

Valley, where they founded the City of San Bernardino. In 1861, John Brown, Jr. moved to San Bernardino and, in partnership with Henry M. Willis and George L. Tucker, constructed and operated a toll road from Summit Valley to Cajon. The toll road was permitted by the California State Legislature and was build to connect the newly discovered gold fields in the Holcomb Valley (a now defunct gold mining village located north of Big Bear Lake [California Historic Landmark No. 619]). The construction of the road, identified as "Brown's Toll Road," followed the general path of Cajon Creek.[29]

As described in the City's "Consolidated Plan": "In 1887, a railroad connector line was built between San Bernardino and Pasadena by the Santa Fe Railroad. Along the line, town sites were located every 2,600 yards and by the fall of that year over 25 new towns had been built. This same year, the Semitropic Land and Water Company was formed. Its purpose was to organize the purchase, improvement and slae of real estate, water, water rights and privileges. Also in this year, a group of Methodists arrived seeking a new college site. Although the college was never built, it was the Methodists who started the town of Rialto. It is not known how Rialto got its name. One story is that it is a contraction of Rio (river) and Alto (high). Another belief is that it was named after the Rialto Bridge located in Venice, Italy. In either case, the bridge has remained a community symbol and will continue as the 'Bridge of Progress.'"[30]

Old Spanish National Historic Trail Comprehensive Management Plan

In 1968, the United States Congress established the National Trails System and designated the first national trails. National Historic Trails are extended trails that closely follow a historic trail or route of travel of national significance. Designation identifies and protects historic routes, historic remnants, and artifacts for public use and enjoyment. The United States Department of the Interior - Bureau of Land Management (BLM) is responsible for over 4,500 miles of ten National Historic Trails.

As described in the National Trails System Act of 1968 (P.L. 90-543), as amended: "The Old Spanish National Historic Trail, an approximately 2,700 mile long trail extending from Santa Fe, New Mexico, to Los Angeles, California, that served as a major trade route between 1829 and 1848, as generally depicted on the maps numbered 1 through 9, as contained in the report entitled 'Old Spanish Trail National Historic Trail Feasibility Study,' dated July 2001, including the Armijo Route, Northern Route, North Branch, and Mojave Road." The "Old Spanish Trail National Historic Trail Feasibility Study" contains a detailed discussion of the history of the Old Spanish National Historic Trail. The following text is excerpted from that document:

> It is commonly said that the Old Spanish Trail was neither 'old' nor 'Spanish.' The first documented use of the name came from John C. Frémont in the 1840s, and the name was picked up and used by others, principally Anglo-American travelers. Nineteenth-century Mexican traders in New Mexico referred to it as the '*Camino de California*' and *Californios* referred to it as the '*Camino de Santa Fe*' or the '*Camino de Nuevo Mexico*.' Sometimes, Anglo-Americans used those designations, but not often. The name 'Old Spanish Trail' has come into common use and is now considered the appropriate name for the trail.[31]

[29]/ *Op. Cit*., Final Environmental Impact Statement/Environmental Impact Report for the Proposed BNSF Cajon Third Main Track Summit to Keenbrook, pp. 3-215 and 216.

[30]/ City of Rialto, 2005-2009 Consolidated Plan, May 1, 2005, p. II-1.

[31]/ United States Department of the Interior and National Park Service, Draft National Historic Trail Feasibility Study and Environmental Assessment, July 2001, p. 5.

> Hispanic New Mexican families, Anglo-Americans from the U.S., and others immigrated to California on the Old Spanish Trail. . .In 1837, José Maria Chávez and his bother Julian Chávez, with family members and several others, escaped New Mexico by way of Utah to California. They had been singled out for execution for siding with Governor Albino Pérez, who was slain in the New Mexico Rebellion of 1837. In California, they joined the rebellion and were captured by government forces under General José Castro. They were later released. José Maria returned to New Mexico but Julian remained, settling in Chávez Ravine in Los Angeles. In 1838, Lorenzo Trujillo and six other New Mexicans left New Mexico for California. En route, Manuelita Renaga gave birth at Resting Springs on the Old Spanish Trail. These eight individuals became the first settlers in the San Bernardino area.[32]
>
> Soon after settling in the Salt Lake area, the Mormons under Brigham Young began expanding southward with the intent of establishing an outlet to the sea. A series of settlements were established in the late 1840s and early 1850s along the 'Mormon Corridor,' including Parowan and Cedar City, which were near beds of iron and coal. In 1852, Young sent a company of 300 settlers, who followed the western part of the Old Spanish Trail to southern California, where they established a city called San Bernardino. In 1855, the Mormons built a fort at the site of present-day Las Vegas, Nevada, and another group followed part of the Old Spanish Trail to settle in Moab, Utah. In 1857, fearing an invasion of Utah by the U.S. Army, the colonists from San Bernardino and other outposts left their settlements and returned to help defend against the potential invaders.[33]

A "Notice of Intent" (NOI) to prepare the comprehensive management plan (CMP) and federal environmental impact statement (EIS) for the Old Spanish National Historic Trail was published in the Federal Register (71 FR 2956-2957) on January 18, 2006. The Old Spanish Trail, which was added to the National Trails System in 2002, extends from Abiquiu and Santa Fe in northern New Mexico through Colorado, Utah, Nevada, and Arizona before reaching its terminus in Los Angeles. In its period of greatest use, from 1829 through 1848, the trail was traversed by mule pack-trains and horse-mounted traders bringing woolen goods west and herds of stock, primarily mules and horses, east to the markets of the eastern United States and Mexico. The CMP/EIS will identify the administrative practices, objectives, processes, and management actions needed to protect trail resources and, where possible and appropriate, make these resources accessible to the public and available to serve the public's needs for recreation, education, and heritage preservation.[34]

The route has been defined through an analysis of historic documentary sources, which generally give either a narrative description of the trail route or illustrate the trail route through a relatively general map or both. The historic trail route is expressed as a physically defined trace at only a small number of places along its 2,700-mile length and the width of the trail route or trail corridor varies considerably from place to place. As illustrated in Figure 4.12-2 (Old Spanish National Historic Trail), the trail route traverses a portion of the project site. In describing that segment of the Old Spanish Trail near the project site, the federal feasibility

[32]/ *Ibid*., p. 10.
[33]/ *Ibid*., p. 11.
[34]/ United States Department of the Interior – Bureau of Land Management and National Park Service, Scoping Report – Old Spanish National Historic Trail Comprehensive Management Plan/Environmental Impact Statement, August 2006, pp. 1-2.

study noted: "Near Oro Grande, the main route crossed a river at the 'Upper Crossing,' or 'Lane's Crossing," and ran southwest toward Cajon Summit. A maze of different routes, including the Crowder Canyon route and Cajon Canyon route, crossed Cajon Pass. The trail descended Cajon Canyon to Sycamore Grove, then ran west-southwest to present-day Cucamonga, El Monte, San Gabriel, and finally Los Angeles."[35]

Sycamore Grove (State Historic Landmark No. 573,[36] also County Historic Site 573) was the location of the first encampment of Mormon pioneers from Salt Lake City as they made their way into the San Bernardino Valley. Following the Old Spanish Trail, Apostles Amasa Lyman and Charles C. Rich, accompanied by Captain Jefferson Hunt, David Seeley, Andrew Lytle, Joseph Mathews, and Samuel Rolfe, temporarily settled in an area full of sycamore trees, between Lytle and Cajon Creeks. For four months, the Mormon colony camped here until their leaders had negotiated the purchase of the San Bernardino Rancho from the Lugo family.

Sycamore Grove is located approximately 1/2-mile northeast of Sycamore Flat within Glen Helen Regional Park. The names "Sycamore Grove" and "Sycamore Flat" are sometimes used synonymously but incorrectly. In actuality, they represent two distinctly different locations physically separated by a small, unnamed pass (sometimes referred to as Sycamore Pass) situated at the southwest end of the Cajon Pass. The site of Sycamore Grove is recognized as a California Historic Landmark (CHL-573). Today, the area is part of the GHRP and a plaque marking the location stands near the park entrance on Glen Helen Parkway.

Other associated historic landmarks include: (1) State Historic Landmark No. 618 (Garcés-Smith Monument[37]), also County Historic Site 618; (2) State Historic Landmark No. 577 (Mormon Trail Monument[38]), also County Historic Site 577 (Mormon Trail Monument); and (3) San Bernardino County Historic Site 576 (Santa Fe and Salt Lake Trail Monument[39]).

Lytle Creek

Lytle Creek comprises the southern boundary of the Muscupiabe land grant. It was named after Captain Andrew Lytle, a former officer of the Mormon Battalion who led Mormon settlers to the area in 1851. The majority of the history of this watercourse focuses on water supply, flood control, and hydroelectric development. One of the earliest attempts to tap into this water supply was the construction of the Rancheria Ditch in 1843. Some of the other more important ditches constructed between 1855 and 1871 comprised the Old Town Ditch and the Lloyd Ditch. Following numerous lawsuits over water rights to Lytle Creek between settlers and owners of the Muscupiabe Rancho, private appropriators formed the Lytle Creek Water Company in 1881. It did not take long for the rancho owners to acquire stock in the company and take it over.

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[35]/ *Op. Cit*., Draft National Historic Trail Feasibility Study and Environmental Assessment, p. 16.

[36]/ State Historic Landmark No. 573 (Sycamore Grove). Sycamore Valley Ranch (formerly Sycamore Grove) was the first camp of the Mormon pioneers. Captain Jefferson Hunt, Amasa Lyman, Charles C. Rich, David Seely, and Andrew Lytle stopped here in June 1851 (Glen Helen Regional Park, 2555 Devore Road, 0.7 miles west of Devore).

[37]/ State Historic Landmark No. 618 (Garcés-Smith Monument). This monument marks an old Indian trail (Mojave Trail) used by Father Garcés in March 1776 on his trip from Needles to San Gabriel. The same trail was used by Jedediah Smith in 1826 on his first trip through San Bernardino Valley (SBNF, Cajon Ranger District).

[38]/ State Historic Landmark No. 577 (Mormon Trail Monument). In June 1851, 500 Mormon pioneers came through the Cajon Pass to enter the San Bernardino Valley, where they established a prosperous community (West Cajon Canyon, State Hwy. 138 [MP 10. 7], 3.6 miles west of the I-15 Freeway, 20 miles north of San Bernardino).

[39]/ San Bernardino County Historic Site 576 (Santa Fe and Salt Lake Trail Monument) (I-15 Freeway [MP 21.4] and Highway 138, 17 miles north of San Bernardino).

During the real estate boom of the late 1880's, a group of investors purchased large land holdings, water rights and the Lytle Creek Water Company. They, in turn, formed the Semi-Tropic Land and Water Company which laid out the town of Rialto and constructed the Rialto Canal. By the 1890's, however, the company encountered financial difficulties since they had borrowed large sums of money for the water supply and distribution systems. In return for collateral, the company gave stock and deeds to land and water rights.

In 1896, the Semi-Tropic Land and Water Company was unable to meet their financial obligations and went bankrupt. Within a year, all the stock and water rights were sold to the Chicala Water Company of Iowa and the land went to the Anglo-American Canaigre Company. Eventually, both companies sold out to the Fontana Land and Water Company. For the next fifty years, numerous other water companies held water rights to Lytle Creek which included the Rialto Irrigation District and the Citizens Land and Water Company. Collectively, they all came under the control of the West San Bernardino County Water District.

Water from Lytle Creek has also been the source of hydroelectric power. In 1904, the Edison Electric Company constructed a powerhouse at the mouth of the creek. A second powerhouse (Fontana Powerhouse) (located in the area of Neighborhood II) was constructed by the Fontana Power Company in 1917.

The year 1913 marked the first attempt at water conservation by spreading flood waters over the grounds at the mouth of Lytle Creek; however, it was not until 1929 that the Fontana Union Water Company initiated construction of the large spreading grounds partially contained within the study area. Completed in 1932 at a cost of $32,000, this project was partially funded by the State's Santa Ana River Flood Control fund. Numerous ensuing flood events, most notably 1939, resulted in the destruction of several of the spreading grounds facilities. Over the years, the USACE has constructed levees, dikes, and channel improvements to aid in flood control.

4.12.3.2 Local Setting

A cultural and paleontologic assessment was conducted for this project by PCR Services Corporation (PCR).[40] Those studies have been included in Appendix III-K (Phase I Cultural and Paleontological Assessment) herein. Information from those studies is incorporated below.

The majority of the project site is located within the floodplain of Lytle Creek. Neighborhood I is located on distal alluvial fan deposits derived from the San Gabriel Mountains, which are composed of predominantly Mesozoic granite rocks. The San Andreas Fault passes east of the San Gabriel Mountains through the Cajon Pass. The project site supports numerous plant communities and/or associations. These include, but are not limited to, scrub, chaparral, riparian, and grassland plant communities. These plant communities provide habitat for a variety of reptiles, amphibians, and mammals. Mammals observed or otherwise detected within the area include the desert cottontail, California ground squirrel, San Diego black-tailed jackrabbit, coyote, mule deer, bobcat, and multiple species of mice and rats. A number of other species are expected to be resident within the region and may occasionally utilize the general project area to forage or for cover. Topography is generally flat throughout the project site, with elevations ranging from 1,400 to 2,400-feet AMSL.

[40]/ PCR Services Corporation, Phase I Cultural and Paleontologic Assessment of the Lytle Creek Ranch Specific Plan Project, City of Rialto, County of San Bernardino, June 27, 2007.

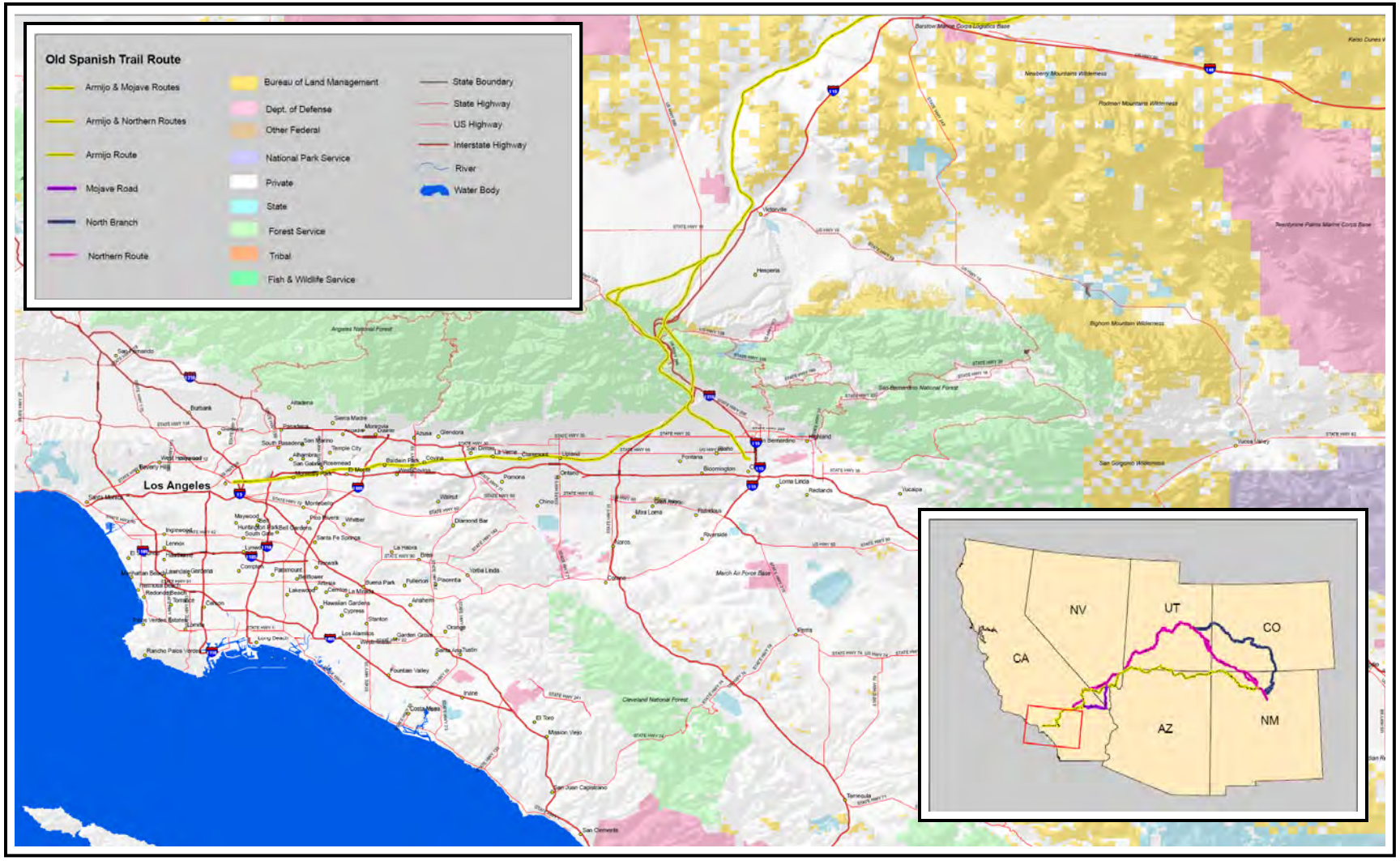

Figure 4.12-2 (1 of 2)
OLD SPANISH NATIONAL HISTORIC TRAIL
Source: Bureau of Land Management
Los Angeles Public Scoping Meeting (May 11, 2006)

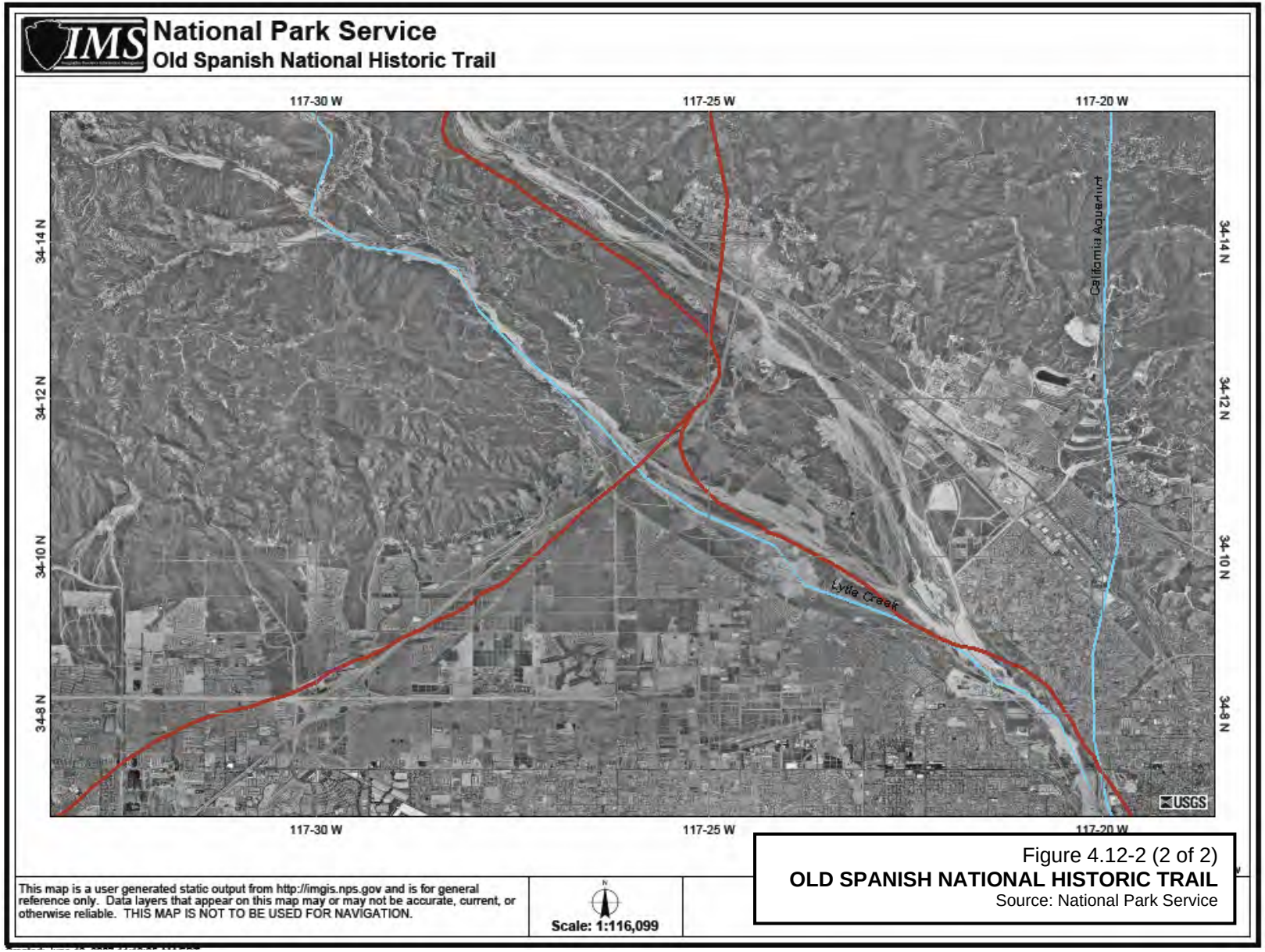

Figure 4.12-2 (2 of 2)
OLD SPANISH NATIONAL HISTORIC TRAIL
Source: National Park Service

Existing conditions within the project site include undeveloped land and the El Rancho Verde Royal Vista Golf Course. Residential development exists to the southwest of Riverside Avenue within the City. Several County facilities are located to the east of the project site, including Glen Helen Regional Park, Verdemont Ranch, Glen Helen Rehabilitation Facility; a San Bernardino County Sheriff's Department training facility, and an off-road vehicle recreation area. Disturbances to the project site include Lytle Creek flood events, two-track roads, and wildfires. In October 2003, the project site was affected by the Padua and Grand Prix fires which merged in the project vicinity. Sections of the "Lytle Creek North Planned Development Project," located adjacent to Neighborhood I, have been graded for development, infrastructure constructed, and home sales are progressing.

Presented below is a brief discussion of the site's prehistoric, historic, and ethnographic context, the findings of the research and literature review, description of the survey methods, and description of the survey results.

- **Prehistoric Context**. Prehistory is most easily discussed chronologically, in terms of environmental change and recognized cultural developments. While several chronologies have been proposed for inland southern California, three periods are defined below based on recent archaeological findings, interpretations, and advances in radiocarbon dating.

- **Paleoindian Period** (ca. 13,000-11,000 years before present [YBP]). Little is known of Paleoindian peoples in inland southern California, and the cultural history of this period follows that of North America in general. Recent discoveries in the Americas have challenged the theory that the first Americans migrated from Siberia, following a route from the Bering Strait into Canada and the Northwest Coast some time after the Wisconsin Ice Sheet receded (ca. 14,000 YBP), and before the Bering Land Bridge was submerged (ca. 12,000 YBP).

  One of the earliest radiocarbon dates from a Paleoindian Period site containing human remains in southern California comes from the Arlington Springs Woman site on Santa Rosa Island. These human remains date to at least 9,500 YBP. To date, no Paleoindian Period sites have been identified in inland southern California. An example of the earliest dated sites is CA-RIV-2798/H located on the shores of Lake Elsinore, which has been dated to approximately 8,400 YBP.

- **Archaic Period** (ca. 11,000-3,500 YBP). The earliest Archaic Period lifeways in inland southern California have been given the name San Dieguito tradition, after the San Diego area where it was first identified and studied. Subsistence practices focused on large game artifacts are suggested by stemmed projectile points, crescents, and leaf-shaped knives. The La Jolla Complex (7,500–3,000 YBP) is characterized by artifact assemblages with basin millingstones and unshaped manos, projectile points, flexed cairn burials, and cogged stones. The transition from San Dieguito tradition to La Jolla lifeways appears to have been an adaptation to drying of the climate after 8,000 YBP, which may have stimulated movements of desert peoples to the coastal regions, bringing millingstone technology with them.

- **Late Prehistoric Period** (ca. 3,500 YBP-1769 A.D.). Environmental changes around 4,000–3,000 YBP may have underlain a cultural shift to more land-based gathering practices. This period was characterized by the increasing importance of acorn processing, which supplemented the resources from hunting and gathering.

The Late Prehistoric Period of the San Bernardino Mountain and eastern San Gabriel Mountains area has been defined by work at CA-SBR-421. There artifact assemblages include percussion-flaked scraper planes, cores, plano-convex scrapers, choppers, and hammerstones. This type of assemblage has been dated to approximately 3,000-1,000 YBP and is similar to Late Prehistoric assemblages found along the coast but lacks mortars and pestles. The absence of mortars and pestles may be due to population or technological changes introduced to the San Bernardino Mountain area along with Uto-Aztecan languages (the so-called "Shoshonean Wedge") by about 1,500 YBP.

- **Historic Context**. The project site is located within a large section of the historic Rancho Muscupiabe (Muscupiabe), which is named after a nearby Serrano village called "Muscupiabit." Muscupiabe encompassed approximately one square league (about 4,500 acres) of northwestern San Bernardino Valley. In 1843, Governor Manuel Micheltorena gave the Muscupiabe to Michael White, a European settler. Muscupiabe was abandoned by 1845 because it could not be defended against the local Native Americans. In 1870, the United States Land Commission conducted a survey of Muscupiabe and expanded it to approximately 30,000 acres. The survey was conducted as a result of a dispute over the water rights to Lytle Creek. In 1851, Captain Andrew Lytle led the Mormon Battalion and Mormon settlers to the San Bernardino area. Lytle Creek was named after Captain Lytle. These first Mormon settlers camped at Sycamore Grove (now CHL No. 573), located within the area of Glen Helen Regional Park.

  Lytle Creek has a long history of water capture and conveyance and has been the subject of many water rights disputes. In the mid-to-late 1800's, three ditches were constructed to transport water. These ditches included the Rancheria Ditch, the Old Town Ditch, and the Lloyd Ditch. At this time, settlers living on Muscupiabe land fought with the rancho owners over water rights. The Lytle Creek Water Company was formed in 1881 to manage water rights. Soon thereafter, real estate investors changed its name to Semi-Tropic Land and Water Company, which went bankrupt in 1896. Thereafter, numerous companies held the water rights to Lytle Creek. In 1932, the Fontana Union Water Company constructed a series of concrete and stacked-rock water control features located in and around Lytle Creek. These flood control features were constructed as part of the Lytle Creek Flood Control Project and were likely damaged or destroyed during major floods in March of 1938.

  In recent times, other uses of the general project area have included vineyards. The Klein/Elenna Brothers Ranch, located in the Sycamore Flat area, was occupied by vintners from the 1920's to the 1970's. This area was graded in 2005 and is being developed as part of the LCNPD (Rosenna Ranch).

- **Ethnographic Context**. The project site is located on the boundary between Serrano and Gabrielino territories and was likely used by both groups. Both groups are discussed briefly below.

  - ◊ **Serrano**. The term "Serrano" refers to both an ethnic group and a group of languages in the Takic family, including Serrano and Kitanemuk and possibly Vanyume and Tataviam. The Serrano lived in an area that extended from Cajon Pass (at the western end of the San Bernardino Mountains) east to Twentynine Palms, north to Victorville, and south to the Yucaipa Valley. This area contains a range of very different topographies, including the San Bernardino Mountains

and flat valley areas. The Serrano subsisted on plant and animal resources in both the mountain and desert life zones. This included hunting animals (such as mountain goats, deer and rabbits) and collecting plant foods (such as grass seeds, acorns, piñon nuts, bulbs, roots, berries, and mesquite pods).

Serrano villages were typically located in the mountain foothills. Water availability appears to have been a major determining factor in the placement of the villages. According to the CHRIS-SBAIC, a Serrano village called "Santisima Trinidad" (pending site number P1072-25) is said to have been located in the vicinity of Sycamore Grove. This village has not, however, been located by archaeologists. Other known Serrano villages in the region include "Guapiabit" and "Muscupiabit" near the Cajon Pass. The Serrano's first contact with the Spanish is thought to have been in 1771 when Mission San Gabriel was established or in 1772 during Pedro Fages's forays into Serrano territory. In 1819 an "asistencia" (an outpost for cattle activities) of the Mission San Gabriel was constructed near present day Redlands. Many Serrano people were forced to live on mission grounds until missions were secularized in 1834. Today, many Serrano lived on the Morongo and San Manuel Indian Reservations in San Bernardino County.

◊ **Gabrielino**. Named after the San Gabriel Mission, the Gabrielino occupied sections of Los Angeles, Orange, and San Bernardino Counties. Gabrielino was one of several Cupan languages in the Takic family which belongs to the Uto-Aztecan linguistic stock. Gabrielino territory included the Los Angeles Basin, the watersheds of the Los Angeles, San Gabriel, and Santa Ana Rivers, intermittent streams in the Santa Monica and Santa Ana Mountains, the coast from Aliso Creek in the south to Topanga Creek in the north, and the islands of San Nicolas, Santa Catalina, and San Clemente. Similar to the Serrano, the Gabrielino subsisted on a variety of resources in several ecological zones. Acorns, sage, and yucca were gathered throughout the inland areas, whereas shellfish, fish, and a variety of plants and animals were exploited within the marshes and along the coast. Deer and various kinds of small mammals were hunted on an opportunistic basis.

The settlement patterns of the Gabrielino and other inland groups were similar and they often interacted through marriage, trade, and warfare. The seasonal availability of water and floral and faunal resources influenced seasonal migration with more permanent villages and base camps being occupied primarily during winter and spring months. In the summer months, the village populations divided into smaller units that occupied seasonal food procurement areas. The more permanent settlements tended to be near major waterways and food sources and various secular and sacred activities (such as food production and storage and tool manufacturing) were conducted at these areas.

▪ **Research, Literature, Survey Methods, and Results**

◊ **Cultural Resources Records Search**. On March 21, 2007, PCR conducted a cultural resource records search at the California Historic Resource Information System (CHRIS) - San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum (SBCM) in Redlands, California. The records search included a review of all recorded cultural resources within and

within a half-mile radius of the project site and associated cultural resource reports. Several additional lists of previously identified cultural resources also were checked, including the PHI, the CHL, the CRHR, the NRHP, the HRI, and historic USGS topographic maps of the area.

The results of the cultural resource records search indicate that 13 previous investigations have covered all or included portions of the project site. An additional 37 archaeological investigations have been conducted within a half-mile radius of the property.[41] As indicated in the available literature, a total of 18 cultural resources have been previously identified within the project site. These resources include: (1) one prehistoric archaeological site (CA-SBR-1416); (2) twelve historical-period archaeological sites (CA-SBR-6109H, CA-SBR-6589H, CA-SBR-6698H, CA-SBR-6699H, CA-SBR-6700H, CA-SBR-6703H, CA-SBR-6705H, CA-SBR-6706H, CA-SBR-6708H, CA-SBR-6709H, CA-SBR-6872H, and CA-SBR-7201H); and (3) five cultural resources listed by CHRIS-SBAIC as pending (PSBR-2H, PSBR-33H, PSBR-34H, P1071-23H, and P1072-40H). The distribution of these resources by relative orientation and, if located within the project boundaries, by Neighborhood is given in Table 4.12-1 (Cultural Resource Properties in the Project Site and Within a Half-Mile Radius of the Project Site).

◊ **Sacred Lands Search and Native America Consultation**. On March 19, 2007, PCR commissioned a Sacred Lands Search of the project site through the NAHC. The NAHC Sacred Lands File search indicated that there are no known and previously recorded Native American cultural resources on the project site.

As per NAHC recommendations, PCR conducted follow-up consultation with those Native American individuals and groups identified by the NAHC as having possible affiliation with the project site. Follow-up consultation was in the form of a letter (sent via certified mail) that indicated the location of the project site and the general nature of the proposed project and requested any information that those groups and those individuals were able to share about Native American resources potentially affected by the proposed project. As of this time, no responses to that consultation have been received by PCR and/or by the City.

- **Survey Method**. On March 26-29 and on April 3, 2007, PCR archaeologists surveyed the project site. The majority of the project site was surveyed with pedestrian transects spaced 15-20 meters (m) between surveyors. In some areas, where surface visibility was above 80 percent, the transect intervals were extended to 25-50 m. All natural exposures (such as cutbanks) were inspected for cultural resources. Detailed field notes and digital photographs were taken during the field survey. All new archaeological sites were documented using DPR forms and the procedure outlined by the OHP.[42] Previously recorded sites

[41]/ The full extent of the project site was included in a 1990 survey and several surveys have covered portions of the project site. These investigations were conducted throughout the 1970's, 1980's, 1990's, and in the first half of the 2000's. The most recent survey was conducted in 2003 in the area of Neighborhood III. Although most of these studies may not be considered current under OHP guidelines (conducted more than five years ago), the number of investigations and their extensive coverage suggests that the distribution of currently known and recorded archaeological sites is a reliable basis from which to assess the archaeological sensitivity of the project site.

[42]/ California Department of Parks and Recreation, Office of Historic Preservation, Instructions for Recording Historic Resources, March 1995.

were assessed with respect to previous site descriptions. Changes in conditions, components, and boundaries, if any, were also recorded on DPR forms.

Refer to Figure 4.12-3 (Lytle Creek Ranch Survey Coverage and Surface Visibility Map). These areas included: (1) steep slopes along the northern and southern margins of the Neighborhood I; (2) developed sections of the golf course and ponded areas (located in the area of Neighborhood II); (3) the Cemex plant (3221 N Riverside Avenue, Rialto) and its associated quarry pits; (4) the Fontana Powerhouse (located in the area of Neighborhood II); (5) a fenced enclosure containing three large water tanks along the southern margin and an area with a steep slope along the northern margin of Neighborhood IV.

During the field survey, a total of 13 cultural resources were located on the project site. These include nine previously recorded sites (CA-SBR-6698H, CA-SBR-6699H, CA-SBR-6700H, CA-SBR-6705H, CA-SBR-6706H, CA-SBR-6708H, CA-SBR-6709H, CA-SBR-6872H, and CA-SBR-7201H) and four newly recorded sites (LC-1H, LC-9H, LC-10H, and LC-11H). Four previously recorded archaeological sites could not be relocated (CA-SBR-1416, CA-SBR-6109H, CA-SBR-6589H, and CA-SBR-6703H). In addition, none of the five CHRIS-SBAIC pending cultural resources (PSBR-2H, PSBR-33H, PSBR-34H, P1071-23H, and P1072-40H) were identified. Table 4.12-2 (Status of Previously Recorded Cultural Resources in the project Site)[43] summarizes the status of the previously recorded resources within the project site. A brief description of the resources identified in the project site is given below.

◊ **LC-1H**. As illustrated in Figure 4.12-4 (Site LC-1H to Northwest), Site LC-1H is a rectangular concrete feature located in the area of Neighborhood VI. The feature measures 7-feet by 16-feet by 3-feet and is oriented northeast-southwest. There are seven bent rebar spaced 1-foot 7-inches apart and a 3-foot by 2-foot metal opening on top of the feature. The concrete contains local aggregate. Construction date of the feature is unknown. Extensive growth of orange lichen suggests the feature is an older construction. The concrete is cracked in a few areas and the cracks are filled with silicone caulking (suggesting recent improvement). Although there are some cracks in the concrete, the feature is largely intact. A small 7-inch metal drainage pipe is located 5-feet south of the feature and a modern Fontana Water District building (F-42) is located 48-feet northeast of the feature. Overall, Site LC-1 is in fair condition.

◊ **LC-9H**. As illustrated in Figure 4.12-5 (Site LC-9H to South), Site LC-9H is a large, round concrete tank and retention pond located in the area of Neighborhood I. Construction date of the tank and pond is unknown. The tank is 30-feet in diameter, and the walls are 12-feet high and 8-inches thick. It was constructed on layered brick and concrete laid in an upward spiraling fashion.

The roof of the tank has burned and collapsed and it is now inside the tank. Inside the tank are large concrete columns that supported the roof.

[43]/ *Op. Cit*., Phase I Cultural and Paleontological Resources Report, Table 3.

The tank is located on a south-facing slope and the northern portion of the tank is partially set into the slope. Located upslope to the north is a water retention pond that measures 131.2 feet in diameter and 65.6 feet deep. A metal pipe located halfway up its western wall connects the retention pond and the tank. Both the interior and exterior walls of the tank have been defaced by modern spray paint graffiti. Overall, the site is in fair to poor condition.

◊ **LC-10H**. As illustrated in Figure 4.12-6 (LC-10H to North), Site LC-10H is an octagon-shaped concrete feature located in the area of Neighborhood III. Construction date of the feature is unknown. The outside diameter of the structure measures 12-feet 2-inches. There is an opening in the center of the structure that has a depth of 6 feet 3-inches and a diameter of 9-feet 4-inches. A concrete slab extends southwest from the top of the feature. Underneath the walls of the structure are hanging metal drums which may have originally been base supports or columns set on the ground surface. Erosion has removed sediments from beneath the metal drums. Overall, the site is in fair to poor condition.

◊ **LC-11H**. As illustrated in Figure 4.12-7 (LC-11H to Northeast), Site LC-11H is an earthen ditch segment located in the area of Neighborhood IV. It measures 193.2-feet long and 9.8-feet wide and 2-feet high. Cobbles are stacked on top of the walls of the ditch. The ditch may be part of a ditch system that was constructed in the late 19th Century, prior to the digging of the Rialto Canal, which was in use between 1888 and 1940. The ditch has been disturbed by flooding and is in fair condition.

◊ **CA-SBR-1416**. Site CA-SBR-1416 was most recently recorded in 1990 (Van Wormer and Langenwalter) as a prehistoric artifact scatter in the area of Neighborhood IV. Van Wormer and Langenwalter determined that the recorded location of CA-SBR-1416 was substantially disturbed by grading related to road work and possible flood control activities. Site CA-SBR-1416 was not relocated by PCR archaeologists during the field survey. It is likely that the site has been destroyed or buried.

◊ **CA-SBR-6109H**. Site CA-SBR-6109H was initially recorded in 1987 (Philip de Barros and Neil Rhodes) as a banked earthen irrigation ditch, known as the "Old Zanja" that crossed through the areas of Neighborhoods II and III. The site was not relocated by PCR archaeologists during the field survey. It is likely that the site has been destroyed by erosion related to flooding and recent wildfires.

◊ **CA-SBR-6589H**. Site CA-SBR-6589H was initially recorded in 1990 (McKenna) as the Grapeland Irrigation District main canal in the area of Neighborhood IV. CHRIS-SBAIC records show that only a small segment of the canal was previously recorded in the area of Neighborhood IV. The site was not relocated by PCR archaeologists during the survey. It is likely that the site has been destroyed by erosion related to flooding and recent wildfires.

Table 4.12-1
CULTURAL RESOURCE PROPERTIES IN THE PROJECT SITE AND WITHIN A HALF-MILE RADIUS OF THE PROJECT SITE

Resource No.	Description	Location Relative to the Project	Status
Sites within Project Boundaries			
CA-SBR-1416	Prehistoric artifact scatter	Neighborhood IV	Unevaluated, R[1], M[2]
CA-SBR-6109H	"Old Zanja" banked earthen irrigation ditch	Neighborhoods II , III	Unevaluated, R
CA-SBR-6589H	Grapeland Irrigation main canal	Neighborhood IV	Unevaluated, R
CA-SBR-6698H	A series of ditches which form a spreading ground	Neighborhood II	Potentially eligible, R, M
CA-SBR-6699H	Fontana Powerhouse and related buildings	Neighborhood II	Appears eligible for NR[3], R, A[4]
CA-SBR-6700H	"Sandbox" filtration building	Neighborhood II	Not eligible, R
CA-SBR-6703H	Diversion ditches and walls	Neighborhood IV	Potentially eligible, R, M
CA-SBR-6705H	A double weir	Neighborhood III	Potentially eligible, R, M
CA-SBR-6706H	A series of ditches which form a spreading ground	Neighborhood III	Potentially eligible; Ineligible for NR, R
CA-SBR-6708H	A series of ditches which form a spreading ground	Neighborhood II	Potentially eligible, R, M
CA-SBR-6709H	Two concrete piers, a diversion weir and a low wall	Neighborhood II	Unevaluated, R
CA-SBR-6872H	Concrete structures	Neighborhood II	Unevaluated, R
CA-SBR-7201H	Concrete structures	Neighborhood II	Unevaluated, R
CA-PSBR-2H	Cajon Pass Road	Neighborhoods I, IV	Unevaluated, P[5]
CA-PSBR-33H	Rialto Canal	Neighborhoods II, IV	Unevaluated, P
CA-PSBR-34H	Old Town Ditch	Neighborhood II	Unevaluated, P
CA-SBR-P1071-23H	Lord Ditch	Neighborhood II	Unevaluated, P
CA-SBR-P1072-40H	Canaigre Co. Ditch	Neighborhood III	Unevaluated, P
Sites Within a Half-Mile Radius of the Project Boundaries			
CA-SBR-1420	Prehistoric campsite	South	Unevaluated, R
CA-SBR-5528H	Powerhouse and associated remains	Northwest	Unevaluated, R
CA-SBR-6110H	Stone and mortar ditch	South	Unevaluated, R
CA-SBR-6111H	Grapeland Irrigation ditch system	South	Unevaluated, R
CA-SBR-6702H	Abandoned irrigation ditch	Northwest	Potentially eligible, R
CA-SBR-6704H	Concrete diversion weir	Northwest	Potentially eligible, R
CA-SBR-6707H	A double weir	Northeast	Potentially eligible, R
CA-SBR-6903H	Multiple irrigation features	Southeast	Unevaluated, R
CA-SBR-7694H	A pair of transmission lines	West	Listed on NR, R
CA-SBR-8857H	Power line	Northwest	Unevaluated, R
CA-SBR-8866H	Historic trash scatter	Southeast	Unevaluated, R
CA-SBR-10878H	A rock and plaster trough	South	Unevaluated, R
CA-SBR-12156H	Lytle Creek Road	South	Unevaluated, R

Table 4.12-1 (Continued
CULTURAL RESOURCE PROPERTIES IN THE PROJECT SITE AND WITHIN A HALF-MILE RADIUS OF THE PROJECT SITE

Resource No.	Description	Location Relative to the Project	Status
Sites Within a Half-Mile Radius of the Project Boundaries (Continued)			
CA-SBR-P1071-9H	Boloman Box- Weir	South	Unevaluated, P
CA-SBR-P1071-15H	Brooke School	South	Unevaluated, P
CA-SBR-P1071-16H	Micallef House	Southeast	Unevaluated, P
CA-SBR-P1072-14H	Lytle Creek Water Conduit System	North	Unevaluated, P
CA-SBR-P1072-21H	Texas Hill Mining District	West	Unevaluated, P
CA-SBR-P1072-22H	Fontana Union Water Company	West	Unevaluated, P
CA-SBR-P1072-25H	Santisima Trinidad	Northeast	Unevaluated, P
CA-SBR-P1072-37H	Glenn Helen Ditch	North	Unevaluated, P
CA-SBR-P1072-38H	Perdew Ditch	West	Unevaluated, P
CA-SBR-P1072-43H	Rock Art Site	West	Unevaluated, P
CPHI-116	Grapeland	Southwest	Listed as PHI

Notes:
1. R – Recorded
2. M – Monitoring Recommended
3. NR – National Register.
4. A – Avoidance Recommended
5. P- Site Pending, Not Recorded.

Source: CHRIS-SBAIC

Table 4.12-2
STATUS OF PREVIOUSLY RECORDED CULTURAL RESOURCES IN THE PROJECT SITE

Resource No.	Description	Relocated	Location
CA-SBR-1416	Prehistoric artifact scatter	No	Neighborhood IV
CA-SBR-6109H	Banked earthen irrigation ditch (“Old Zanja”)	No	Neighborhoods II, III
CA-SBR-6589H	Grapeland Irrigation main canal	No	Neighborhood IV
CA-SBR-6698H	A series of ditches which form a spreading ground	Yes	Neighborhood II
CA-SBR-6699H	Fontana Powerhouse	Yes	Neighborhood II
CA-SBR-6700H	"Sandbox" filtration building	Yes	Neighborhood II
CA-SBR-6703H	Diversion ditches and walls	No	Neighborhood IV
CA-SBR-6705H	A double weir	Yes	Neighborhood III
CA-SBR-6706H	Fontana Union Water Company Spreading Grounds	Yes	Neighborhood III
CA-SBR-6708H	Lytle Creek Land and Improvement Company Spreading Ground	Yes	Neighborhood III
CA-SBR-6709H	Two concrete piers, a diversion weir and a low wall	Yes	Neighborhood II
CA-SBR-6872H	Concrete structures	Yes	Neighborhood II
CA-SBR-7201H	Concrete structures	Yes	Neighborhood II

Source: PCR Services Corporation

◊ **CA-SBR-6698H**. As illustrated in Figure 4.12-8 (Site CA-SBR-6698H to North), Site CA-SBR-6698H (Fontana Union Water Company Spreading Ground) was recorded in 1990 as two groupings of ditches, some rock lined and approximately 3 to 10-feet deep, together formed a spreading ground over an approximately 364-acre area. Both portions of site, separated by the current I-15 Freeway, were relocated by PCR and found to be in similar condition, although the site has been disturbed by wildfires and flooding since 1990. Several intact piled-rock walls remain, although many have been disarticulated and destroyed. Overall, the site is in fair to poor condition. The boundary of the northern portion of the site was modified to cover a narrower area that extends farther to the northwest.

◊ **CA-SBR-6699H**. As illustrated in Figure 4.12-9 (Site CA-SBR-6698H to North), Site 6699H was recorded in 1990 as the Fontana Powerhouse and its grounds, intake, penstock, and outflow conduits in the area of Neighborhood II. The original site form indicates that, although the outbuildings, intake, penstock, and outflow conduits were included in the site, the standing or above-ground portions had been removed prior to the site recording. The Fontana Powerhouse facility was evaluated and determined that it appeared eligible for the NRHP (Criterion A) because it played an important role in the development of the area.[44]

PCR relocated the Fontana Powerhouse. No traces of the outbuildings, intake, penstock, and outflow conduits were located. The Fontana Powerhouse is, however, in operation and is regulated by Southern California Edison (SCE). Due to this, the grounds were not accessible; however, the powerhouse appears to be in good condition. The original site recording indicated the site location with a dot. PCR defined a boundary for the site based on the extant structure of the powerhouse and adjacent fenced grounds.

◊ **CA-SBR-6700H**. As illustrated in Figure 4.12-10 (CA-SBR-6700H to Northeast), Site CA-SBR-6700H, located in the area of Neighborhood III, was initially recorded in 1990 as a sandbox filtration building with a subsidiary gauging house related to the Fontana Powerhouse built in 1917. PCR relocated the site in the previously recorded location approximately 75 m south of the Fontana Powerhouse (CA-SBR-6699H). Since it is regulated by SCE, the grounds were fenced and not accessible. Although the sandbox was fenced, PCR archaeologists were able to accurately assess the site condition. The site consists of the collapsed remains the sandbox filtration building. The site is in poor condition as it has collapsed since the previous recording in 1990 and is no longer in operation. The site boundary remains the same.

◊ **CA-SBR-6703H**. Site CA-SBR-6703H was initially recorded in 1990 as a portion of the remains of the Fontana Union Water Company Spreading Grounds in the area of Neighborhood IV. The site was described as a

[44]/ The HRI (dated March 17, 2006) lists the Fontana Powerhouse as appearing eligible for the National Register under Criteria A and C as an individual property through survey evaluation as of April 22, 1997.

series of diversion ditches and walls consisting of piled cobble burins and stacked rock walls. The site was not relocated by PCR archaeologists during the field survey and may have been destroyed by road grading.

◊ **CA-SBR-6705H**. As illustrated in Figure 4.12-11 (CA-SBR-6705H to Northeast), Site CA-SBR-6705H was initially recorded in 1990 (Van Wormer and Langenwalter) as two concrete weirs, with a grout and boulder spillway in between, located on the north and south sides of Lytle Creek. PCR relocated the site. Overall, the site is the same as described in 1990. The concrete weirs have been covered by spray paint graffiti. The spillway between the two concrete weirs has been improved with concrete and boulders. The only disturbance indicated on the original site record is flood damage. It is, therefore, possible that the graffiti and spillway repairs have been added since the original site recording in 1990. The site is in fair condition. Major disturbances are graffiti and remaining flood damage.

◊ **CA-SBR-6706H**. Site CA-SBR-6706H was initially recorded in 1990 (and re-identified in 2004) and consists of earthen ditches and stacked-rock water diversion and control features. PCR relocated the southern extension of site CA-SBR-6706H. This part of the site is located in the eastern section of the area of Neighborhood III, northeast of Lytle Creek. PCR identified stacked rock diversion walls and ditches which were part of the 1932 Fontana Union Water Company Spreading Ground. The site has been disturbed by wildfire, flooding, and overgrown vegetation. Although many of the stacked rock diversion walls are still relatively intact, many have been destroyed and reduced to rubble. The site, therefore, is considered to be in fair to poor condition. The site boundaries within the project site remained the same. Site boundaries for the area outside the project site were not evaluated.

◊ **CA-SBR-6708H**. Site CA-SBR-6708H was initially recorded in 1990 as the remains of the Lytle Creek Land and Improvement Company Spreading Ground, consisting of the remains of a diversion box and stacked rock diversion features. PCR relocated the spreading grounds comprised of ditches and stacked rock diversion walls. The remains of the diversion box were not identified. The stacked rock diversion walls were in poor condition and many were completely disarticulated. The site is in poor condition from flooding and overgrown vegetation. The site boundary remains the same.

◊ **CA-SBR-6709H**. As illustrated in Figure 4.12-12 (CA-SBR-6709H to North), Site CA-SBR-6709H was initially recorded in 1990 as two concrete machinery mounts, a diversion weir, and a concrete masonry wall. PCR relocated the site and re-identified all of the previously recorded features. The site is disturbed by spray paint graffiti and it appears that that diversion weir has been used recently as a social gathering place as there is a sheet of modern trash throughout the site. The site is in fair to poor condition. The structures are still standing but have been disturbed by vandalism. The site boundary remains the same.

◊ **CA-SBR-6872H**. As illustrated in Figure 4.12-13 (CA-SBR-6872H to East), Site CA-SBR-6872H was originally identified in 1991 in the south central portion of the area of Neighborhood II as five loci containing historical-period concrete structures widely distributed across an area of approximately thirteen acres. PCR relocated the site and all five loci. All of the concrete structures remain intact and standing; however, all have been disturbed by spray paint graffiti and modern trash. No artifacts were observed in association with these concrete structures. The site is in fair to poor condition. PCR extended the site boundary to the north and contracted the site boundary in the south.

◊ **CA-SBR-7201H**. CA-SBR-7201H was initially recorded in 1992 as a group of historical-period concrete and iron structures representing two buildings, water-handling structures, and a wooden floor built between 1910 and 1920 located near the southeast boundary of the area of Neighborhood II. PCR relocated the site and all of the previously recorded features. The remains of the possible water-handling features and wooden floor are shown in Figure 4.12-14 (CA-SBR-7201H to North). The concrete of the concrete and iron structures is cracked and has been vandalized by spray paint graffiti. Overall, the site is in fair to poor condition. The site boundary remains the same.

- **Paleontological Resources Records Search**. On March 15, 2007, PCR commissioned a paleontological records search through the SBCM. The records search entailed an examination of geologic maps and fossil locality records in order to determine the paleontological sensitivity of the project site. The results of the paleontological records search revealed that there are no paleontological localities either within or within a one-mile radius of the project site. Fossil proboscidean remains have, however, been found approximately three miles east of the project site.

  Sediments within the project site have been identified as young Quaternary fan deposits and older Quaternary fan deposits, of Holocene and Pleistocene-Holocene boundary age, respectively. These sediments have also been categorized as several types of Holocene fan and alluvial deposits. The only exception is a limited area on the northeast bank of Lytle Creek, west of the I-15 Freeway, which was characterized as older fan deposits (Qof) of Pleistocene age. It is suggested by SBCM that Pleistocene sediments might underlie some of the Holocene sediments throughout the project area. The Holocene sediments have a low sensitivity for paleontological resources. The paleontological sensitivity of the older Pleistocene sediments is undetermined in this area but could contain paleontological resources.

4.12.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed

project would normally be deemed to produce a significant or potentially significant cultural resource impact if the project or if project-related activities were to:

- Cause a substantial adverse change[45] in the significance of a historic resource[46] as defined in Section 15064.5 of the State CEQA Guidelines.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines.
- Directly or indirectly destroy a significant paleontological resource,[47] site, or unique geologic feature.
- Disturb any human remains, including those interred outside of formal cemeteries.[48]

Under federal criteria, in order for a building or structure to be significant, it must be eligible for listing in the National Register of Historic Places. Federal listing generally requires that a building or structure be at least 50 years of age and possess "the quality of significance in American history, architecture, archaeology, engineering and culture. . .present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, material, workmanship, feeling and association."[49] In California, properties of historical importance are currently designated as significant resources in separate registration programs administered by the California Historic Landmark Program, Points of Historical Interest, and the CRHR. Based on the presence of established preservation policies and documented lists of historic and prehistoric resources, the proposed project would normally be deemed to produce a significant or potentially significant cultural resource impact if the project or if project-related activities were to:

- Alter, destroy, or otherwise adversely impact any object, building, structure, site, area, place, or district that has been formally included or eligible for inclusion on any local, State, or federal prehistoric or historic resource list, determined to be eligible for listing under National Register criteria, or deemed to be significant by the Office of Historic Preservation.

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative cultural resource impacts.

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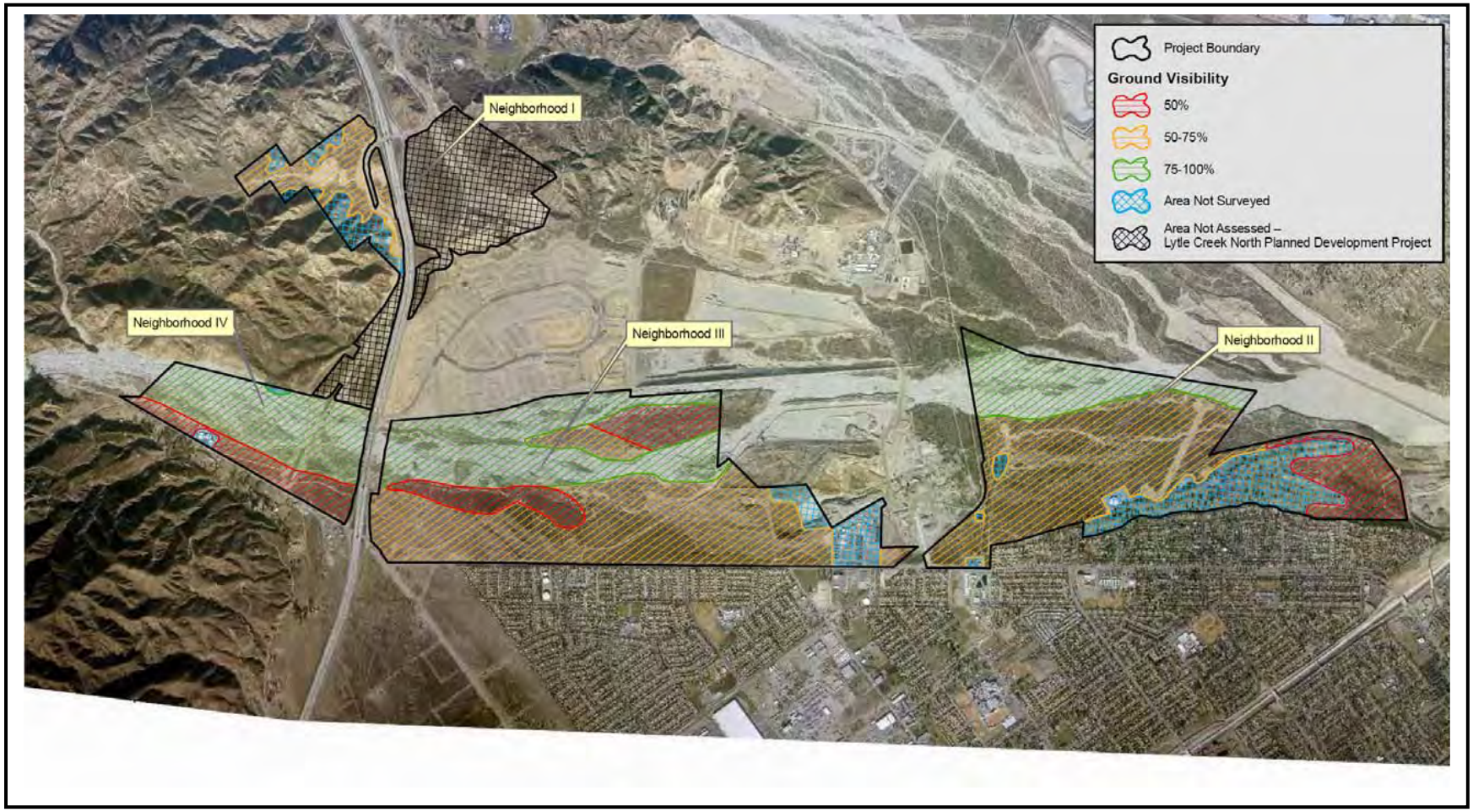
[45]/ As defined in Section 5020.1(q) of the PRC: "'Substantial adverse change'" means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired."

[46]/ As defined in Section 21083.2(l) of CEQA, "an historic resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historic Resources. Historical resources included in a local register of historical resources, as defined in subdivision (k) of Section 5020.1, or deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, are presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is no historically or culturally significant."

[47]/ Paleontological resources determined to be significant or potentially significant are those fossils or assemblages of fossils that are unique, unusual, rare, uncommon, and diagnostically or stratigraphically important and/or those adding substantially to the existing body of knowledge in specific areas, stratigraphically, taxonomically, and/or regionally.

[48]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section V (Cultural Resources).

[49]/ 36 CFR Part 800.



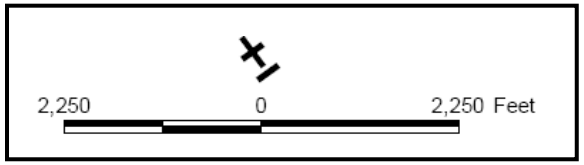


Figure 4.12-3
LYTLE CREEK RANCH SURVEY COVERAGE AND SURFACE VISIBILITY MAP
Source: PCR Services Corporation

Figure 4.12-4
SITE LC-1H
LOOKING TOWARD NORTHWEST
Source: PCR Services Corporation

Figure 4.12-5
SITE LC-9H
LOOKING TOWARD THE SOUTH
Source: PCR Services Corporation

Figure 4.12-6
SITE LC-10H
LOOKING TOWARD THE NORTH
Source: PCR Services Corporation

Figure 4.12-7
SITE LC-11H
LOOKING TOWARD NORTHEAST
Source: PCR Services Corporation

Figure 4.12-8
SITE CA-SBR-6698H
LOOKING TOWARD THE NORTH
Source: PCR Services Corporation

Figure 4.12-9
SITE CA-SBR-6699H
LOKING TOWARD THE NORTH
Source: PCR Services Corporation

Figure 4.12-10
SITE CA-SBR-6700H
LOOKING TOWARD NORTHEAST
Source: PCR Services Corporation

Figure 4.12-11
SITE CA-SBR-6705H
LOOKING TOWARD NORTHEAST
Source: PCR Services Corporation

Figure 4.12-12
SITE CA-SBR-6709H
LOOKING TOWARD THE NORTH
Source: PCR Services Corporation

Figure 4.12-13
SITE CA-SBR-6872H
LOOKING TOWARD THE EAST
Source: PCR Services Corporation

Figure 4.12-14
SITE CA-SBR-7201H
LOOKING TOWARD THE NORTH
Source: PCR Services Corporation

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4.12.5 Impact Analysis

4.12.5.1 Construction Impacts

Environmental Impact 12-1*. All site disturbance activities have the potential to adversely affect cultural resources located within the area of disturbance.*

Preliminary Determination 12-1*. Potentially significant unless mitigation incorporated.*[50]

With regards to prehistoric resources, the records search failed to indicate the presence of any recorded prehistoric resources within the study area boundaries. The results of the field assessment were also negative. Since a thorough investigation has failed to reveal the presence of any prehistoric resources within the study area, no project-related impacts on prehistoric resources are anticipated during either project construction or throughout the project's operational life. In the absence of any identified resources, no mitigation is required or recommended.

With regards to historic resources, the cultural resource assessment resulted in the identification of 22 cultural resources within or adjacent to the project site. Of these resources, 13 were also identified on the ground during survey (i.e., four previously recorded sites and five pending resources were not relocated during survey). All of the sites identified or relocated during the field survey date to the late nineteenth to mid- twentieth centuries. Most of the sites are the remains of water control features, including ditches, weirs, and other diversion-type features. Two adjacent sites are related to electric power distribution. The 13 sites that were evaluated for identification and significance determinations as part of this assessment are all historical-period sites dating between about 1912 and 1939. The sites fall into four general categories: (1) contour ditches and weirs of spreading grounds; (2) water wells and attendant features; (3) water storage devices; and (4) electrical power.

Field and archival research was used to gather additional contextual and condition information for each site. One site (SBR-6700H) has recently been removed due to safety concerns. Applying the criteria of significance for the NRHP, the CRHR, and the State CEQA Guidelines to the remaining twelve sites, nine are recommended to be not significant. Three sites, including remains of the Fontana Union Water Company Spreading Ground (SBR-6698H and SBR-6705H), and the Fontana Power Plant (SBR-6699H) are recommended to be significant under one or more significance criteria and will require further treatment and mitigation. Evaluation findings are summarized in Table 4.12-3 (Site Significance Evaluations).

The flood control system exemplified by the remains of the Fontana Union Water Company Spreading Ground (SBR-6698H and SBR-6705H) cannot be confirmed to be unique but does appear to be rare. Although other spreading ground locations were planned and developed in the Santa Ana watershed, none appear to have been documented in the historical record.

[50]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) cause a substantial adverse change in the significance of a historic resource as defined in Section 15064.5 of the State CEQA Guidelines; and (2) have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal species or eliminate important examples of the major periods of California history or prehistory.

Table 4.12-3
SITE SIGNIFICANCE EVALUATIONS

No.	Identification	Recommendation			Mitigation
		Previous	CRHR	NRHP	
LC-1H	Water well irrigation weir	None	Not Eligible	Not Eligible	None
LC-9H	Surface runoff water supply tank	None	Not Eligible	Not Eligible	None
LC-10H	Water wellhead	None	Not Eligible	Not Eligible	None
LC-11H	Bulldozer cut	None	Not eligible	Not eligible	None
CA-SBR-6698H	Fontana Union Water Co. Spreading Ground (contour ditches, and walls)	Eligible	Eligible	Eligible	Recommend NRHP Nomination and HALS recording/preservation
CA-SBR-6699H	Fontana Powerhouse	Eligible	Eligible	Eligible	None
CA-SBR-6700H	Fontana Powerhouse sandbox	Not Eligible	Not Eligible	Not Eligible	Site has been removed. None
CA-SBR-6705H	Fontana Union Water Co. Spreading Ground (Weir No. 3)	Eligible	Eligible	Eligible	Recommend NRHP Nomination and HALS recording/preservation
CA-SBR-6706H	Fontana Union Water Co.. Spreading Ground	Eligible[1] Not Eligible[2]	Not Eligible	Not Eligible	None
CA-SBR-6708H	Undefined spreading ground features	Eligible	Not Eligible	Not Eligible	None
CA-SBR-6709H	Water wellhead and motor mount	None	Not Eligible	Not Eligible	None
CA-SBR-6872H	Four water wellheads and one standpipe	None	Not Eligible	Not Eligible	None
CA-SBR-7201H	Water	None	Not Eligible	Not Eligible	None

Notes:
1. Van Wormer and Langenwalter, 1990.
2. Dice, *et al*., 2004.

Source: PCR Services Corporation

The combined attempts at minimizing the damage caused by unpredictable flood events and harnessing flood waters to recharge the water table have not been topics of detailed scientific inquiry. The initial attempts appear to have been locally conceived and privately funded by the farmers and orchard owners that were most directly affected by flood events. Clearly, the interceding by the United States Army Corps of Engineers in flood prevention efforts beginning in the early 20th Century brought great relief to threatened agricultural areas throughout the United States.

It appears that the water control structures that remain at SBR-6698H and SBR-6705H illustrate a time period that has been overlooked in the historical record and, as such, constitute an important resource in understanding early settler's adaptations to the limitations of water supply and requirements of agriculture in southern California. SBR-6698H and SBR-6705H contain

substantial intact elements of the Fontana Union Water Company spreading grounds which are water control features of a bygone era. The intact areas of the spreading ground retain integrity of form and setting. Although the proposed project will not directly affect the northern intact section, it will result in the removal of the two southern intact areas, which are the largest and best preserved sections.

It is recommended that SBR-6698H and SBR-6705H be identified as significant and eligible for listing in the NRHP and CRHR. Recordation of the Fontana Union Water Company Spreading Ground would reduce the adverse impacts of the proposed project by retaining important historical information and images, and recording existing physical conditions in archival format. Recordation would serve to address the proposed project's detracting from the property's eligibility or potential eligibility for listing in the NRHP Criteria A, C and D. A mitigation measure (Mitigation Measure 12-1) has been formulated specifying the preparation and submittal of a NRHP nomination form for the Fontana Union Water Company Spreading Ground, incorporating SBR-6698H and SBR-6705H.

It is further recommended that, prior to the issuance of any grading permits, the Applicant develop a preservation plan allowing for the retention of intact portions of the Fontana Union Water Company Spreading Ground (Mitigation Measure 12-2). In the event that preservation is infeasible, such as through modification of open space areas to allow for in-situ preservation, intact portions of the Fontana Union Water Company Spreading Ground (as identified during preparation of the NRHP nomination form) may be impacted during development following the preparation and recordation of a Historic American Landscape Survey (HALS), Level II (Mitigation Measure 12-3). This level of documentation includes large-format archival-quality black-and-white photographs linked to a detailed site plan and a written narrative. Under this mitigation measure, the HALS recordation would be implemented prior to the commencement of grading activities.

The Fontana Power Plant (SBR-6699H) has been previously recommended as eligible for NHRP listing. The site is currently outside of the project boundaries and adjacent to areas proposed for "Village Center Commercial (VC)" development (between PAs 90 and 91) and "High Density Residential (HDR) (25-35 du/ac)" (PA 92). Modern development currently surrounds the Fontana Power Plant site to the south (Country Club Estates) and, at a distance, to the east. The criteria by which the SBR-6699H has been recommended eligible to the NRHP are its associations with the history of the region (Criterion A) and its representation of a characteristic style (Criterion C). Development of the surrounding specific plan area will not adversely affect the potential for the building to convey its significance. With regards to SBR-6699H, no further work or mitigation is required or recommended.

Environmental Impact 12-2*. Ground disturbance activities could result in impacts to on-site paleontological resources that may potential exist in Pleistocene-age sediments.*

Preliminary Determination 12-2*. Potentially significant unless mitigation incorporated.*[51]

Earth-moving activities associated with the project's development could, however, result in the loss of paleontological resources from older fan deposits (Qof) of Pleistocene age located along the northeast bank of Lytle Creek, west of the I-15 Freeway. These resources include fossil

[51]/ Prior to mitigation, the applicable or potentially applicable threshold standard relative to this preliminary determination includes, but may not be limited to, the initial conclusion that the proposed project could directly or indirectly destroy a significant paleontological resource, site, or unique geologic feature.

remains, associated specimen data and corresponding geologic and geographic site data, and an undetermined number of fossil sites. The loss of resources, if any, would constitute a significant adverse paleontological resource impact.

Paleontological monitoring is recommended for all excavation and disturbance of Pleistocene-age sediments along the northeast bank of Lytle Creek in the southwestern portion of the project site (Neighborhood IV). These sandy sediments have an undetermined sensitivity for paleontological resources and potential impacts to paleontological resources in this portion of the project site cannot be ruled out. No paleontological work is, however, recommended for other portions of the project site.

Given the potential for on-site paleontological resources, a mitigation measures (Mitigation Measure 12-4) has been formulated to identify, evaluate, and recover paleontological resources, if any, from the project site. Implementation of that measure would reduce the project's potential impacts on paleontological resources to a less-than-significant level.

4.12.5.2 Operational Impacts

Environmental Impact 12-3*. Project development could impede the implementation of that segment of the Old Spanish National Historic Trail that traverses the project site.*

Preliminary Determination 12-3*. Less-than-significant impact.*

As specified in the National Trails System Act: "In order to provide for the ever-increasing outdoor recreation needs of an expanding population and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation, trails should be established (i) primarily near the urban areas of the Nation, and (ii) secondarily, within the scenic areas and along historic travel routes of the Nation which are often more remotely located. The purpose of this act is to provide the means for obtaining these objectives by instituting a national system of recreation, scenic and historic trails."

In 2006, BLM published the "National Scenic and Historic Trails Strategy and Work Plan," providing guidance to establish a coordinated and consistent trail-focused administrative infrastructure, develop national policies to protect and sustain trail resources within BLM's multiple-use mandate, manage trail resources to enhance visitor experiences and promote "appropriate public access," and maintain and advance BLM's partnerships with trail organizations and other agencies. As indicated therein, BLM established the following objective: "Establish and implement national policy and guidance to identify and protect trail resources in conjunction with our multiple-use mandate."[52] Neither the National Trails System Act nor the BLM work plan mandate any conservation or preservation efforts on private lands. Similarly, neither document contains design guidelines nor development standards for the acknowledgement of a designated trail system or for physical manifestation. As such, based on existing public policies, no federal, State, or local requirements now exist with regards to the National Trail System. Absence those regulations, guidelines, and standards, the Lead Agency has no prudent basis to mandate specific action by the Applicant.

[52]/ United States Department of the Interior – Bureau of Land Management, National Scenic and Historic Trails Strategy and Work Plan, BLM –WO-GI-06-020-6250, February 13, 2006, p. 9.

No additional impacts, beyond those associated with the project's construction, are anticipated during the project's ongoing operations. As a result, no further analysis is presented herein.

4.12.5.3 Cumulative Impacts

Environmental Impact 12-4*. Grading activities conducted on other sites located within the general project area could result in impacts to any prehistoric, historic, and paleontological resources that may be located thereupon.*

Preliminary Determination 12-4*. Less-than-significant impact.*

No significant cumulative impacts to localized or areawide cultural resources are anticipated. All related projects will themselves be subject to site-specific environmental reviews and must conform to all applicable local, State, and federal requirements relating to the identification and preservation of cultural resources. Compliance with those requirements will ensure that all project-related and cumulative impacts upon prehistoric and historic archaeological resources and paleontological resources are mitigated to below a level of significance.

4.12.6 Recommended Mitigation Measures

- **Mitigation Measure 12-1**. Prior to the issuance of any grading permits in Neighborhoods II, III, and IV, the Applicant shall retain a qualified cultural resources consultant, meeting the United States Secretary of the Interior's Professional Qualification Standards for Archaeology or Architectural History, to prepare and submit to the City of Rialto and the California Historical Resources Information System San Bernardino Archaeological Information Center (CHRIS-SBAIC) a National Register nomination form for the Fontana Union Water Company Spreading Ground, incorporating SBR-6698H and SBR-6705H.

- **Mitigation Measure 12-2**. The Applicant shall develop and incorporate into the project planning a preservation plan for a representative portion(s) of the southern intact sections of SBR-6698H. The preservation plan shall be developed by a qualified archaeologist or architectural historian meeting the United States Secretary of the Interior's Professional Qualification Standards for Archaeology or Architectural History. The preservation plan shall include a detailed map of the intact portions of SBR-6698H, place those portions in perpetual open space, and present interpretive information about the site and its history accessible to the public. Interpretive information shall include, but may not be limited to, appropriate informative signage and public access. The preservation plan shall be submitted to the City and the California Office of Historic Preservation and, when deemed acceptable, shall be accepted by the Development Services Director (Director) prior to issuance of grading permits in Neighborhoods II, III, and IV.

- **Mitigation Measure 12-3**. In the event that in-situ preservation of the Fontana Union Water Company Spreading Ground is infeasible, as an alternate to and in lieu of Mitigation Measure 12-2, intact portions of the Fontana Union Water Company Spreading Ground (as identified during preparation of the National Register nomination form) that will be directly or indirectly impacted by the project's development shall be documented by means of a Historic American Landscape Survey (HALS) recordation, Level II. This level of documentation includes large-format archival-quality black-and-

white photographs linked to a detailed site plan and a written narrative. Completion of the HALS recordation, including acceptance by the Director, shall be implemented prior to the issuance of any grading permits in Neighborhoods II, III, and IV.

This documentation shall be prepared by a qualified architectural historian or historic landscape architect and a photographer experienced in Historic American Building Survey/Historic American Landscape Survey (HABS/HALS) photography. The overall landscape layout, structural elements, and features, as well as the property setting and contextual views shall be documented. Original archival prints and negatives of the photographs shall be submitted to the Library of Congress. Original archival prints shall also be submitted to the California State Archives. Archival copies of the documentation shall be distributed to the CHRIS-SBAIC and the Rialto Public Library.

- **Mitigation Measure 12-4**. Prior to the issuance of any grading permit in Neighborhood IV, a qualified paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists shall be retained by the Applicant and approved by the City to develop and implement a paleontological monitoring plan. The monitoring plan shall be submitted to and, when deemed acceptable, accepted by the Director. Where deemed applicable in the judgment of the Director, the monitoring plan shall be imposed as a condition to the issuance of grading permits in Neighborhood IV.

4.12.7 Significant Unavoidable Adverse Effects

As mitigated, the approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative cultural or paleontological resource impacts.

4.13 AESTHETICS

The "Merriam-Webster Dictionary" defined "aesthetics" as "(1) a branch of philosophy dealing with the nature of beauty, art, and taste and with the creation and appreciation of beauty; (2) a particular theory or conception of beauty or art: a particular taste for or approach to what is pleasing to the senses and especially sight."[1] As further noted by the United States Department of Transportation, aesthetics is the "science or philosophy concerning the quality or sensory experience" and a "branch of philosophy dealing with the nature of the beautiful and with judgments concerning beauty."[2] The words and the underlying concepts that define "philosophy," "beauty," and "taste" are subject to broad individual interpretation and cannot be readily framed into a single shared societal believe or universally accepted single set of values.

"Aesthetics is broader in scope than the philosophy of art, which comprises one of its branches. It deals not only with the nature and value of the arts but also with those responses to natural objects that find expression in the language of the beautiful and the ugly. A problem is encountered at the outset, however, for terms such as beautiful and ugly seem too vague in their application and too subjective in their meaning to divide the world successfully into those things that do, and those that do not, exemplify them. Almost anything might be seen as beautiful by someone or from some point of view; and different people apply the word to quite disparate objects for reasons that often seem to have little or nothing in common. It may be that there is some single underlying belief that motivates all of their judgments. It may also be, however, that the term beautiful has no sense except as the expression of an attitude, which is in turn attached by different people to quite different states of affairs."[3]

The central concept underlying the cognitive paradigm is that environmental perception is subjective, where people value environments from the way information is given meaning in their own minds. It has been stated "humans are thinking creatures who do not merely respond passively to environmental stimuli, but select aspects of the landscape that have value to them. Landscape quality is seen as a construct built up in the mind, usually on the basis of visual information."[4] An individual's attitudes and cognitive process influences their perceptions and consequent aesthetic evaluations of the environment such that "there is most likely no causality between the physical properties of the object and its aesthetic appreciation."[5] The identification of aesthetic values in landscapes encompasses the "transaction between an observer who is experiencing the environment and the environment that is being experienced."[6] Judgments of aesthetic value reside in the perceptual experience, such that "[a]esthetic values are neither a direct function of the environmental characteristics being perceived, nor are they a product of the individual involved in the perceptual experience. Rather, human experience, knowledge, expectation, and sociocultural context interact with environmental elements and environments as entities to produce an outcome that affects both the human and the environment."[7]

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[1]/ Merriam-Webster Dictionary online.

[2]/ United States Department of Transportation, Federal Highway Administration, Visual Impact Assessment for Highway Projects, FHWA-HI-88-054, 1988, p. 117.

[3]/ Encyclopædia Britannica online.

[4]/ Taylor, J.G., Zube, E.H., and Sell, J.L., Landscape Assessment and Perception Research Methods, in Bechtel, R.B., Marans, R.W., and Michelson, W. (Eds), Methods in Environmental and Behavioral Research, 1987, p. 375.

[5]/ Höge, H., Ecological Perception and Aesthetics: Pictures are Affordance-Free, in Landwehr, K. (Ed), Ecological Perception Research, Visual Communication, and Aesthetics, 1990, p. 114.

[6]/ Pitt, D.G. and Zube, E.H., Management of Natural Environments, in Stokols, D. and Altman, I. (Eds), Handbook of Environmental Psychology, 1975, p. 1019.

[7]/ *Ibid*., pp 1019-1020.

Accordingly, the human observer and the environment cannot be separated in the understanding of aesthetic appreciation and environmental perception. "Scenic beauty is inferred from a judgment made by a human observer in response to his perception of a landscape. An observer's judgments of scenic quality are assumed to be affected by both the perceived characteristics of the landscape and by the observer's own aesthetic standards of judgment criteria."[8] Correspondingly, in a study of the aesthetic appreciation of forest scenes, researchers concluded that "implicit perceptual processes encode the features of the environmental stimulus. . .and translate them into a subjective impression of the 'attractiveness,' 'aesthetic quality' or. . .the 'scenic beauty' of the stimulus. This perceptual process is strongly influenced by the features of the environment in interaction with the sensory and perceptual system of the observer."[9]

As noted by the USFS: "The American people are concerned about the quality of their visual environment. Because of this concern, it has become appropriate to establish the 'visual landscape' as a basic resource, to be 'treated as an essential part of and receive equal consideration with the other basic resources of the land' (FSM 2380)."[10] It has been noted that "[w]hether in surroundings that are largely natural or largely man-made. . .the environment, far from being of little account to human personality development, constitutes one of the most basically important ingredients of human psychological existence."[11] Visual resources include both the natural and man-made physical features that give a particular landscape its character and aesthetic value as an environmental factor. While "many planning professionals consider the visual aspects of the environment to be trivial in comparison with economic, fiscal, and social issues, the fact is that the public is extremely sensitive to the visual environment, for its symbolic quality as well as the immediate experiences it affords. Matters of scale, color, shape, street character, and view affect a population's image of its city and of itself."[12]

Since perceptions are unique to each individual, the Lead Agency's role is not to specifically address how any one individual may "perceive" the physical changes to the site's visual resources but to focus on the physical changes themselves. Individual "impressions" regarding whether a particular change is adverse or beneficial must be left to the individual observer.

Aesthetic appreciation is determined "by the perceptual and judgmental processes of a human observer in interaction with the relevant features of the landscape; scenic beauty is in part 'in the eye of the beholder' but it also depends on the specific features of the landscape being viewed."[13] Landscapes or elements of the landscape act as stimuli to which the human observer responds. Indicators constitute those major physical elements that comprise the existing landscape. The identified indicators refer to those different environmental parameters that can be measured or observed and expressed in either quantitative or qualitative terms. Once defined, a project's impacts can be expressed by the physical changes to those indicators.

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[8]/ Schroeder, H.W. and Daniel, T.C., Predicting the Scenic Quality of Forest Road Corridors, Environment and Behavior, 1980, Volume 12 (3), p. 349 - 350.

[9]/ Brown, T.C. and Daniel, T.C., Context Effects in Perceived Environmental Quality Assessment: Scene Selection and Landscape Quality Ratings, Journal of Environmental Psychology, Volume 7, 1987, p. 243.

[10]/ Bacon, Warren R., The Visual Management System of the Forest Service, 1979, In Elsner, Gary H., and Richard C. Smardon, Proceedings of our National Landscape: A Conference on Applied Techniques for Analysis and Management of the Visual Resource, April 23-25, 1979, General Technical Report PSW-GTR-35, United States Department of Agriculture, Forest Service, 1979, pp. 660-665.

[11]/ Smith, P.F., The Syntax of Cities, 1977, p. 22.

[12]/ *Op. Cit*., Landscape Assessment and Perception Research Methods, in Bechtel, R.B., Marans, R.W., and Michelson, W. (Eds), Methods in Environmental and Behavioral Research, 1987, pp. 176-177.

[13]/ Daniel, T.C., Measuring the Quality of the Natural Environment: A Psychophysical Approach, Journal of American Psychological Association, Volume 45(5), 1990, p. 634.

The physical features that comprise a particular landscape, both individually and collectively, provide the visual cues that allow an observer to form an overall impression of an area. What we see includes a number of elements that, one agency has categorized to include, landform, vegetation, water, color, adjacent scenery, and cultural modification (man-made change in land, water form, or vegetation that creates a visual contrast to the unaltered character of an existing landscape).[14]

In the context of federal highway projects, the Federal Highway Administration (FHWA) defines visual quality as consisting of the following three elements: (1) vividness (the memorability of the visual impression received from contrasting landscape elements as they combine to form a striking and distinctive visual pattern); (2) intactness (the integrity of visual order in the natural and built landscape and the extent to which the landscape is free from visual encroachment); and (3) unity (the degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern; unity refers to the compositional harmony or inter-compatibility between landscape elements).[15]

In conducting this analysis and attempting to provide an objective and measurable yardstick against which aesthetic impacts can be assessed, the Lead Agency has sought to draw upon the work and methodologies identified by a number of governmental entities. Ultimately, in any discussion of aesthetics, some level of subjectivity is unavoidable. The CEQA process provides a vehicle for the presentation of different viewpoints. As part of its deliberations, the Lead Agency will consider any comments which are received, including those that may offer a different perspective and derive different conclusions that those presented herein.

4.13.1 Technical Reports

No previous site-specific or project-specific technical reports focusing specifically on aesthetics were prepared or examined by the Lead Agency. The County's "Conservation Background Report" (County of San Bernardino, February 1, 2006) and "Circulation and Infrastructure Background Report" (County of San Bernardino, February 21, 2006) provide general information germane to regional and subregional visual resources. In addition, other technical reports referenced throughout this EIR have potential relevancy to the assessment of the project's aesthetic impact and were considered by the Lead Agency in the preparation of this analysis.

4.13.2 Regulatory and Policy Setting

4.13.2.1 United States

The following information presents a general discussion of certain federal statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **National Forest Management Act**. Planning for the management and use of NFS lands must conform to the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1601-1614) (RPA), as amended by the National Forest Management Act of 1976 (16 U.S.C. 1601-1614; Public Law 94-588) (NFMA), and

[14]/ United States Department of Interior, Bureau of Land Management, Visual Resource Management Program, Stock No. 024-011-00116-6, United States Department of the Interior, Washington, DC, 1980.

[15]/ *Op. Cit*., Federal Highway Administration, Visual Impact Assessment for Highway Projects, FHWA-HI-88-054, pp. 47-48.

implementing regulations found in 36 CFR Part 219, NEPA, and 40 CFR 1500-1508. The current land and resources management plan for the SBNF is contained in the following inter-related Forest Service documents: (1) "Land Management Plan - Part 1 Southern California National Forests Visions: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest"; (2) "Land Management Plan - Part 2, San Bernardino National Forest Strategy"; (3) "Land Management Plan - Part 3 Design Criteria for Southern California National Forests: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest"; (4) "Record of Decision - San Bernardino National Forest Land Management Plan"; (5) Final Environmental Impact Statement - Land Management Plans: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest"; and (6) "Record of Decision - San Bernardino Forest Land Management Plan."

The Forest Plan constitutes the USFS' strategic direction for the SBNF, at a broad program level, for managing the land and its resources for the next 10 to 15 years. The strategic direction seeks to assure the coordination of multiple-uses, including recreation, environmental education opportunities, forest health and management, air, soil and water quality, watershed, and wildlife and the sustained yield of products and services. As indicated therein, the Forest Plan replaces prior plans as the "original forest plans were often a confusing mix of strategic and site-specific direction that have been difficult to implement. In contrast, the revised forest plans describe only the strategic direction and offer the flexibility for managers to deal with unpredictable events that range from politics and policy decisions at the national level to on-the-ground situations such as drought, disease, or wildland fire. Managers will work from within this strategic framework as they make decisions and propose site-specific projects that are designed to incrementally move the national forests toward the desired conditions."[16]

While no specific visual quality direction is presented, the Forest Plan seeks to "[r]etain natural areas as a core for a regional network while focusing the built environment into the minimum land area needed to support growing public needs." Further, the Forest Plan acknowledges that "[u]rbanization within and surrounding national forest boundaries is threatening to alter the natural character of many areas. Suburban communities have been developed in more remote areas and urban areas have pushed up into the foothills in many places. This has led to an explosion in the amount of Wildland/Urban Interface areas that are at risk and in need of protection from wildland fire. The combination of increased development and the need to protect these developed areas from fire and other natural events (such as flooding) will put increasing pressure on national forest managers to alter landscape character to accommodate these uses."[17]

As part of the strategic direction, the desired condition is that (1) the natural and cultural features of landscapes that provide their "sense of place" are intact; (2) landscapes possess a vegetation pattern and species mix that is natural in appearance and function; (3) built elements and landscape alterations complement landscape characteristics; and (4) facilities supporting urban needs are clustered on existing sites or designated corridors, minimizing the number of acres encumbered by special-use authorizations.

[16]/ United States Department of Agriculture, Forest Service, Land Management Plan, Part 1 Southern California National Forests Visions: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-075, September 2005, p. 4.

[17]/ *Ibid*., p. 47.

The Forest Plan presents more details of the management objectives applied specifically to the SBNF. Land-use zones (CFR 219.11[c]) were used to map the National Forest for the purpose of identifying appropriate management types of "uses" that are consistent with the achievement of the desired conditions. These land-use zones are used to help demonstrate the USFS' intent and to indicate the anticipated level of public use throughout the National Forest. The activities that are allowed in each zone are expected to result in progress along the pathway toward the realization of the desired conditions. National Forest land-use zoning is similar in concept to the zoning models that are used by municipalities throughout southern California. As illustrated in Figure 4.1-1 (San Bernardino National Forest Land Management Plan), in the "Developed Area Interface," which includes those National Forest areas abutting the project area, "recreation residence tracts" are a suitable land use in designated areas.[18]

The Forest Plan presents a discussion on themes and desired conditions by geographic area. The Forest Plan's theme for the "Lytle Creek Place" is that it "offers a popular year-round stream gathering place for urban families. Steep, chaparral-covered hillsides with perennial and intermittent streams and fragmented riparian vegetation, coastal sage scrub, scattered groves of large sugar pine and bigcone Douglas-fir provide important wildlife habitat. The [Lytle Creek] Place supplies the primary source of water for the City of Fontana."[19]

The Forest Plan's desired condition for the "Lytle Creek Place" is that it be maintained as a natural appearing landscape that functions as a location for family-oriented, day-use, and dispersed and developed recreation. The valued landscape attributes to be preserved over time are scattered riparian-area vegetation, the presence of mature stands of mixed conifer and bigcone Douglas-fir, the presence of sugar pines, coastal sage scrub, and an age-class mosaic in chaparral. Chaparral and forested areas are managed to provide fire protection for adjacent communities, recreation areas, and wildlife habitat. Heritage properties and Native American gathering areas are identified and protected. Access to the Cucamonga Wilderness is maintained. No new or expanded winter sports areas are proposed. Property lines are located and managed. Law enforcement presence in high-use areas serve to minimize unauthorized activities and conflicts.

The Forest Plan further notes that community protection from wildland fire in Lytle Creek is the highest priority and will be emphasized through public education, fire prevention, and fuel management in cooperation with city, county, and State agencies. The scenic focus of Lytle Creek Place will be on maintaining a naturally appearing mosaic of chaparral and mixed conifer forest, montane forest, bigcone Douglas-fir, and riparian vegetation. Habitats for federally listed and other sensitive species will be managed to promote species conservation and recovery, with maintenance of water flows and processes being a high priority.[20]

As outlined below, with regards to the National Forest as a whole, the following Forest Plan "strategies and tactics" for the management of the SBNF's visual environment focuses on landscape aesthetics, restoration, and character:

[18]/ United States Department of Agriculture, Forest Service, Land Management Plan, Part 2, San Bernardino National Forest Strategy, R5-MB-079, September 2005, p. 3.
[19]/ *Ibid*., p. 72.
[20]/ *Ibid*., pp. 74-75.

◊ **Landscape Aesthetics**. Manage landscapes and built elements to achieve scenic integrity objectives: Use best environmental design practices to harmonize changes in the landscape and advance environmentally sustainable design solutions.

◊ **Landscape Restoration**. Restore landscapes to reduce visual effects of nonconforming features: Prioritize landscape restoration activities in key places (Arrowhead, Big Bear, Big Bear Back Country, Front Country, Garner Valley, Idyllwild, Lytle Creek, San Bernardino Front Country, San Gorgonio, and Santa Rosa and San Jacinto National Monument). Integrate restoration activities with other resource restoration. Restoration of landscape should consider not only the existing condition but the sustainable natural appearing landscape that is the desired condition of the mature forest.

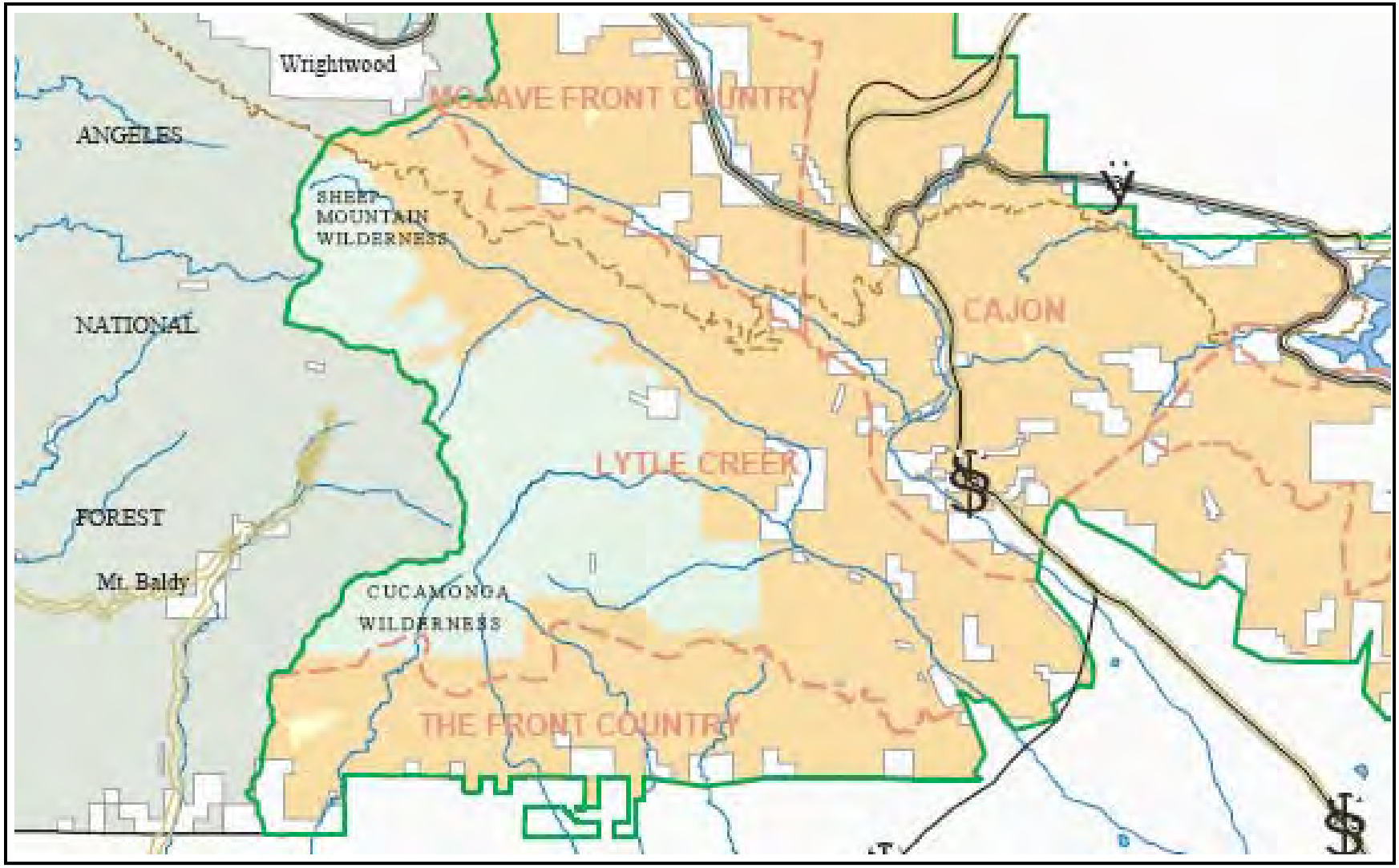
◊ **Landscape Character**. Maintain the character of "Key Places" to preserve their intact nature and valued attributes: Maintain the integrity of the expansive, unencumbered landscapes and traditional cultural features that provide the distinctive character of the place. Promote the planning and improvement of infrastructure along scenic travel routes.[21]

The Forest Service's "scenery management system" (SMS) presents a vocabulary for managing scenery and a systematic approach for determining the relative value and importance of scenery on NFS lands.[22] The system is used in the context of ecosystem management to inventory and analyze scenery in a national forest, to assist in establishment of overall resource goals and objectives, to monitor the scenic resource, and to ensure high-quality scenery for future generations.

Although the SMS includes five "scenic integrity objectives" (SIOs), only the following three SIOs have been applied to the National Forest: (1) High (Appears Unaltered): Retention (landscapes where the valued landscape character appears intact; deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident); (2) Moderate (Slightly Altered): Partial Modification (landscapes where the valued landscape character appears slightly altered; noticeable deviations must remain visually subordinate to the landscape character being viewed); (3) Low (Moderately Altered): Modification (landscapes where the valued landscape character appears moderately altered; deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetation type changes or architectural styles outside the landscape being viewed; they should not only appear as valued character outside the landscape being viewed but as compatible or complimentary to the character within).

[21]/ *Ibid*., p. 144.

[22]/ The City also considered the methodology outlined in the United States Department of the Interior, Bureau of Land Management's "Visual Resource Management Program, Stock No. 024-011-00116-6" (1980) and "Visual Resource Inventory, Manual H-8410-1" (1986) but, based on the proximity between the project site and San Bernardino National Forest, elected to utilize the methodology presented in the United States Department of Agriculture, Forest Service's "Landscape Aesthetics - A Handbook for Scenery Management, Agricultural Handbook No. 701" (1995) based on the project site's proximity to the National Forest.



Scenic Integrity Objectives

Very High | High | Moderate

Figure 4.13-1
SAN BERNARDINO NATIONAL FOREST - SCENIC INTEGRITY OBJECTIVES
Source: United States Forest Service

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The following definitions are presented in the Forest Plan: (1) "High Scenic Integrity: This classification provides for conditions where human activities are not visually evident. This refers to landscapes where the valued (desired) landscape character 'appears' intact. Deviations may be present but must repeat the form, line, color, texture, pattern, and scale common to the landscape character. The landscape appears unaltered. This is synonymous with the Retention Visual Quality Objective under the original Visual Management System"; (2) "Moderate Scenic Integrity: The classification refers to landscapes where the valued (desired) landscape character 'appears slightly altered.' Noticeable deviations must remain subordinate to the landscape character being viewed. The landscape appears slightly altered. This is synonymous with the Partial Retention Visual Quality Objective under the original Visual Management System; and (3) "Low Scenic Integrity: This classification refers to landscapes where the valued (desired) landscape characters 'appears moderately altered.' Deviations begin to dominate the valued landscape character being viewed, but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetation-type changes or architectural styles outside the landscape being viewed. Deviations must be shaped and blended with the natural terrain (landform) so that elements such as unnatural edges, roads, landings and structures do not dominate the composition. The landscape appears moderately altered. This is synonymous with the Modification Visual Quality Objective under the original Visual Management System."[23]

As further defined therein, a "viewshed" is the "[t]otal visible area from a single observer position or the total visible area from multiple observer positions. Viewsheds are accumulated seen-areas from highways, trails, campgrounds, towns, cities or other viewer locations."[24]

As illustrated in Figure 4.13-1 (San Bernardino National Forest – Scenic Integrity Objectives), SIOs have been designated for the National Forest. At the project level, all National Forest activities are subject to review of the SIOs. As indicated, the SIO for that portion of the National Forest that abuts the project site is designated as "High."

The Forest Plan contains common design criteria for the four southern California national forests (Angeles, Cleveland, Los Padres and San Bernardino National Forests). As indicated therein, the following aesthetic management standards have been established: (1) Design management activities to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map (S9); and (2) SIOs will be met with the following exceptions: Minor adjustments not to exceed a drop of one SIO level is allowable with the Forest Supervisor's approval. Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration (S10).[25]

Scenic integrity is a measure of the degree of visible disruption of the landscape character. A landscape with minimal visual disruption is considered to have high scenic integrity. Those landscapes having increasingly discordant relationships among scenic attributes are viewed as having diminished scenic integrity.

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[23]/ United States Department of Agriculture, Forest Service, Land Management Plan – Part 3 Design Criteria for Southern California National Forests: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-080, September 2005, pp. 98, 102, and 104.

[24]/ *Ibid*., p. 118.

[25]/ *Ibid*., p. 6.

- **Federal Land Policy and Management Act**. The Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 *et. seq.*) stipulates that "public lands be managed in a manner that will protect the quality of the. . .scenic. . .values" (Section 102[a][8]) and identified "scenic values" as one of the resources for which public land should be managed (Section 103[c]).

The United States Supreme Court has stated that the protection of aesthetics is a legitimate function of the legislature.[26]

4.13.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **California Environmental Quality Act**. In accordance with Section 21000(b) of CEQA, "[i]t is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man." Pursuant to Section 21001(b) of CEQA, it is the policy of the State to "[t]ake all actions necessary to provide the people of this State with clean air and water, enjoyment of aesthetics, natural, scenic, and historic environmental qualities, and freedom from excessive noise."

  The State does not provide specific guidelines or methodology to be applied in the assessment of the visual environment but leaves the assessment and methodology for such assessment, if any, up to the discretion of the CEQA Lead Agency.

- **California Street and Highway Code**. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the California Streets and Highways Code (S&HC). The status of a State Scenic Highway changes from "eligible" to officially "designated" when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a scenic highway.

  No State-designated scenic highways exist in the general project area. As indicated in the County's "Circulation and Infrastructure Background Report," "Lytle Creek Road" and "Interstate 15 from the Fontana city limit northeast to the Nevada state line" are identified as roadways having "scenic character of visual importance." The County General Plan does not, however, include "Lytle Creek Road" among the list of roadways which the County has "designated as scenic highways and includes a different segment of the I-15 Freeway."

- **California Public Utilities Code**. The PUC prohibits new overhead utility distribution installation in scenic highway corridors and requires the CPUC to regulate approved work (Section 320). Section 320 does not apply to transmission towers, conductors, or related facilities designed to operate at high-side voltages of 50 kV or more, unless the utility designates them as distribution lines.

[26]/ In Berman v. Parker (348 U.S. 26 [1954]), the court noted: "The concept of the public welfare is broad and inclusive. [Citation]. The values it represents are spiritual as well as physical, aesthetic as well as monetary. It is within the power of the legislature to determine that the community should be beautiful as well as healthy, spacious as well as clean, well-balanced as well as carefully patrolled."

4.13.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **County of San Bernardino General Plan**. According to the County General Plan, "San Bernardino County contains vast undeveloped tracts of land that offer significant scenic vistas. These locations are in danger of deteriorating under growing pressure from urban development and increased recreational activities occurring across the County. Actions have been taken by federal, State, County, and local jurisdictions to ensure that these resources are protected to preserve their aesthetic value." The County has determined that the "primary goal of scenic routes is to conserve the scenic qualities of these routes." In the context of the proposed project, those aesthetic goals, objectives, and programs presented in the County General Plan that appear to be most closely related to the unincorporated County portion of the project site are presented below.

  - Goal LU1. The County will have a compatible and harmonious arrangement of land uses by providing a type and mix of functionally well-integrated land uses that are fiscally viable and meet general social and economic needs of the residents.

    - ◊ Policy LU1.2. The design and siting of new development will meet locational and development standards to ensure compatibility of the new development with adjacent land uses and community character.

      Programs. Discourage linear commercial development of shallow depth along streets or highways when it can be shown that such development impairs traffic flow or detracts from the aesthetic enjoyment of the surroundings, or if it can be demonstrated that equally effective services can be provided in an alternative configuration.

  - Goal CO1. The County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County.

    - ◊ Policy CO1.2. The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County will continue the review of the land use designations for unincorporated areas within one mile of any State or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.

  - Goal OS2. The County will expand its trail systems for pedestrians, equestrians, and bicyclists to connect with the local, state, and federal trail systems.

◊ Policy OS2.3 Locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural, and historic features.

- Goal OS5. The County will maintain and enhance the visual character of scenic routes in the County.

◊ Policy OS5.1. Features meeting the following criteria will be considered for designation as scenic resources: (a) A roadway, vista point, or area that provides a vista of undisturbed natural areas. (b) Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed. (c) Offers a distant vista that provides relief from less attractive views of nearby features.

◊ Policy OS5.2. Define the scenic corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail, or path. Development along scenic corridors will be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.

◊ Policy OS5.3. The County desires to retain the scenic character of visually important roadways throughout the County. A “scenic route” is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to add beauty to the County. Therefore, the County designates the following routes as scenic highways and applies all applicable policies to development on these routes. . .Interstate 15 from the junction with Interstate 215 northeast to the Nevada state line.

- **County of San Bernardino Development Code**. It is the purpose of the County Development Code “to implement the San Bernardino County General Plan by classifying and regulating the uses of land and structures within unincorporated San Bernardino County; by preserving and protecting the County’s important agricultural, cultural, natural, open space and scenic resources; and by protecting and promoting the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the County. More specifically, the purposes of this [County] Development Code are to: (1) Provide standards and guidelines for the continuing orderly growth and development of the County that will assist in protecting the character and identity of San Bernardino County and its distinct communities. (2) Conserve and protect the County’s important agricultural, cultural, natural, open space and scenic resources” (Section 81.01.020).

  Scenic resources in the County contain vistas that rival many found elsewhere in the State and the nation. These scenic resources can be deteriorated by increased urbanization along scenic corridors. The Open Space Overlay seeks to preserve these resources and to provide additional opportunities for the public to enjoy these pleasing features (Section 82.19.010[b]).

  As indicated, in part, in Section 82.19.040 (Development Criteria within Scenic Areas) in Chapter 82.19 (Open Space Overlay) of the County Development Code: “(a) Applicability. The criteria below shall be used to evaluate a land use proposal within a

scenic area in an Open Space Overlay and shall apply to: (1) Areas with unique view of the County's desert, mountain and valley areas or any other aesthetic natural land formation. (2) An area extending 200 feet on both sides of the ultimate right-of-way of State and County designated scenic highways as identified in the [County] General Plan.

The area covered may vary to reflect the changing topography and vegetation along the right-of-way. (b) Report. A special viewshed analysis may be required if it is determined that the proposed project may have a significant negative impact on the scenic values of the subject parcel. (c) Building and structure placement. Structure placement shall be compatible with and shall not detract from the visual setting or obstruct significant views. (d) Review area. Intensive land development proposal, including residential facilities, commercial activities and mobile home parks/manufactured home land-lease community, shall be designed to blend into the natural landscape and maximize visual attributes of the natural vegetation and terrain. The design of development proposals shall also provide for maintenance of a natural open space parallel to and visible from the right-of-way." Additional criteria are established for access drives, landscaping, roads, pedestrian walkways, parking and storage areas, above ground utilities, grading, timber harvesting, storage areas, and signs.

It is noted that the County has not adopted a view preservation or protection ordinance.

4.13.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. The City General Plan includes an optional "Community Design Element" which sets forth specific design criteria, including guidelines related to the physical characteristics of land uses and guidelines for various design relationships between different land uses. In the context of the proposed project, those visual resource goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.
  - Goal 1.1. Protect and enhance the City's existing positive attributes.
    - ◊ Policy 1.1.3. The City shall protect, to the extent feasible, the natural character of the areas bordering, or in close proximity to, the National Forest to the north and northwest of the City, and the view of those areas seen from the northern portion of the City.
    - ◊ Policy 1.1.4. The City shall protect, to the extent feasible, the natural character of the areas bordering, or in close proximity to, the Santa Ana River.
  - Goal 1.2. Protect Rialto's rural, small town character.

◊ Policy 1.2.1. All new development and renovations, adjacent to older residential neighborhoods, shall respect the scale, massing, and landscape of older residential neighborhoods. This includes: development of landscape plans which complement neighboring lots, buffer adjoining land uses, and soften variations in size, setback, or architectural character of buildings on nearby parcels; the relationship between size and bulk of building parts; placement of windows and doors, setbacks, colors, materials and detailing compatible with the existing neighborhood; and adopt demolition and infill ordinances, applying demolition and infill standards in all future specific plans within developed areas.

- Goal 1.4. Improve the architectural quality of development within Rialto to achieve harmony without monotony in the built environment.

  ◊ Policy 1.4.4. The following neighborhoods shall be addressed separately by specific policies and/or documents as identified below. . .Sycamore Flats (Sycamore Flats Specific Plan) [and] Lytle Creek Area (Lytle Creek Specific Plan. . .In these areas, design shall conform to the separate design standards found in their respective specific plan documents. The City shall encourage the timely completion of these design components within these areas.

- Goal 2.1. Promote well planned design of residential land uses within the City.

  ◊ Policy 2.1.3. Meandering greenbelts shall be incorporated into subdivision design along trails, collector streets, secondary streets and major highways, protected environmental areas, or other features. Bicycle and pedestrian trails should be connected with similar features in neighboring projects so that upon completion newer neighborhoods will be linked at the pedestrian level.

- Goal 3.1. Promote commercial and/or industrial development which is well designed, people-oriented, sensitive to the needs of the visitor or resident, and functionally efficient for its purpose.

- Goal 3.3. Minimize the visual impact of vehicles on the landscape and community design of parking lots.

- Goal 3.4. Special design consideration shall be given to such uses as service stations, car washes, convenience markets, and fast food drive through businesses.

- Goal 5.1. Promote the “greening” of Rialto.

Applicable or potentially applicable visual resource policies, as extracted from the City General Plan, including an assessment of the project’s compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. No City Municipal Code excerpts are cited herein.

It is noted that the City has not adopted a view preservation or protection ordinance.

4.13.3 Environmental Setting

4.13.3.1 Regional Setting

From a visual perspective, the regional setting is comprised of a number of physical elements, rather than a single dominant element. In no intended order, those elements include the massive San Gabriel and San Bernardino Mountains to the north, the generally undisturbed expanse of the National Forest to the north and west, the concrete-lined and elevated I-15 Freeway and the overhead high-voltage steel-lattice transmission towers that appear to traverse the project site, the unchannelized braids of Lytle Creek and Cajon Creek, the rock-strewn alluvial fan emanating from the mountain washes and spreading throughout the San Bernardino Valley, the high-intensity urban development along the I-15 Freeway corridor, the open sand and gravel mine dividing the southern portion of the project site, the tranquil residential neighborhoods adjacent to the project site, the introduced landscaping along the El Rancho Verde Royal Vista Golf Course, the openness of Glen Helen Regional Park, and the remaining underdeveloped or undeveloped areas to the north, east, west, and south of the project site.

These elements differ in scale and massing and increase or decrease in dominance based on the location and orientation of the viewer. Some elements constitute components of the natural landscape[27] (natural environment) while others constitute introduced features (built environment) of human endeavors. Traveling north along the I-15 Freeway, the general project area is becoming more and more visually dominated by residential and commercial development. In those areas, once dominant open space areas has been replaced by extensive urban development. To the west, over a substantial portion of the landscape, homes rather than native vegetation now cover the upward sloping terrain leading to the base of the nearby mountains.

Public vantage points from the I-15 Freeway and from other areas of elevated terrain, including the base of the National Forest, once were dominated by agriculture and natural sparsely vegetated open space lands. Now, much of that area has given way to residential and commercial development. In addition, along the I-15 Freeway corridor, commercial complexes and industrial warehouses, including truck terminals, add appreciably to the urban character viewed by passing motorists. In those areas directly to the south of and through the project site and further to the north, through and to the north of the community of Devore, development thins and undeveloped lands and underdeveloped areas continue to dominate the visible landscape.

Similarly, views by motorists traveling north along Lytle Creek Road are first dominated by the wide expanse of freeway which is the dominant visual element in the general project area and then to the freeway-oriented commercial development (Nealey's Corner) near the I-15 Freeway. Those views rapidly change to low-density rural residential on the west and to the braided strands of Lytle Creek on the east. Lytle Creek Road is used by residents of small mountain communities located within and adjacent to the SBNF and is the primary access route to the Cucamonga Wilderness Area. The road enters Lytle Creek Canyon on the south side of Lytle Creek and crosses to the north side midway up the canyon.

[27]/ Reference to the "natural landscape" or "natural environment" herein is not limited to only those pristine landscapes and environments absent human influences, containing only native vegetation, but includes areas where those influences are not the dominant visual elements.

4.13.3.2 Local Setting

Visual Character

Photographs characterizing the four proposed neighborhood sites are presented herein. Figure 4.13-2 (Existing Environmental Setting - Photograph Orientation Map) presents the location and orientation of a number of photographs that provide a visual record of the existing visual environment. Photographs illustrating the visual character of the project site are presented in Figure 4.13-3 (Existing Environmental Setting - Illustrative Visual Characterization). The existing visual character of each of the proposed neighborhoods is described below.

- **Neighborhood I**. The area comprising Neighborhood I is the most visually diverse of the four LCRSP neighborhoods. This area is situated in close proximity to the SBNF (Cajon Ranger District). Neighborhood I can be considered as comprising three subareas (Sycamore Canyon, Sycamore Flats, and the triangular area located to the north of Lytle Creek and once comprised a portion of Lytle Creek North). The Sycamore Canyon area, which constitutes the northwesterly portion of Neighborhood I, is comprised of terrain that gently rises in elevation from the I-15 Freeway toward the base of the SBNF. Toward the north and west, the hilly terrain comprising the foothills of the San Bernardino Mountains is primarily covered with native vegetation. Views from east to west encompass background vistas of the SBNF. The clarity of the existing background views vary based on meteorological conditions (haze) and air quality (pollutants in the air).

  Adding further distinction to the landform, Sycamore Wash divides Neighborhood I into its larger eastern portion and its smaller triangular western portion, with Lytle Creek bordering the latter on the west. While no still or flowing water is evident throughout the year, there exist areas containing riparian vegetation, characteristic of drainage areas. The Sycamore Canyon area is not pristine. Improvements to Clearwater Parkway (formally Glen Helen Parkway) have resulted in ground disturbance and vegetation removal adjacent to that right-of-way. Similarly, the I-15 Freeway is a dominant visual element throughout Neighborhood I.

  Clearwater Parkway bisects the eastern portion of Neighborhood I, while the two-lane Devore Road divides the western portion (Sycamore Flats). Both roads roughly parallel the I-15 Freeway. Figure 4.13-3(A) and Figure 4.13-3(B) show the project site from Clearwater Parkway, looking west and southeast, respectively. Figure 4.13-3(A) shows the proposed open space area, including an area of riparian vegetation. Figure 4.13-3(B) shows the proposed residential area within Neighborhood I. All project areas currently contain dirt roads, indicative of human interaction.

  The portion of Neighborhood I located west of the I-15 Freeway is accessed off of Devore Road. From Devore Road, the proposed commercial area is shown in Figure 4.13-3(C). Looking southwesterly, the proposed residential and open space areas are shown in Figure 4.13-3(D). Figure 4.13-3(E) shows the westerly portion of Neighborhood I from the I-15 Freeway traveling west. In this area, the developed portion would fan out as a triangle on both sides of Devore Road. In the middleground are SCE's 500-kV transmission lines, extending beyond the site. Steel-lattice transmission towers and accompanying access roads divide portions of Neighborhoods III and IV.

A Photograph Number
Viewpoint and Camera Orientation

Figure 4.13-2
PHOTOGRAPH ORIENTATION MAP
Source: Environmental Impact Sciences

Figure 4.13-3(A)
Neighborhood I Area Southeast of the I-15 Freeway from Clearwater Parkway

View from Clearwater Parkway looking westward

Figure 4.13-3(B)
Neighborhood I Area Southeast of the I-15 Freeway from Clearwater Parkway

View from Clearwater Parkway looking southeasterly

Figure 4.13-3(C)
Neighborhood I Area Northwest of the I-15 between Devore Road the I-15 Freeway

View from Devore Road looking southeasterly

Figure 4.13-3 (1 of 4)
EXISTING ENVIRONMENTAL SETTING ILLUSTRATIVE VISUAL CHARACTERIZATION
Source: Environmental Impact Sciences

Figure 4.13-3(D)
Neighborhood I Area Northwest of the I-15 Freeway and West of Devore Road

View from Devore Road looking southwesterly

Figure 4.13-3(E)
Western Portion of Neighborhood I Area Northwest of the I-15 Freeway

View from I-15 Freeway looking southwesterly

Figure 4.13-3(F)
Neighborhood IV Area and Lytle Creek Northwest of the I-15 Freeway

View from southbound I-15 Freeway north of Sierra Avenue ramp looking southwesterly

Figure 4.13-3 (2 of 4)
EXISTING ENVIRONMENTAL SETTING ILLUSTRATIVE VISUAL CHARACTERIZATION
Source: Environmental Impact Sciences

Figure 4.13-3(G)
Neighborhood II Area North of El Rancho Verde Royal Vista Golf Course

View from northern boundary of El Rancho Verde Royal Vista Golf Course behind clubhouse looking northeasterly

Figure 4.13-3(H)
Neighborhood II Area and El Rancho Verde Royal Vista Golf Course

View from backyard property line of existing residences in County Club Estates abutting El Ranch Verde Golf Royal Vista Golf Course looking northeasterly

Figure 4.13-3(I)
Neighborhood II Area from the Vicinity of the San Bernardino County Flood Control District Property

View is from end of Oakdale Avenue looking northwesterly

Figure 4.13-3 (3 of 4)
EXISTING ENVIRONMENTAL SETTING ILLUSTRATIVE VISUAL CHARACTERIZATION
Source: Environmental Impact Sciences

Figure 4.13-3(J)
Neighborhood III Area and Riverside Avenue from Las Colinas

View from Riverside Avenue looking northward

Figure 4.13-3(K)
Neighborhood III Area and Riverside Avenue

View from Riverside Avenue looking southeasterly toward Cemex USA Lytle Creek Plant

Figure 4.13-3(L)
Neighborhood IV Area and Lytle Creek Road at the Northern Project Boundary

View from Lytle Creek Road looking southeasterly toward the I-15 Freeway

Figure 4.13-3 (4 of 4)
EXISTING ENVIRONMENTAL SETTING ILLUSTRATIVE VISUAL CHARACTERIZATION
Source: Environmental Impact Sciences

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Since the project site is generally vacant, changes in the area's color palette varies with the seasons, depending on rainfall amounts. Following winter rains, the site area contain additional color diversity as spring wildflowers bloom and subsequently fade. During dry summer months, as moisture dissipates and annuals complete their seasonal cycles, portions of the site turn brown/gray-green. The riparian areas remains green during the summer season. Portions of Neighborhood I currently have the greatest potential for exhibiting seasonal variations and diversity of color given the area's topography, vegetation, and proximity to the National Forest.

With the exception of Glen Helen Regional Park, in the vicinity of Neighborhood I, the project site and the general project area remain mostly undeveloped. The development that does exist constitutes only a scattering of homesites along the 1-15 Freeway. The broad floodplains of Cajon Creek and Lytle Creek remain primarily as natural features and illustrate the natural forces that have shaped much of the visual landscape.

The adjacency of SBNF ensures that much of the adjacent area to the north, and the northward-oriented background views across Neighborhood I, will generally be retained in perpetuity as natural open space. Given the very sparse development that exists, night lighting is limited to few spots of light within a dark area that contrasts strongly with the multitude of headlights moving along the I-15 Freeway.

- **Neighborhood II**. The area comprising Neighborhood II is located east of Riverside Avenue. Primarily single-family residential development exists to the west of this portion of the project site. The El Rancho Verde Royal Vista Golf Course, which is kept green with irrigation and non-native landscaping, contrasts with the undeveloped and sparsely to moderately vegetated areas comprising the remainder of Neighborhood II. Neighborhood II is relatively flat, and generally maintains a constant slope across its width. Similar to the conditions in Neighborhoods III and IV, there is an absence of distinct physiographic elements that would give the property a unique visual character.

  The cobble-strewn landscape and spare vegetation contribute to the limited diversity of colors. Some of the native alluvial fan scrub vegetation has been disturbed by flood-scowling actions or human interaction.

  Neighborhood II is located to the east of Riverside Avenue. Riverside Avenue serves as the primary northern entry into the City. An existing single-family residential neighborhood (Country Club Estates) and limited industrial uses (Monier Lifetile) are situated along the east side of Riverside Avenue. A number of existing homes along Sycamore Avenue back to the golf course. Figure 4.13-3(G) shows the typical view from vantage points at the property line of the residential area. The brown area in the middleground is the developable project area. Figure 4.13-3(H) shows the view from the edge of the golf course property looking across the project site. This view is typical of that observed from vantage points from the residential area along Sycamore Avenue that do not abut the golf course. Figure 4.13-3(I) is taken from the end of Oakdale Avenue, located in the vicinity of the adjoining SBCFCD property. The view orientation is toward the northwest across the southern portion of Neighborhood II. The existing Vulcan Materials San Bernardino Sand and Gravel Plant (2400 W. Highland Avenue) is located to the right of the photograph. The Cemex USA's Lytle Creek Plant (3221 N. Riverside Drive, Rialto) frames the northwestern boundary of Neighborhood II and Lytle Creek constitutes the northeastern boundary of this neighborhood.

Observers positioned along Riverside Avenue are afforded only limited views of the Neighborhood II area. On-site lighting is limited to that associated with the golf course.

- **Neighborhood III**. The area comprising Neighborhood III is located east of Riverside Avenue. Existing single family residences (Las Colinas) and limited office uses (Burlingame Industries) abut Riverside Avenue to the west of the project area. Monier Lifetime (3511 Riverside Avenue, Rialto) is the only existing permitted land use within the Neighborhood III area.

  Part of the down-sloping alluvial fan, Neighborhood III lacks other distinct physiographic elements that would give the property a unique visual character. The site's sparse to moderate vegetation tends to lack a diversity of colors. Steel-lattice high-voltage transmission towers bisect the northern portion of the neighborhood. Low-voltage electrical distribution lines parallel Riverside Avenue along the easterly side of the street. Within the area of Neighborhood III, no overhead distribution lines exist along the west side of Riverside Avenue. Street lights are installed on the west side of Riverside Avenue but not along the west side.

  Views to the north and east include background views of the SBNF. Figure 4.13-3(J) illustrates northward-oriented views from the Riverside Avenue right-of-way across the site. In this area, the westerly side of Riverside Avenue is a landscaped parkway, with a meandering sidewalk and decorative stucco-covered walks separating the abutting single-family homes from the roadway. Figure 4.13-3(K) shows existing northward-oriented views across Riverside Avenue and the property. The Cemex USA quarry and associated conveyer belts and material stockpiles are visible in the middleground. The Cemex USA Lytle Creek plant is not part of the project site and serves to physically separate the areas comprising Neighborhoods III and IV. Lytle Creek wash and the Cemex USA facility form the easterly boundary of Neighborhood III.

  On the project site, with the exception of Monier Lifetile and El Rancho Verde Royal Vista Golf Course, no sources of light presently exist within the area of Neighborhood III. Although a wall borders and separates residences situated along Riverside Avenue from the street, from existing community egress and ingress points, residents can look northward at a generally non-illuminated area, mostly void of night lighting, interrupted only by the headlights moving along the I-15 freeway in the middleground.

- **Neighborhood IV**. The area comprising Neighborhood IV is located east of Lytle Creek Road, an undivided two-lane roadway providing access to the SBNF and the community of Lytle Creek, and north of the I-15 Freeway. Lytle Creek wash forms the easterly boundary of Neighborhood IV. The Neighborhood IV area remains mostly undeveloped. Two steel-tank, above-ground water reservoirs are located on the east side of Lytle Creek Road.

  On the west side of Lytle Creek Road, Nealey's Corner, containing a number of gasoline service stations and fast-food restaurants, are located northwest of the I-15 Freeway/Sierra Avenue exit. Rural residential development, consisting primarily of older single-family homes on large lots, are located north of Nealey's Corner along the west side of Lytle Creek Road. Figure 4.13-3(F) presents a view of Neighborhood IV from southbound I-15 Freeway, before the Sierra Avenue exit. Figure 4.13-3(L) presents a southeasterly view taken near the northern boundary of Neighborhood IV along Lytle Creek Road.

Neighborhood IV is located near the mouth of Lytle Creek, where it leaves the San Gabriel and San Bernardino Mountains as a relatively confined watercourse to become a widely braided channel become joining Cajon Creek. In the general project area, except where disturbed by human intervention, the resulting alluvial fan is generally indistinct except for the periodic presence of flowing water and vegetation. The project site is absent major physiographic (topographic) elements that would introduce areas of exposed geologic formations or rock outcroppings.

The site contains area of sparse to moderate vegetation but lacks distinct physiographic elements that would give the property a unique visual character. The site's color palette is comprised mostly of muted tones with a general homogeneity encompassing most of the property. The site lacks an evident richness of native vegetation. Night lighting is limited to few spots of light within a dark area that contrasts strongly with the multitude of headlights moving along the I-15 Freeway.

Similar to Neighborhood I, this neighborhood abuts the SBNF foothills and Lytle Creek Wash and is crossed by steel-lattice high-voltage transmission towers. The rock-strewn alluvial fan, the SBNF, Lytle Creek wash, and the residential and non-residential structures situated along Lytle Creek Road give Neighborhood IV area its dominant visual character.

Identification of Existing Landscape Value

All views are not created equal. In recognition of the potential subjectivity that is inherent in any discussion of aesthetics, it is first necessary to formulate a mechanism with which visual impacts can be discussed and evaluated. Although no such mechanism exists in CEQA or the State CEAA Guidelines, the Forest Service has developed a "Visual Management System Handbook"[28] that served as a guide for visual resource inventory and management from 1973 to 1997. In 1997, the Forest Service initiates the implementation of the scenery management system (SMS), as outlined in the Forest Service's "Landscape Aesthetics: A Handbook for Scenery Management."[29]

The SMS is a tool for integrating the benefits, values, desires, and preferences regarding aesthetics and scenery for all levels of land management planning. SMS is used to classify, plan, manage, and monitor visual changes either over time, whether as a result of planned change or due to catastrophic events such as a wildfire. Because of the project's proximity to NFS lands, the SMS was selected as the methodology for assessing aesthetic impacts. Portions of the SMS have been incorporated herein and applied to agency-derived "sensitive viewpoints" in order to identify a "landscape value" that classifies the "before construction" existing condition of each viewpoint. In order to describe the changes that occur and to determine if impacts are significant, those same values are then reapplied, as part of the impacts analysis, to define and classify the visual transition to post-project condition of each viewpoint. Sensitive viewpoints are neither the best or worst views of the project area but represent "typical" views of the project area from public vantage points.

[28]/ United States Department of Agriculture, Forest Service, National Forest Landscape Management, Volume 2, The Visual Management System, United States Department of Agriculture Handbook Number 462, 1974.

[29]/ United States Department of Agriculture, Forest Service, Landscape Aesthetics - A Handbook for Scenery Management, Agricultural Handbook No. 701, December 1995.

Landscape character gives a geographic area its visual and cultural image and consists of the combination of physical/structural, biological/natural, and cultural attributes that make each landscape identifiable or unique. Landscape character embodies distinct landscape elements that exist throughout an area. Those elements that are used to identify the landscape value of the site's existing and future aesthetic conditions are identified below. These elements can be viewed as a matrix and used as a means of describing and comparing the pre-project and post-project landscapes. When combined, these elements produce a value of relative importance of the landscape that is being viewed.

- **Distance Zones**. Distance zones are landscape areas denoted by the distance observed by the viewer and used as a frame of reference in which to discuss landscape visibility. As the separation distance between an observer and landscape feature within a view being observed increases, the viewer's perception of the landscape features typically diminishes (unless the feature increases proportionately in size to fill the same portion of an observer's field of vision). Landscape visibility uses three visibility (distance) zones: foreground (Fg), middleground (Mg), and background (Bg). Although no precise distances exist, the foreground is generally defined as a distance extending up to 0.5 miles from the observer, middleground can be considered as extending 0.5-4.0 miles from the observer, and background extends from about 4.0 miles to the horizon. Although different distances can be assigned, the foreground is based upon the distances at which details can be readily perceived. In the middleground, texture normally is characterized by the massing of objects. In the background, texture is either very weak or non-existent.

  Distance zones are divisions of a particular landscape being viewed and are used to describe the part of a characteristic landscape that is being inventoried or evaluated. Unless visibility is restricted by dense trees or structures, middleground vistas typically dominate. In middleground vistas, trees, vegetative patterns, water features, structures, roadways, are still discernable and color variations still distinguishable. In background vistas, vegetation and structures typically begin to merge together and colors become muted. Foreground features tend to dominate where trees or structures obstruct middleground views or become obtrusive to the point that the human eye focuses on those closer features and does not easily flow to middleground features.

  In the general project area, meteorological (haze) and air quality (pollution) conditions can become a factor to visibility and mute the clarity of middleground and background views, blend vegetative patterns, and reduce color distinction. Some days, haze/pollution completely blocks view of background landscapes. Viewing on a clear day provide more distinct variation on color, pattern, texture, and allow distant features to be in clearer focus. Haze and the presence of air pollution is more often the norm than the exception in the general project area.

  Since the resulting impacts of the proposed physical transformation of the site would logically be less for most distant (background) views as compared to more proximal (foreground and middleground) locations, since, with the exception of views of the project site from elevated vantage points within the National Forest, most background views would be anticipated to remain relatively unchanged, for the purpose of this analysis, the discussion of distance zone shall be limited to foreground and middleground zones.

- **Scenic Attractiveness**. Scenic attractiveness is the primary indicator of the intrinsic beauty of a landscape and of the positive responses it evokes in an observer. Scenic attractiveness constitutes a variable that can be used to assess the relative importance of a particular landscape, based on human perception of the intrinsic beauty and based on common (albeit not universally held) perceptions concerning the beauty of landform, vegetation patterns, composition, surface water characteristics, land-use patterns, and cultural features. For the purpose of comparison, as described below, scenic attractiveness is divided into three classes: Class A (Distinctive), Class B (Typical), and Class C (Indistinctive).

  - **Class A (Distinctive)**. The "distinctive" class is comprised of areas where landform, vegetation patterns, water characteristics, and cultural features combine to provide unusual, unique, or outstanding scenic quality. Those landscapes have strong positive attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

  - **Class B (Typical)**. The "typical" class includes areas where landform, vegetation patterns, water characteristics, and cultural features combine to provide ordinary or common scenic quality. Those landscapes have generally positive, yet common, attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

  - **Class C (Indistinctive)**. The "indistinctive" class includes areas where landform, vegetation patterns, water characteristics, and cultural features have low scenic quality. Often, water and rockform of any consequence are missing. Those landscapes have generally weak or missing attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

- **Sensitivity/Concern Levels**. Public sensitivity or concern is the measure of the degree of importance which is assigned to a specific scenery. Landscapes are viewed to varying degrees from different locations and can differ in perceived importance. Based on the context, not all viewers experience the same level of sensitivity to a similar view. The potential sensitivity of a visual receiver may be related to whether the view being processed is being observed by a person at work, at play, or at rest. Visual receivers may be broadly classified into the following groups: (1) those observers who view the impact from their homes are considered highly sensitive as the attractiveness or the outlook from their homes will affect their perception of the quality and acceptability of their home environment and the general quality of life; (2) those observers who view the impact from their workplace are considered only moderately sensitive as the attractiveness or the outlook will have less importance. The degree to which this applies depends on whether the workplace is industrial or commercial. In general, for industrial work place, the sensitivity is considered as low; (3) those observers who view the impact while taking place in an outdoor leisure activity may display varying sensitivity depending on the type of leisure activity. In general, an individual engaged in a team or competitive sport or a sport that requires a high degree of focus and concentration would be less concerned about the quality of their visual surrounding than individuals involved in a more passive or reflective sport or activity, such as hiking; and (4) those observers who view the impact while traveling on a public thoroughfare. In an urban environment, since most motorists choose the shortest rather than the most visually pleasing path to reach their destinations, unless traveling through an area where a motorist may have

reasonable expectations of views of a natural landscape, such as a national park or forest, the sensitivity of passing motorists would be low.

Sensitivity may also be dependent on the number of viewers and the duration of view. With regards to sensitivity, all other factors being equal, along a linear scale, long-duration views by a large number of individuals would have a greater sensitivity than a short-duration view by a limited number of viewers.

The largest number of viewers who reasonably have the potential to observe portions of the site area are associated with those public vantage points afforded along the I-15 Freeway and from local roadways situated directly adjacent to project site. From these vantage points, observers are referred to as "mobile" viewers since they are in transit along the roadways and view the landscape while driving, bicycling, or walking. As such, mobile viewers' vantage points constitute views that are continuously changing. The length of time (duration) mobile viewers have of a particular view is limited to that afforded by traffic flow, the presence or absence of any intervening obstructions (e.g., landscaping), other competing images that the viewer much also process (e.g., driving safely), weather conditions, and the size of the view.

In general, viewers potentially having the greatest concern for or sensitivity to view changes are those which have static or non-changing (stationary or permanent) vantage points, such as a view from a residence. For the proposed project, those "stationary" observers would include views from existing residences located along Sierra and Riverside Avenues.

Along a relative scale, visual sensitivity or concern can be evaluated based on the following relative scale, Sensitivity/Concern Level 1 (High), Sensitivity/Concern Level 2 (Moderate), and Sensitivity/Concern Level 3 (Low).

- **Scenic Class**. Scenic classes represent the relative assignable landscape value derived by combining distance zones, sensitivity/concern level, and scenic attractiveness, as shown in the matrix presented in Table 4.13-1 (Scenic Management System Distance Zone and Sensitivity/Concern Level Matrix). Scenic Classes 1 and 2 (High) reflect varying degrees of high scenic value. Scenic Classes 3 through 5 (Moderate) reflect varying degrees of moderate scenic value. Scenic Classes 6 and 7 (Low) reflect varying degrees of low scenic value.

Table 4.13-1
SCENIC MANAGEMENT SYSTEM DISTANCE ZONE AND SENSITIVITY/CONCERN LEVEL MATRIX

Scenic Attractiveness	Distance Zones - Sensitivity/Concern Levels								
	Fg-1	Mg-1	Bg-1	Fg-2	Mg-2	Bg-2	Fg-3	Mg-3	Bg-3
A	1	1	1	2	2	2	2	3	3
B	1	2	2	2	3	4	3	5	5
C	1	2	3	2	4	5	5	6	7

Source: United States Forest Service

- **Scenic Integrity**. Scenic integrity is a measure of the degree of visible disruption of the landscape character. A landscape with minimal visual disruption is considered to have

high scenic integrity. Those landscapes having increasingly discordant relationships among scenic attributes are viewed as having diminished scenic integrity. Scenic Integrity is expressed in terms of Very High (VH), High (H), Moderate (M), Low (L), Very Low (VL), and Unacceptably Low (UL). Scenic integrity levels are defined as follows.

◊ **Very High Scenic Integrity** (VH). Very High scenic integrity refers to landscapes where the valued landscape character "is intact" with only minute, if any, deviations. The existing landscape character and sense of place is expressed at the highest possible level.

◊ **High Scenic Integrity** (H). High scenic integrity refers to landscapes where the valued landscape character "appears intact." Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.

◊ **Moderate Scenic Integrity** (M). Moderate scenic integrity refers to landscapes where the valued character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.

◊ **Low Scenic Integrity** (L). Low scenic integrity refers to landscapes where the valued landscape character "appears moderately altered." Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed but compatible or complimentary to the character within.

◊ **Very Low Scenic Integrity** (VL). Very Low scenic integrity refers to landscapes where the valued landscape character "appears highly altered." Human activities of vegetation and landform alterations may dominate the original, natural landscape character. Deviations appear as natural occurrences when viewed at background levels.

◊ **Unacceptably Low Scenic Integrity** (UL). Unacceptably Low scenic integrity refers to landscapes where human activities of vegetative and landform alterations have "excessively and dominantly altered" the natural or natural-appearing landscape character.

In addition to sight, landscape character attributes that can affect the perception of the aesthetic experience include the sound, smell, taste, and touch. Examples include soft and sharp sounds of native wildlife, unique fragrance of native vegetation and flowers, mix of vegetation that has both course and fine textures adding a tactile dimension, and sound and sight of movement (rustling tree leaves).

Selection and Characterization of Sensitive Public Viewpoints[30]

Since the project site is privately owned, except for those "on-site" areas now in commercial use (i.e., Monier Lifetile and El Rancho Verde Royal Vista Golf Course) and those "off-site" areas

[30] Absent a local view preservation ordinance, a recorded easement, or enforceable conditions, covenants and restrictions, views from private property are neither provided protection nor is their preservation assured. As a result, the focus of this analysis is primarily directed toward public rather than private viewsheds.

(e.g., SBCFCD property) which are currently operational, no authorized public access to the project site is now provided. The project site or portions thereof can, however, be viewed from a number of public vantage points. For the purpose of this analysis, five sensitive public viewpoints have been selected and are shown in Figure 4.13-4 (Photographs Depicting Selected Sensitive Viewpoints). These viewpoints represent project areas seen from linear (mobile) and single-point fixed (stationary) public vantage points. The selected public viewpoints are not necessarily either the "best" or the "worst" views but were chosen as being representative of the existing visual environment for the proposed project. The pre-project (before) condition of the site's landscape character, as assessed from each sensitive public vantage point, is described using the Forest Service's terminology by element and values assigned. Later in this section, the construction-term and post-project (after) conditions are examined. The results of these assessments, conducted during three separate periods in the project's lifecycle, can then be compared for a qualitative analysis of the project's potential for creating a significance visual change.

- **Sensitive Viewpoint No. 1**. Sensitive Viewpoint No. 1 (Neighborhood I from Clearwater Parkway) is selected as being representative of views from Clearwater Parkway which cuts across the eastern portion of Neighborhood I. From this slightly elevated location, the observer looks westerly across Neighborhood I. The view would also be typical of the proposed residential areas in Sycamore Flats. Motorists and pedestrians (mobile viewers) traveling along Clearwater Parkway and Glen Helen Parkway and other individuals (including both mobile and static viewers) positioned at certain vantage points within Glen Helen Regional Park have views that are generally represented by this viewshed. Sensitive Viewpoint No. 1 is shown as Figure 4.13-4(A).

  - ◊ **Distance Zone**. The distance zone assigned is the middleground. Muted by haze/pollution, the background views are the mountains beyond the second foothill ridge. The middleground view encompasses the I-15 Freeway and the sloping terrain that comprises the valley area at the foot of the San Gabriel and San Bernardino Mountains and including the first ridgeline. The foreground area comprises that area in the lower quarter of the photograph, situated between Clearwater Parkway and the I-15 Freeway, comprised of green riparian vegetation, transitioning to brown dry (upland) shrubs.

  - ◊ **Scenic Attractiveness**. The otherwise natural view is broken by the introduced horizontal lines associated with Glen Helen Parkway, the I-15 Freeway, and the unimproved road in the foreground. The viewer's perception is drawn across the green riparian area (foreground) to the valley at the base of the ridgeline in the upper-middle portion of the view. The eye then transitions to the two mountain valleys that appear beyond. A mix of vegetative patterns and colors, which can vary according to seasonal changes, broken by the roadways, still produces an overall pleasing composition. The view is not, however, unique or outstanding and does not fit into the category of distinctive. Scenic attractiveness is Class B (Typical) since, in the general project area, the viewshed is considered common of other views of the base of the adjoining foothills.

  - ◊ **Sensitivity/Concern Level**. Presently, relatively few observers are located in the general area since the area remains mostly undeveloped. This non-residential view is similar to that which would be seen by observers traveling along Glen Helen Parkway and within the GHRP area. Since the view tends to draw the eye toward it, Sensitivity Level 2 (Moderate) is assigned.

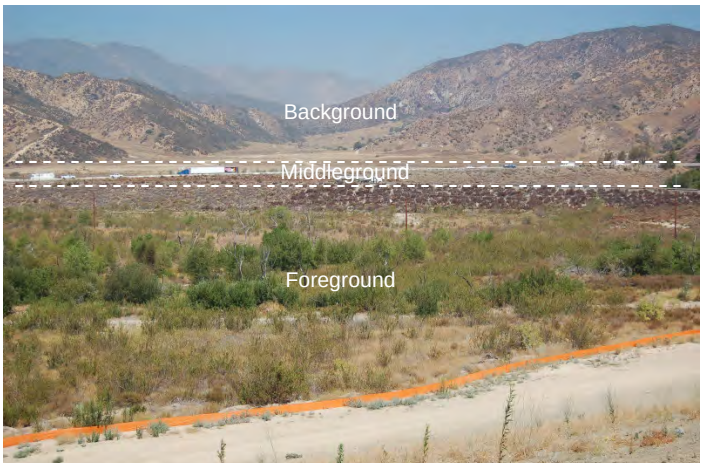

Figure 4.13-4(A)
Sensitive Viewpoint No. 1 Neighborhood I from Clearwater Parkway

View looking northwest across proposed Neighborhood I

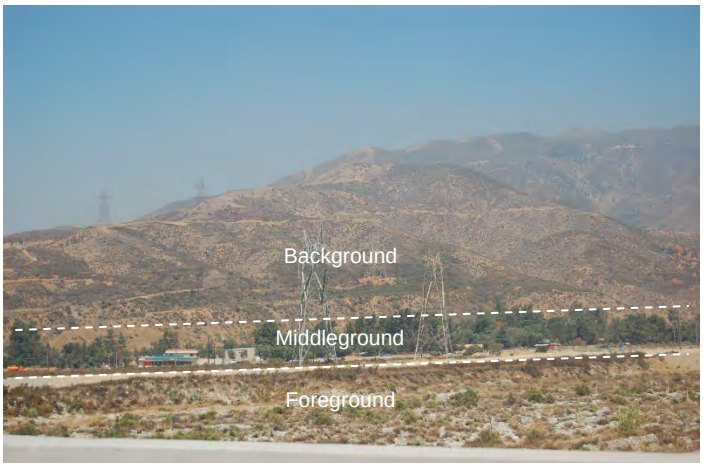

Figure 4.13-4(B)
Sensitive Viewpoint No. 2 Neighborhood IV from I-15 Freeway

View from I-15 Freeway looking westerly across Neighborhood IV

Figure 4.13-4(C)
Sensitive Viewpoint No. 3 Neighborhood III from Riverside Avenue

View from Riverside Avenue looking northerly across Neighborhood III

Figure 4.13-4 (1 of 2)
PHOTOGRAPHS DEPICTING SELECTED SENSITIVE VIEWPOINTS
Source: Environmental Impact Sciences

Figure 4.13-4(D)
Sensitive Viewpoint No. 4
El Rancho Verde
Royal Vista Golf Course

View looking northward from property line of residences abutting golf course in Neighborhood II

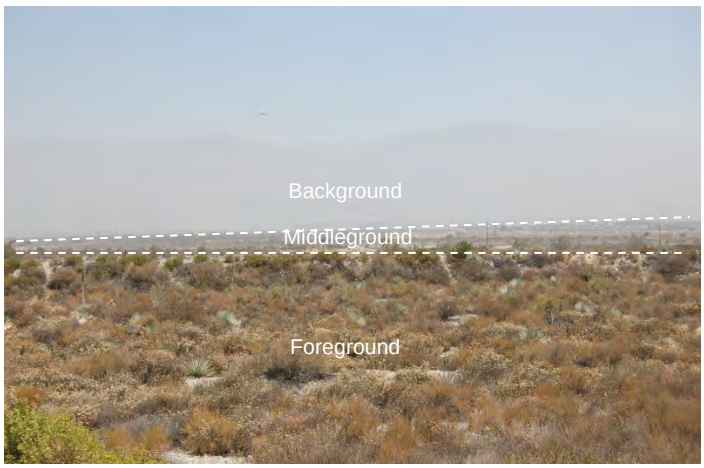

Figure 4.13-4(E)
Sensitive Viewpoint No. 5
Neighborhood II from El Rancho Verde Royal Vista Golf Course

View looking northward from golf course boundary in Neighborhood II

Figure 4.13-4 (2 of 2)
PHOTOGRAPHS DEPICTING SELECTED SENSITIVE VIEWPOINTS
Source: Environmental Impact Sciences

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 3 (Moderate).

◊ **Scenic Integrity**. Because the roadways begin to dominate the middleground landscape character, the linear roadways constitute a moderately altered landscape. The aesthetic experience is further altered by the sights and sounds of the freeway. As the viewer pans the horizon along the foothills, the continuous view of improved roadways serve to visually divide the viewshed into incremental parts rather than being perceived as a unified whole. The scenic integrity of the viewshed is Low (Appears Moderately Altered).

▪ **Sensitive Viewpoint No. 2**. From Sensitive Viewpoint No. 2 (Neighborhood IV from the I-15 Freeway), a large percentage of the individuals who see the property are motorists traveling along the I-15 Freeway. The I-15 Freeway is elevated as it crosses Lytle Creek and Sycamore Creek. Southbound motorists traveling along the I-15 Freeway observe the northerly portion of Neighborhood I and all of Neighborhood IV. The viewpoint was selected as representative of the west to northwest view orientation across the Neighborhood IV area toward the National Forest. Sensitive Viewpoint No. 2 is shown as Figure 4.13-4(B).

A south to southwest orientation by motorists traveling along Lytle Creek Road, toward the I-15 Freeway, was not selected since mobile viewers would have reasonable expectations that they would encounter increasingly dense urban uses as they depart the National Forest toward destinations within the metropolitan area.

◊ **Distance Zone**. The distance zone assigned is middleground. Overhead steel-lattice transmission towers visually separate the foreground from the middleground. Lytle Creek Road and the tree line that borders the far side of that roadway are the dominant horizontal elements within this viewshed. The introduced steel-lattice transmission towers are vertical features in a view that otherwise is dominated by low-lying elements. The presence of these vertical elements draws the viewer's sight line away from the foreground and to the middleground.

◊ **Scenic Attractiveness**. The viewer' eye is first drawn to the generally horizontal green tree line and structures along the far side of Lytle Creek Road and to the vertical transmission towers in the middleground. The horizontal line is accented by the parallel line created by the unimproved (dirt) road in front of the two transmission towers in the middle of the viewshed. The observer then notices several additional dominant horizontal lines which are transmission tower maintenance roads on the mountain slopes (including the transmission lines themselves), introducing additional horizontal elements into this viewshed.

These elements are contrasted by the vertical transmission towers in the center of the viewpoint and the background ridgeline. Many of these horizontal and vertical elements constitute introduced features in an otherwise natural landscape. As a result of the presence of introduced features, the view is not unique, outstanding, or distinctive. The scenic attractiveness is Class B (Typical) since the viewshed is considered common of other views of the base of the adjoining foothills.

◊ **Sensitivity/Concern Level**. A larger number of mobile observers perceive this viewshed for only a short duration by motorists traveling southbound along the I-15 Freeway. Lytle Creek Road, adjoining structures, trees, and the steel-lattice transmission towers becoming increasingly dominant the closer the motorist travels toward these elements. In recognition of the existence of both natural and introduced elements, a Sensitivity/Concern Level 2 (Moderate) is assigned.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 3 (Moderate).

◊ **Scenic Integrity**. The horizontal and vertical elements produce a moderately altered landscape, as these elements begin to dominate the middleground and background landscape character. The observer's aesthetic enjoyment of the view is further altered by the fact that the viewer is mobile whose senses are dominated by the vehicle rather than nature. The scenic integrity of the viewshed is Low (Appears Moderately Altered).

- **Sensitive Viewpoint No. 3**. Individuals traveling along Riverside Avenue are provided public views of the relatively flat terrain that is Neighborhoods III. Views are generally northwest to northeast depending on the viewer's precise vantage point. In addition, although first-floor views are generally obscured by a masonry block wall paralleling the Riverside Avenue right-of-way, those existing residences backing along Riverside Avenue (Las Colinas), with second-floor views generally to the northeast, are provided private unprotected views which are similar to that presented in Sensitive Viewpoint No. 3 (Neighborhood III from Riverside Avenue). Sensitive Viewpoint No. 3 is presented in Figure 4.13-4(C). This viewpoint is considered typical of existing public views from Riverside Avenue looking north and northeasterly across Neighborhood III.

◊ **Distance Zone**. The distance zone assigned is middleground for motorists and pedestrians traveling along Riverside Avenue. Those abutting residences which have windows facing northward that are not blocked by fences, walls, or landscaping (primarily views from second-story windows) are static viewers and, being elevated above ground level, also have a middleground view beyond the roadway.

Because the gently sloping topography appears relatively flat, the mobile view of ground-level observers traveling along Riverside Avenue would generally focus on the middleground. A number of unimproved (dirt) roads cut through the middleground, drawing viewer's attention to objects near the existing roadway.

Portions of Neighborhood III are crossed by steel-lattice transmission towers. Where they are present, those transmission towers become the dominant visual elements within the background and create an identifiable visual edge defining this vista's distance zones.

Since middleground views can be enhanced though the use of screening landscape which effectively limits the views beyond, the middleground was selected as the appropriate distance zone.

◊ **Scenic Attractiveness**. The site is characterized by the dry brown, low-to-the-ground shrubbery and scattered boulders that is present along the floodplain and alluvial fan. Following wet periods, the shrubbery appears green only for a short duration. Low-voltage electrical distribution lines and poles exist along the easterly side of Riverside Avenue and high-voltage electrical transmission lines and towers cut through the northerly portion of Neighborhood III and the southerly portion of Neighborhood IV. Access is provided by means of several dirt roads. In some areas, trash and debris are clearly visible. As a result of the presence of these introduced features, the overall character of this viewshed is of a highly disturbed area.

In those areas where the overhead transmission lines are not the dominant visual element, the distant mountains provide a backdrop and a vertical element to the otherwise flat terrain. To the northeast, the background is also framed by the I-15 Freeway, which constitutes a linear, horizontal element on the horizon.

Based on location, a southwesterly orientation would provide a view of the Cemex USA facility in the middleground, including conveyers, metal buildings, trucks and stockpiles of homogenous appearing materials. Except for the background which is subject to muting from haze and pollution, the landscape is weak, missing attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance. The scenic attractiveness is Class C (Indistinctive).

◊ **Sensitivity/Concern Level**. For the motorist traveling along Riverside Avenue looking northward, mobile views include a landscaped parkway and a linear stucco-covered perimeter wall and the backside of residences to the west and power poles, an indistinctive, sparsely vegetated, and disturbed landscape to the east. There is little visual interest for the mobile viewer, producing a Sensitivity/Concern Level 3 (Low).

In contrast, with regards to unprotected private views, those residences located along Riverside Avenue which have static second-story views, live with these long-term views. These properties abut Riverside Avenue and Riverside Avenue constitutes the immediate foreground view from second-story windows. Bedrooms and bonus rooms are typically located on upper floors. The focus of these rooms are more typically inward, focusing on privacy and the functional use of the room and the activities being conducted therein. In contrast, living rooms and family rooms, particularly those that provide direct access to outdoor areas, would have a greater sensitivity to their associated viewsheds. However, while the existing view from abutting residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is rated Scenic Class 6 (Low).

◊ **Scenic Integrity**. The landscape character appears highly altered by human disturbance. Introduced features, including dirt roads, transmission towers, and distribution poles, dominate the landscape character. The landscape does not

offer opportunities for enhanced enjoyment affecting the other senses. The scenic integrity is Very Low (Appears Highly Altered).

- **Sensitive Viewpoint No. 4**. Although privately owned and operated, the El Rancho Verde Royal Vista Golf Course is a public, non-member course. Since the golf course is private property, existing viewsheds are not provided a protected status. Similarly, from an aesthetic perspective, golfers are not themselves elevated to any special status. However, if golf course users are assumed to have a quasi-public status, since the course is open to the public, a view from the area of Neighborhood II of and across the golf course by individuals on or utilizing the course has been included herein. Sensitive Viewpoint No. 4 (El Rancho Verde Royal Vista Golf Course), looking northward, is shown in Figure 4.13-4(D).

  Residents living adjacent to the El Rancho Verde Royal Vista Golf Course with eastward or northward oriented views, whose private unprotected views are not blocked by backyard fences or by intervening vegetation, are provided a viewshed that includes the golf course and, to a lesser extent, the undeveloped area of Neighborhood II beyond the far edge of the course. However, while the existing view from abutting residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

  - ◊ **Distance Zone**. The distance zone assigned is foreground. The expanse of turf area and mature trees dominate the foreground. The middleground area is secondary and, in some areas, partially shielded by trees along the far edge of the golf course.

  - ◊ **Scenic Attractiveness**. Although an introduced rather than a natural environment, the green lawn of the golf course provides color to an otherwise indistinctive landscape. Composition is enhanced by the vertical nature of the trees, which add shades of green to the view which complement the horizontal plane and wide visual expanse of the turf area. The gently meandering golf cart pathway complements the gentle bend in the trees, providing harmony and interest, and visually inviting the observer to enjoy the serenity of the landscape. The natural terrain that is the middleground, while a contrast from urban to natural terrain, provides a continuation of the foreground's softscape features. The scene is distinctive when compared to other landscapes in the general project area. The dominant landscape has attributes of unity, vividness, intactness, order, harmony, and balance, giving the viewshed Class A (Distinctive) rating.

  - ◊ **Sensitivity/Concern Level**. Because golfers are mobile viewers and concentrate on the skills required to play the game, they may only focus on the views beyond the course for short durations (e.g., as they await their turn). Although mobile viewers would generally be less sensitive to existing landscapes that static viewers, such as residents and other individuals that may be on the golf course (e.g., individuals utilizing the club house), golfers seek out certain landscapes and those landscapes play a role in the course choices that golfers make. As a result, a sensitivity/concern rating of Sensitivity/Concern Level 2 (Moderate) has been assigned.

Although the selected observers are the golf course users (including both mobile and static viewers), those residents whose homes abut the golf course are afforded similar views. Unlike golfers who may experience the existing landscape for only short periods of time, while relatively small in number, residential observers (static viewers) experience the viewshed from a long-term perspective. Many of these residents likely consider the golf course a visual extension of their living spaces. However, while the existing view from abutting residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 2 (High).

◊ **Scenic Integrity**. While the landscape is both introduced and has been highly altered by human activities, scenic integrity is considered from the standpoint of an urban setting and not necessarily an undisturbed natural environmental perspective for this viewpoint. The valued landscape character is seen as being intact with only minor deviation attributable to the middleground area, detracting from the harmony which would otherwise be produced if the soft green texture were to continue past the actual edge of the golf course. The other senses enjoy the relative quiet of the park-like setting, the associated aromas of the vegetation, the quiet soft sounds of rusting leaves and resident birds, and the perceived presence of nature. The scenic integrity is High (Appears Intact).

- **Sensitive Viewpoint No. 5**. The El Rancho Verde Royal Vista Golf Course is a public course located within Neighborhood I. Sensitive Viewpoint No. 5 (Neighborhood II from El Rancho Verde Royal Vista Golf Course), looking northward from the golf course boundary, is shown in Figure 4.13-4(E). Looking toward the north and northeast, this viewshed is considered typical of views from the eastern border of the golf course.

◊ **Distance Zone**. The distance zone assigned is foreground. Although subject to some seasonal variation, based on the relatively narrow band that forms the middleground, the alluvial fan terrain contains only limited diversity in landscape and landform character, gives the observer a view that appears to continue, unmodified, to the San Bernardino Mountains in the background.

◊ **Scenic Attractiveness**. The apparent uniformity in topography and the relatively flat expanse of low, gray-green scrubs that comprise the foreground results in a repetitious pattern expanding to the horizon and no distinguishing features to give the viewshed any distinct character. There is a lack of vertical elements, no unique rock or water formations, limited color diversity, nothing that serves to break up the rather homogeneous pattern. Only the background mountain range adds a potential element of visual interest. Haze and pollution mute the background during much of the year. The landscape is weak and is missing visual attributes such as variety, vividness, mystery, balance, and harmony. The scene attractiveness is Class C (Indistinctive).

◊ **Sensitivity/Concern Level**. Observers include those individuals that patronize the golf course (both mobile and static viewers) and those residences whose homes are located to the north of golf course, south of the Cemex USA quarry,

and backing toward Lytle Creek (static viewers). Although mobile viewers would generally be less sensitive to existing landscapes that static viewers, golfers seek out certain landscapes and the value that golfers assigned to those landscapes play a role in the course choices that individual golfers make. As a result, a sensitivity/concern rating of Sensitivity/Concern Level 2 (Moderate) has been assigned.

Similarly, existing residence have a greater potential sensitivity based on the longer duration and orientation of their views and the importance which is placed on the retention of those views. Although the natural landscape may itself be indistinctive, static views include unimpeded views of the San Bernardino Mountains in the background. While the existing view from abutting residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is given a Scenic Class 2 (High).

◊ **Scenic Integrity**. Some visual disruption can be seen in the middleground where introduced elements (berm) of the urban landscape can be seen. While these deviations are subordinate to and do not substantially detract from the natural terrain, the presence of human activities demonstrates that this is not a pristine landscape but an already altered viewshed. The scenic integrity is, therefore, Moderate (Appears Slightly Altered).

With regards to the existing environmental setting, each of the viewpoints and their respective landscape element values are summarized in Table 4.13-2 (Existing Condition Element Values for Sensitive Viewpoints). The physical changes to each of the above sensitive viewpoint's elements and their corresponding landscape elements, resulting from project implementation, are qualified in the impacts analysis below.

Table 4.13-2
EXISTING CONDITION ELEMENT VALUES FOR SENSITIVE VIEWPOINTS

Element	Viewpoint 1 Value	Viewpoint 2 Value	Viewpoint 3 Value	Viewpoint 4 Value	Viewpoint 5 Value
Distance Zone	Mg	Mg	Mg	Fg	Mg
Scenic Attractiveness	B	B	C	A	C
Sensitivity/Concern Level	2	2	3	2	2
Scenic Class	3	3	6	2	4
Scenic Integrity	L	L	VL	H	M

Source: Environmental Impact Sciences

4.13.4 Threshold of Significance Criteria

Presented herein are the thresholds of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the

proposed project would normally be deemed to produce a significant or potentially significant aesthetic impact if the project or if project-related activities were to:

- Have a substantial[31] adverse effect on a scenic resource.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.[32]

Neither CEQA nor the State CEQA Guidelines provide a definition for or guidance for determining what constitutes a "scenic resource" nor a reference from what vantage point the "scenic resource" is being observed. A "scenic resource" is defined herein to include public views of: (1) registered historic buildings and structures, whether public or privately owned; (2) established non-commercial public recreational areas; and (3) publicly-designated public open space areas that are non-urban in character, lacking evidence of recent cultural modifications. Since no view preservation ordinances have been adopted by the City and/or by the County, private view and vistas are not provided protection and, for the purpose of CEQA analysis, have not been identified as sensitive viewsheds herein.[33]

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or other environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative aesthetic impacts.

4.13.5 Impact Analysis

Visual change in the physical character of a site from the natural environment to the built environment should not, in and of itself, be seen as either an adverse or beneficial change. The quality of life in southern California is characterized not only by the intrinsic attributes of the natural environment but also by the history of the introduced environment and the cultural contributions that are made by art and architecture. As a result, it is the intent of this analysis to objectively assess the potential impacts on visual resources and not to artificially value or weight either the natural or the built environment.

Visual impacts relate to the project's potential to alter or conflict with the site's existing landscape character and other proximal uses. The significance of visual impacts for sensitive viewpoints was determined, in part, by assessing the site's overall landscape character and the degree of change of that landscape character. The Forest Service's SMS was used as a tool to

[31]/ Certain terms, such as "substantial" and "substantially," are not defined in CEQA or in the State CEQA Guidelines and require a local determination where a proposed action would meet or exceed the stated standard.

[32]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section I (Aesthetics).

[33]/ Only public vantage points have been evaluated herein since private viewsheds, defined as views from private properties, are not typically provided any protected status. Under California law, a landowner has no right to an unobstructed view over adjoining property (Posey v. Leavitt; Pacific Homeowners' Assn. v. Wesley Palms Retirement Community; Venuto v. Owens Corning Corp.). California courts have noted: "As a general rule, a landowner has no natural right to air, light or an unobstructed view and the law is reluctant to imply such a right [citations]. Such a right may be created by private parties through the granting of an easement [citations] or through the adoptions of conditions, covenants and restrictions. . .or by the Legislature [citations]" (Posey v. Leavitt).

qualitatively describe those landscape character changes to existing condition that will occur as a result of project's construction and operation. Those changes were then applied to the CEQA criteria in order to determine the level of significance as a result of project-induced changes.

4.13.5.1 Construction Impacts

Physical Changes to Pre-Construction Landscape Values

Environmental Impact 13-1*. Construction activities, including grubbing, grading, and the construction of authorized facilities and improvements, will alter the site's existing visual character and will transform the site's visual character from that which might be generally characterized as a natural environment to that of a built environment, producing changes in landform, vegetation, water, color, lighting, adjacent scenery and through the introduction of hardscape and other cultural modifications to the existing landscape.*

Preliminary Determination 13-1*. Potentially significant unless mitigation incorporated.*[34]

The construction process is typically short-term in duration and dynamic in nature. For many projects, a distinct construction phase will procede the subsequent operation, use, and/or habitation of the facilities constructed. Once a facility reaches its life expectancy, a site may undergo redevelopment and reuse. In the context of the LCRSP, because the project build-out will extend through 2030, the three phases (construction, operation, and redevelopment) of a site's lifecycle may all occur concurrently on the project site and abutting properties.

Over the course of the project's anticipated construction (build-out) term, the overall project area will transform from an undeveloped to a developed area and may recommence that same cycle within the time period envisioned herein. Within the boundaries of the LCRSP, multiple project areas (PAs) will likely experience simultaneously construction. Within individual PAs, construction would constitute a relatively short-term event. As such, from a project-wide perspective, construction constitutes an ongoing activity. From a planning-level perspective, construction constitutes a short-term event that serves as a precursor to the subsequent use of that planning area. From the perspective of visual resource assessment, construction constitutes an interim event in the site's visual transformation from pre-project to post-project conditions.

During construction, the project site is in "transition" as the natural environment evolves to take on the character of the approved development (built environment). This process is comprised of a number of components that either represent distinct stages or overlapping activities (e.g., clearing and grubbing, rough grading, utility installation, final grading, and building construction). Each of these activities themselves has its own visual characteristics and occurs within a finite time frame.

Generally, it is assumed that mass grading will occur across each neighborhood as a single event. As part of that grading operation, superpads will be created, creating the building envelops for each of the PAs that comprise that neighborhood, the collector street system will be graded to accommodate pavement, and major infrastructure systems will be installed within

[34]/ Prior to mitigation, the applicable or potentially applicable threshold standard relative to this preliminary determination includes, but may not be limited to, the initial conclusion that the proposed project could substantially degrade the existing visual character or quality of the site and its surroundings.

their associated rights-of-way. Development activities, including final grading and building construction, within individual PAs would follow based on tract-level scheduling which would be dictated by specific market factors. Since the four neighborhoods are each separated by intervening open space and other non-project areas, the separate development phases of each neighborhood should produce minimal visual impacts when perceived from another project-related neighborhood. However, internal to each neighborhood, within individual planning areas, excluding rough grading, the later phases of development would occur in different time frames. Stationary observers positioned along the perimeter of one planning area may, therefore, be placed in close proximity to active construction.

The attributes of landform, vegetation, water, color and hardscape, lighting, adjacent scenery, and cultural modification can be individually examined in order to establish the overall visual impression of a landscape and contribute to a description of the landscape character. During construction, the following physical changes to the site's landscape character will occur, both with regards to the project site as a whole and with regards to individual subareas which are located therein. Except where otherwise noted, no distinction is made between the entire project site, the individual planning areas collectively comprising the LCRSP, and the individual parcels or assemblage of parcels within each planning area.

- **Landform**. The following analysis of landform impacts relate only to the proposed changes in the site's physiography. Impacts associated with the removal of existing on-site vegetation and the construction of physical improvements are separately addressed under the discussion of other visual indicators below.

  During project construction, the existing landform will be altered though the mass grading of the project site in order to create internal roadways, superpads, and individual building pads that will be subsequently developed to accommodate both residential and non-residential land uses. With the exception of certain areas (or fractional portion of areas) which would be designated as "Open Space (OS)" under the proposed LCRSP, grading activities will occur upon and across a majority of the project site. The changes to the site's landform required to accommodate the major components of the on-site street system and the proposed land uses will result in a transformation of the affected area from that of a generally undeveloped area (excluding Monier Lifetile and El Ranch Verde Royal Vista Golf Course) to one ultimately possessing a highly urban character.

  Through the construction process, the site's physical form will take on an altered appearance more conducive to the implementation of the proposed land uses. These changes will be clearly evident by mobile viewers from those public roadways that now traverse and/or abut the project site, including the I-15 Freeway, Clearwater and Glen Helen Parkways, Sierra and Riverside Avenues, and Lytle Creek Road. As the site develops, the inventory of streets abutting active construction areas will also increase, as will the opportunities and number of mobile viewers observing these landform alterations and the public vantage points from which those alterations will be observed.

  From and along each of those linear vantage points, motorists will be provided a dominant view of the presence and resulting handiwork of heavy construction equipment as it reconfigures and recontours the project site. Depending on the distance the observer is from construction, motorists will be provided with both a foreground and middleground view of the landform changes planned for the four neighborhoods.

In those adjoining planning area where construction and occupancy occur as simultaneous events, stationary viewers (mostly private unprotected vistas) would more closely encounter construction equipment and more closely experience the change in landform. Because rough grading occurred as an earlier event, any subsequent landform alterations would likely be perceived as being less dramatic and would not be perceptible as a substantial change to the site's physiography.

With the exception of Sycamore Canyon, the project site lacks unique landform features that would provide the property with a distinct visual character. The generally flat extension of the gradually descending floodplain will remain and grading activities will not produce any substantial alterations to the site's existing landform. The site will continue to reflect a relatively uniform grade as each neighborhood gently descends into the San Bernardino Valley. No substantial change to the landform would occur and impacts would be less than significant.

- **Vegetation**. Grubbing and rough grading activities produce sudden and perceptible changes and serve as precursors to those construction activities that follow. During this phase, vegetation is stripped from those areas upon which homes, streets, and other later development activities will occur. Bare dirt replaces existing vegetation and may remain denuded pending the completion of final grading operations and subsequent coverage with the resulting development, roadway surfaces, or landscaping.

  Although most of the plant communities and plant species that now exist on the project site are relatively common throughout the region, certain sensitive plant communities (Riversidian alluvial fan scrub) and protected plant species (splender-horned spineflower and Plummer's mariposa lily) do exist within the project area. These communities and species appear in isolated locations and are not visually dominant components of the natural landscape. Most casual observers would not even know of their presence.

  While the diversity of plants evident on the project site may expand with the site's development, the reduction in native vegetation and the type and assemblage of those introduced plants will alter the perceptions of the site from that which could be characterized as a perceived natural environment (possessing what may be perceived as native landscaping) to a built environment (containing introduced landscape elements). Native plants will be confined to designated on-site areas, with the remainder of the site possessing a general vegetative uniformity (ornamental landscaping), more characteristic of other development areas.

  From a visual quality perspective, the removal of existing on-site vegetation associated with grading operations and the change in the site's plant palette will result in a substantial change in the scenic value of those disturbed areas. During the short-term, the elimination of existing ground cover over relatively large areas of the project site will produce a sharp visual contrast that would be perceived as disharmonious with the general undeveloped landscape character of the project's general surroundings. Since the elimination of native vegetation would constitute a substantial visual change to the character of the project site, the resulting visual impact would be deemed a significant, albeit short-term, impact during the construction (grubbing and grading) process.

  During later stages of the construction process, many observers may perceive the end product of those changes to constitute a positive visual feature (e.g., greater diversity of

color, greater symmetry and uniformity in landscape appearance). Once on-site landscaping is introduced and begins to mature, the change in the site's landscape value will not be so substantial as to produce a perception of the site being disharmonious with the larger urban environmental setting in which the project exists. Just as the landscaped parkway along the west side of Riverside Avenue would be perceived as more visually pleasing than the non-landscaped frontage along the east side of that roadway in terms of unity, vividness, intactness, order, harmony, and balance, **i**ntroduced landscaping would positively contribute to the inclusion of the project site into the larger urban fabric.

- **Water**. Since construction activities will not be confined solely to summertime periods, construction could occur during periods when surface waters are visible on the project site. During construction, control devices will be installed to control the discharge of sediments into surface flows prior to discharge to the storm drain system or into Lytle Creek and Sycamore Creek. Additionally, in order to reduce fugitive dust during grading operations and to allow for adequate soil compaction, construction water will be introduced onto the site. Water trucks will be observed within active grading areas spraying a thin water cover across exposed soils. The application of those waters will not be of sufficient quantities to increase surface discharge, induce water-borne erosion, or produce the ponding of water (standing water) on the project site.

  Since the proposed project design results in the retention of Lytle Creek and Sycamore Creek as natural drainage courses and since a substantial portion of the project site in proximity to those drainage features will be retained as natural open space, no substantial changes will occur to the presence and perception of on-site waters. Project construction will, therefore, not result in a significant visual impact affecting any on-site or near-site water resources.

- **Color and Hardscape**. With the importation of construction equipment, portable offices, construction water tanks, construction materials, and commencement of building activities, a variety of hard surfaces (hardscape) of different colors are introduced onto the site. Hardscape is defined as "structures that are incorporated into a landscape."[35] In a broader context, hardscape (hard surfaces, including rock outcroppings, construction equipment, construction materials, constructed structures, and flatwork) can be contrasted with softscape (soft surfaces, including earth, vegetation, and ornamental landscaping).

  Excluding Sycamore Canyon, the surface area can be characterized as rock and cobble, accented by scattered and sparse native vegetation and invasive grasses. This existing landscape is one of general homogenity and is absent any broad expanse or diversity of vegetation and other features that would produce an intensity or richness of color. Similarly, with the exception of Montier Lifetile (3511 Riverside Avenue, Rialto) and portions of the El Rancho Verde Royal Vista Golf Course, hardscape elements are absent from the project site. Hardscape, however, becomes the dominant visual feature adjacent to certain portions of the project site, such as the I-15 Freeway, the string of steel-lattice transmission towers, Riverside Avenue and Lytle Creek Road.

  During construction, the presence of workers, equipment, and introduced materials will produce a substantial visual change in color and hardscape. As the project site

[35]/ Merriam-Webster Dictionary online.

transitions from that of a generally undeveloped area to one more characteristic of an urban setting, hardscape will take on increasing significance. In those areas not retained as natural open space, during grading operations, vegetation will be removed, thus reducing some of the site's existing softscape and further reducing those color variations that do exist. Soil conditions will become more uniform and less textured as individual PAs are prepared for development. With the paving of new streets and the erection of new buildings, impervious surfaces will begin to replace areas of natural infiltration. As such, the site's natural color palette will first diminish before flourishing with the broader palette wheeled by architects and landscape architects. The transition will continue as introduced landscaping matures and residents and other site users occupy the property. These elements will enhance color and soften the hardscape.

Just as a boat in the desert may seem out of place but that same boat would appear harmonious in the ocean, perceptions of hardscape would change based on whether those visual elements are being observed as an isolated feature or perceived as part of larger holistic setting. As such, looking only at the end points, although the site's transition from a natural landscape to an urban landscape may constitute a substantial visual change, once the post-project setting is achieved, the site's then existing color and hardscape will be perceived as that of an environment rich with human character.

- **Lighting**. All construction activities will be limited to daylight hours. Other than limited security lighting that may be installed and operated in equipment and construction staging areas, no new source of illumination will be introduced onto the property (excluding vehicle head lights and warning lights). As residential and non-residential uses are constructed on the project site, additional street, accent, task, and security lighting will be added, changing the site and its setting from that of a "dark sky" to one more characteristic of an urban area. Each of those lighting sources will be similar in type, style, and intensity to those now evident in similar areas located throughout the County. Similarly, excluding street lighting, no substantial amount of illumination originating within the project site will be allowed to "spill" (light trespass) across the property line to affect adjoining properties or other planning areas.

  Since only limited sources of lighting will be added to the project site and since that lighting will be confined to only those areas where active construction is underway, introduced construction lighting would not produce a significant visual impact.

- **Adjacent Scenery**. With limited exceptions, grading and other construction activities will be confined to the project site.[36] Since the construction process commences with the first shovel of dirt and concludes with the last landscape plant installed, the visual imprint and perceptions that are produced by observed construction activities may vary throughout the construction process and, in fact, may extend beyond the construction process itself to overlap with operation of those end uses that those construction activities presage. When an observer views a house under construction, the mental images that are produced include not only the current stage of construction (e.g., an image of the rough framing) but include the postulated image of a romanticized finished

[36]/ A number of off-site improvements relate either directly or indirectly to the proposed project. Since those infrastructure improvements will be confined to areas within and adjoining existing utility easements and roadways, the "adjacent scenery" located in proximity to those off-site areas is not separately addressed herein since those areas already exhibit urban influences and will not be substantially changed through the construction and subsequent operation of those improvements.

product (e.g., an image of children playing). In the case of the proposed project, the end uses include low-rise housing, commercial and office uses, parks, paseos, schools, and open space uses. Since construction is not typically perceived as an end use but an interim process, the visual images that are invoked are familiar and inviting.

With regards to the natural landscape, existing public views of the project site are generally confined to those which can be seen by mobile viewers traveling along the I-15 Freeway, Clearwater Parkway, Glen Helen Parkway, Lytle Creek Road, and Riverside Avenue. From those linear vantage points, foreground and middleground views of the project site, generally looking northwest to northeast, include background views of the San Gabriel and San Bernardino Mountains and the National Forest. Additional views are afforded of the hills of Sycamore Canyon and Glen Helen Regional Park, while others include Lytle Creek and Sycamore Creek.

With regards to the urban landscape, mobile viewers can also observe ongoing construction activities within the area of the LCNPDP, quarrying and transport activities associated with the Cemex USA Lytle Creek Plant, and can observe the operational characteristics of the mix of residential (e.g., Las Colinas and County Club Estates) and non-residential (e.g., Monier Lifetile) uses located along Riverside Avenue.

As the site develops, construction activities may appear disharmonious with the visual perception of the general project area. As development progresses and a greater proportion of the site is developed and occupied, perceptions of the site will change. At that time, the site, as well as the uses and open space areas thereupon and the general project area itself, will be perceived as part of a more unifying and not an assemblage of disharmonious visual elements in the larger landscape. Once the community becomes established, the site will take on an urban form and character. That character is familiar to all southern California residents and the developed site will become part of the larger urban fabric.

Initially, the transforming images and activities of construction will dominate foreground and middleground views and will detract from adjacent scenery by introducing obtrusive and disharmonious elements. The contrast created by a developing site (e.g., removal of native vegetation) will, however, become less evident as introduced landscaping matures and the retained and improved open space areas, including both those areas internal to the site and those located along its perimeter, offer transitional design elements visually linking the site with other proximal open space and developed areas located beyond the project boundaries.

- **Cultural Modifications**. Cultural modifications refer to existing or proposed man-made changes to the natural environment. A “negative” cultural modification is perceived as being disharmonious with the existing scenery. In contrast, a “positive” cultural modification can actually complement and improve a particular scene by adding variety that complements and enhances existing landscape (e.g., elimination of aesthetically undesirable or discordant sights and influences).

  Existing cultural modifications consist of introduced near-site (e.g., I-15 Freeway, power poles, maintenance roads, established residential areas, quarry operations) and on-site (e.g., Monier Lifetile) land uses. While the introduced on-site El Rancho Verde Royal Vista Golf Course possesses substantial scenic quality and adds visual diversity to the

existing landscape setting, other near-site elements, such as steel-lattice transmission towers, create impedance and obtrusions fragmenting the relationship between the natural and built environments. The presence and impacts of certain evident cultural modifications are so discordant with the natural landscape that the landscapes upon which these features exist cannot be appropriately categorized as "natural."

Construction constitutes the transitional and transforming process by which cultural modifications to the existing environment occur. As the construction process moves forward, building pads are created and structures erected, roadways paved, and landscaping installed. These activities manifest either in the conversion of this factious landscape into a unified whole or further into dissonance.

Project implementation will result in a significant visual change to the project site. With the exclusion of the areas of natural open space, cultural modifications will become both the principal and the dominant visual element upon the property. Although a variety of open space areas will remain on the project site, the property will take on a distinctively urban character.

During construction, the influences of human endeavors over the natural environment will be the most evident. Heavy equipment will alter the existing landform, native vegetation will be stripped from the site, roads will be constructed, and buildings will be erected. Within those disturbed areas, the changes will be immediately evident and the introduced cultural modifications will be seen as a sharp contrast to those on-site and off-site areas that remain undisturbed. Those natural resources that presently exist within those areas will be eliminated or substantially altered as the built environment replaces the existing visual setting. During the construction period, the resulting cultural modifications will be perceived as disharmonious with the natural environment and will result in a significant visual change.

The USDOT states that since a specific landscape setting may be significant because of cultural values, the setting must be, at least briefly, examined in its regional and national contexts to determine if it is culturally significant. Three general criteria are identified: uniqueness, commemoration, and designation.[37]

In recognition of the potential aesthetic impacts attributable to the project's construction, a number of mitigation measures (Mitigation Measure 13-1 through 13-5) are recommended and, when implemented, will reduce potential visual resource compatibility conflicts to a less-than-significant level.

Visual Impacts from Sensitive Internal and External Viewpoints

Environmental Impact 13-2*. The project site is visible from adjacent areas, including those views afforded from adjoining public roadways and from private residences. Alterations to the site's visual character during the construction process could produce changes to the available field of view from a limited number of public and private vantage points. Due to the wide field of view that is available from these areas, the project's development would not result in substantial coverage of the existing visual environment from these vantage points.*

[37]/ *Op. Cit.*, Federal Highway Administration, Visual Impact Assessment for Highway Projects, FHWA-HI-88-054, p. 115.

***Preliminary Determination 13-2**. Less-than-significant impact.*

By focusing on each of the identified landscape elements, the previous analysis examined the visual changes that would be expected to occur upon the project site during the construction process. By focusing on the on-site changes to those elements, the analysis did not specifically address how those changes would be perceived from each of the off-site sensitive viewpoints identified herein. Presented below is an assessment of the construction-related visual impacts as perceived from each of the five sensitive viewpoints. Since this analysis examines visual changes that may occur during construction, in the context of this analysis, the existing visual environment constitutes the conditions identified in Table 4.13-4 (Existing Condition Element Values for Sensitive Viewpoints).

- **Sensitive Viewpoint No. 1**. Sensitive Viewpoint No. 1 (Neighborhood I from Clearwater Parkway) observers will see the relatively flat terrain in the foreground either retained as undisturbed open space or transition to a combination of developed open space and recreational uses. The middleground, located beyond the I-15 Freeway, will transition to commercial and low-density residential use, with open-space buffers comprising the adjoining slope areas. As development progresses, initial site clearing and grubbing will result in the removal of vegetation, followed by the construction of roads, building pads, structures, and landscaping.

  - ◊ **Distance Zone**. Since the foreground will retain an open space character, the distance zone is the middleground. During construction, the middleground view will transition to mixed-use development on the north side of the freeway, incorporating both single-family residential development, commercial uses, and retained open space areas adjacent to the National Forest.

  - ◊ **Scenic Attractiveness**. The existing viewshed, which includes the introduced horizontal lines that are Glen Helen Parkway and the I-15 Freeway, will be further disrupted by the commercial and residential development as construction begins to transform the existing landscape. The eye will be drawn across the open space areas in the foreground to the developed areas on the far side of the freeway. As construction progresses, the evolving built environment will detract from and visually compete with the mountain valleys and ranges beyond. The introduced structures and urban form will present a visual dichotomy to the natural landscape, increasing, by abstract, the viewer's perception and cognitive impressions of the mountains in the background. The scenic attractiveness will remain Class B (Typical), continuing to provide relatively common views of the base of the foothills and the San Gabriel and San Bernardino Mountains.

  - ◊ **Sensitivity/Concern Level**. The primary observers located along this viewshed will be comprised of those motorists and pedestrians (mobile viewers) traveling along Clearwater Parkway and Glen Helen Parkway and, to a lesser extent, mobile and static users located within Glen Helen Regional Park. These viewers have a Sensitivity/Concern Level 2 (Moderate).

  - ◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 3 (Low).

◊ **Scenic Integrity**. Although contributing to visual attractiveness, the modified open space area in the foreground, which will include landscape enhancements within the recreational area, will add to perceptions of landscape alterations. In addition, besides the I-15 Freeway, the introduced commercial and residential development in the middleground will further contribute to perceptions of human activity and landscape alteration. Those urban elements will further detract from the existing integrity of the pre-project landscape. Scenic integrity will, therefore, change from Low (Appears Moderately Altered) to Very Low (Appears Highly Altered).

During construction, with the exception of scenic integrity which will change from Low (Appears Moderately Altered) to Very Low (Appears Highly Altered), all landscape elements will remain the same as those associated with pre-project condition. Because the viewshed's scenic attractiveness is common, since the number of observers will remain relatively small, and since these represent mobile and not static views, the change is landscape character is considered adverse but does not constitute a significant visual impact.

- **Sensitive Viewpoint No. 2**. Sensitive Viewpoint No. 2 (Neighborhood IV from I-15 Freeway) observers will see heavy equipment and the landform alterations required to accommodate the proposed improvements in the middleground. As development progresses, initial site clearance and grubbing will result in the removal of existing vegetation, followed by construction of roads, building pads, structures, and landscaping.

  It is noted that individuals traveling along the freeway will be able to observe ongoing construction operations underway across Neighborhoods I, III, and IV, all of which will appear similar to the perceptions gained from this viewshed. Within each of these three neighborhoods, areas of retain natural open space will be preserved. In the area of Neighborhood I, recreational open space will be provided. Other introduced uses include, single-family and multi-family residential and mixed use development. Each of the land uses comprise common elements in an urban environment and, during later stages of development, will be readily recognizable and familiar to passing motorists.

  ◊ **Distance Zone**. Because the overhead steel-lattice transmission towers will remain the dominant vertical element in this landscape, the distance zone will remain as middleground. Natural open space will be retained in the foreground, as well as a small area of freeway-oriented commercial development which represents the on-site expansion of other introduced land uses now evident adjacent to the project site. Residential development will be concentrated in the middleground. As construction progresses, roads, building pads, and structures will appear in the middleground, impeding views of the tree line that borders the far side of Lytle Creek Road. The new construction will become the dominant horizontal element, while the transmission towers will remain the dominant vertical elements.

  ◊ **Scenic Attractiveness**. Multi-family residential uses typically have greater building massing than low-density residential uses. As such, a viewer's eye line will be drawn to the horizontal lines that will be created by the residential structures that will replace existing views of the tree line along Lytle Creek Road. No substantial physical changes are proposed in the open space area, thus the

transmission towers, power lines, and access roads will remain visible. These horizontal and vertical elements represent introduced features in an otherwise natural setting. The scenic attractiveness will remain Class B (Typical), continuing to provide relatively common views of the base of the foothills and the San Gabriel and San Bernardino Mountains.

◊ **Sensitivity/Concern Level**. A large number of southbound I-15 Freeway mobile observers see this view for a relatively short duration. The residential structures will begin to obscure and eventually replace the line of trees along Lytle Creek Road. These structures and the transmission towers become more dominant the closer the motorist travels toward these elements. A Sensitivity/Concern Level 2 (Moderate) remains for this viewpoint.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint retains the existing condition of Scenic Class 3 (Moderate).

◊ **Scenic Integrity**. New residential and commercial structures will call increased attention to the introduced horizontal elements of this landscape and will increase the perception of cultural modifications by mobile viewers. As these elements become more pronounced and perceptions of human activity and landscape alteration increase, the scenic integrity of this viewshed will diminish. Scenic integrity will, therefore, change from Low (Appears Moderately Altered) to Very Low (Appears Highly Altered).

All landscape elements remain the same as the existing condition, except that scenic integrity will change from Low (Appears Slightly Altered) to Very Low (Appears Highly Altered). Given that the scenic attractiveness is common, since observers view the scene for only a short duration, and since these represent mobile and not static views, the change is landscape character is considered adverse but does not constitute a significant visual impact.

▪ **Sensitive Viewpoint No. 3**. The project area will transition disturbed open space, containing a number of discordant visual elements, to a fully built environment containing a mix residential and non-residential land uses. Sensitive Viewpoint No. 3 (Neighborhood III from Riverside Avenue) observers will see the operation of heavy equipment in the foreground and middleground and the landform alterations required to accommodate the proposed improvements. As development progresses, initial site clearance and grubbing will result in the removal of existing vegetation, followed by construction of roads, building pads, structures, and landscaping. The eastern edge of the Riverside Avenue right-of-way will closely replicate the design character of the western edge of that right-of-way. A perimeter wall be erected and a landscape parkway with a meandering sidewalk will be installed.

◊ **Distance Zone**. With the introduction of construction equipment and related activities in the middleground, the distance zone will remain unchanged. As structural framing progresses, residential structures will increasingly attract middleground views of both the mobile viewers of motorists traveling along Riverside Avenue and the static views of residents living along Riverside Avenue.

◊ **Scenic Attractiveness**. The existing disturbed open space and low-lying vegetation will be replaced by urban structures that will eventually dominate site views along Riverside Avenue. Although the overhead steel-lattice transmission towers will remain, based on the extent of other structures, those towers will become less dominant and more inter-mixed with the landscape they share. For all but second-floor observers (private unprotected viewscape), the background landscape of the San Bernardino Mountains will disappear or appear sporadically as a fleeting element viewed between buildings and introduced landscaping. Even though the view will substantially change in character, as compared to the existing condition, the landscape will remain weak, missing key attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance. As a result, the viewshed's Scenic Attractiveness will retain Class C (Indistinctive).

◊ **Sensitivity/Concern Level**. For the motorist traveling along Riverside Avenue, the open space to the east will change form a disturbed natural but non-distinct landscape, to one where construction activities are evident, to one containing residential and non-residential structures and a landscaped parkway. As this change progresses, views of the project site will take on an appearance similar to the residential neighborhoods located to the west of the project site. Since, in an urban setting, the mobile viewer is but a transitory observer and assigns only limited value to the passing landscape, although the streetscape will appear more homogenous, the Sensitivity/Concern Level will remain a Class 3 (Low).

In contrast, those residences that have static second-story views across the project site experience these views over an extended time period. Since residences on the east side of Riverside Avenue will be similar in size, height, and massing as buildings situated along the west side of that roadway, unimpeded background views will diminish and structures in the foreground and middleground will obstruct or otherwise limit and alter these static views. However, while the existing view from abutting residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint remains Scenic Class 6 (Low).

◊ **Scenic Integrity**. Construction activities and introduced features will dominate the landscape and the character of this viewshed will become more highly altered by human disturbance. With the denuded landscape now only a memory, human activity will be perceived in a more anticipatory fashion, as viewers anxiously await the environment envisioned by those on-site activities. Although construction activities will dominate the perceived landscape, the act of constructing is both a common element and typically seen in a positive light. The scenic integrity of the altered landscape will remain Very Low (Appears Highly Disturbed).

The distance zone remains the middleground. The sensitivity/concern level remains Sensitivity/Concern Level 3 (Low). The scenic class rating remains Class 6 (Low). The scenic integrity remains Very Low (Appears Highly Altered). The resulting change in landscape character, therefore, constitutes a less-than-significant visual impact.

- **Sensitive Viewpoint No. 4**. Static Sensitive Viewpoint No. 4 (El Rancho Verde Royal Vista Golf Course) adjacent to the El Rancho Verde Royal Vista Golf Course will see both alterations to the open space areas comprising the golf course through the reconfiguration of that commercial recreational facility and the transition of the relatively flat terrain beyond and adjacent to the present course from an open space to a more urbanized land use. During construction, both native and introduced vegetation will be removed, roads, buildings, and other improvements installed, and new ornamental landscaping introduced.

  - ◊ **Distance Zone**. The distance zone remains as foreground. The expanse of green lawn and trees that comprise the golf course will remain the dominant visual element. As the golf course is reconfigured, certain areas with introduced landscaping may be altered. In those areas, the visually dominant distance zone will remain the foreground. The middleground area, planned for residential development, will remain as a secondary and less dominant visual element.

  - ◊ **Scenic Attractiveness**. The green turf, the soft textured landscape, and the meandering cart path comprising the golf course will remain the viewshed's primary visual elements, catching the viewer's attention and directing the viewer's sight lines toward these naturalist features. The middleground area will remain a secondary visual element as the visually dominant natural landscape transitions to a middleground landscape more characteristic of the built environment. The transition from soft-textured natural terrain (softscape), characterized by the muted colors of vegetation, to the rigidity of hard structures (hardscape) may have an increased tendency to draw the eye to the threshold separating these two landscapes and serve to define and delineate a more distinctive edge between the foreground and middleground distance zones. To the observer, a mild-to-moderate distraction may be evident in perceived unity, intactness, order, harmony, pattern, balance, and interest. Because the golf course will remain the dominant visual element, the viewshed's scenic attractiveness remains Class A (Distinctive).

  - ◊ **Sensitivity/Concern Level**. Golfers are mobile viewers. Although there may exist other static viewers which are located on the golf course (e.g., individuals at the club house), with the exception of those residences (private unprotected viewsheds) that abut and those individuals employed on the property, the views of those observers located on the golf course would generally be of short-term duration. Although the visual character of a golf course setting may be prized, foreground views would not be expected to change substantially. A rating of Sensitivity/Concern Level 2 (Moderate) has, therefore, been retained.

  - ◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 2 (High).

  - ◊ **Scenic Integrity**. During construction, the observer will experience the introduced sights, sounds, and aromas of construction. Based on distances between source and receptor, construction activities will replace or partially obscure the sounds of the rustling leaves and birds, and reduce the viewer's sense of immersion in and harmony with the natural environment. Although the landscape character will be altered, for most observers, those deviations will remain subordinate to the golf course. During construction, the viewshed's

scenic integrity will be downgraded from a High (Appears Intact) to a Moderate (Appears Slightly Altered) rating. Changes will be most evident the closer the introduced development is to the viewers.

As perceived from Sensitive Viewpoint No. 4, no identifiable scenic resources (i.e., registered historic building and structures, established non-commercial public recreational area, publicly designated open space areas that are non-urban in character) will be impacted) will be impacted during construction.

Scenic integrity will, however, be reduced from a highly valued High (Appears Intact) rating to a less desirous Moderate (Appears Slightly Altered) rating. Because the changes are subordinate to the dominant landscape character being observed and do not detract appreciably from views of the golf course and the perceptions of mobile and static viewers, these changes would not substantially degrade the existing visual character or quality of the site and its surroundings. The resulting change in scenic integrity is, therefore, considered adverse but constitutes a less-than-significant impact.

- **Sensitive Viewpoint No. 5**. From the area of the El Rancho Verde Royal Vista Golf Course, based on a northerly and easterly orientation, because the project area is presently undeveloped except for the golf course and its associated facilities, Sensitive Viewpoint No. 5 (Neighborhood II from El Rancho Verde Royal Vista Golf Course) observers are afforded views of the Neighborhood II area dominated by open space. During construction, the terrain in the foreground and the middleground will transition from that of a natural landscape to that representative of a built environment. Users of the public golf course and its associated facilities will observe the undeveloped Neighborhood II area transition through site clearance, the removal of existing vegetation, through the construction of buildings and other improvements, and through introduced landscaping.

  - ◊ **Distance Zone**. The viewpoint is assumed to be located at the edge of the El Rancho Verde Royal Vista Golf Course and not from a more centralized locale in the area of play. Golfers located in the middle of the fairway would perceive the foreground to be the golf course itself with the “out-of-bounds” areas and the areas located beyond the golf course property to be the middleground. It is neither that observer nor that vantage point which is considered herein.

    For an observer located near the edge of the golf course, the distance zone will remain the foreground as construction activities replace the existing landscape. Those primarily views of relatively flat upland terrain that now exist within this viewshed, as characterized by the presence of low-lying vegetation, will be dominated first by construction activities and then by views of erected buildings.

  - ◊ **Scenic Attractiveness**. The existing flat expanse of low, gray-green shrubs that comprise the foreground and which produce a repetitious pattern expanding to the horizon will be replaced by a foreground view of construction activities. The existing view, which has few distinguishing features, will be replaced over time by the multi-story structures appearing as large, obtrusive, introduced elements. The existing landscape is weak and is missing attributes of variety, vividness, mystery, balance, and harmony. Since the built environment will remain weak and indistinctive, a Class C (Indistinctive) rating is retained.

◊ **Sensitivity/Concern Level**. To the extent that golf course use is curtailed during those construction activities that are planned at the El Rancho Verde Royal Vista Golf Course, the absence of any public viewers from this vantage point would result in no aesthetic impacts (since no parties would be present which would observe the resulting change). Assuming that golf course use continued while development of adjoining properties occurred, such that public observes will continue to exist in the vicinity of the golf course boundaries, a Sensitivity/ Concern Level 2 (Moderate) has been retained.

Within the County Club Estates area, based on pre-project conditions, a limited number of residences have unimpeded and long-term views of existing open space areas. Based on the relatively level terrain in the general project area, new multi-story residential structures erected to the northeast of County Club Estates will effectively block or substantially reduce existing views across the project site. However, while the existing view from abutting residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 2 (High).

◊ **Scenic Integrity**. The built environment will result in a foreground landscape that will completely dominate and, with the exception of any retained open space areas, generally replace the natural appearing landscape character. However, since none of the planning areas abutting the El Rancho Verde Royal Vista Golf Course are planned for open space use, the character of the abutting landscape will undergo change.

During construction, the observer will experience the introduced sights, sounds, and aromas of construction. Construction activities will replace or partially obscure the sounds of the rustling leaves and wildlife, reduce or eliminate the sounds of any flowing water, and modify the viewer's sense of immersion in and any perceived harmony with the natural environment. During construction, the viewshed's scenic integrity will be downgraded from a Moderate (Appears Slightly Altered) to Very Low (Appears Highly Altered) rating. Changes will be most evident the closer the introduced development is to the viewers.

As perceived from Sensitive Viewpoint No. 5, no identifiable scenic resources (i.e., registered historic building and structures, established non-commercial public recreational area, publicly designated open space areas that are non-urban in character) will be impacted) are impacted during construction.

From near the perimeter of the El Rancho Verde Royal Vista Golf Course, based on a northerly and easterly orientation, because the project area is presently undeveloped, construction of the proposed project would replace the current perspective of relatively undeveloped open space with foreground views of a developed environment. From that viewpoint, scenic integrity will be reduced from a Moderate (Appears Slightly Altered) rating to a less desirous Very Low (Appears Highly Altered) rating. Although the landscape character will be altered, for most observers, those deviations will remain subordinate to the golf course itself. Because these changes do not detract appreciably

from views of the golf course and the functional use or perceptions of mobile and static golf course users, the resulting changes would not substantially degrade the existing visual character or quality of the site and its surroundings. Because the viewshed already contains elements of human alteration, the resulting change in the viewshed's scenic integrity from Moderate (Appears Slightly Altered) to Very Low (Appears Highly Altered) constitutes a less-than-significant impact.

During construction, as shown below in Table 4.13-3 (Construction Condition Element Values for Sensitive Viewpoints), with regards to the selected sensitive viewpoints (i.e., Sensitive Viewpoints Nos. 4 and 5), certain values assigned to the visual elements of distance zone, scenic attractiveness, sensitivity/concern level, scenic class, and scenic integrity change based on pre-project (before) and construction-term (after) conditions. Based on the reduction in the natural environment and expansion of the built environment, those changes that have been identified to the selected viewpoint values are generally lower. From this, is can be determined that the site's scenic quality will be adversely affected during construction though such events as vegetation clearance and the temporary introduction of disharmonious cultural modifications (e.g., construction activities). Although adverse, based on the criteria outlined herein, from a construction perspective, construction-term landscape character changes will not, however, result in a significant visual impact for any of the five sensitive viewpoints.

Table 4.13-3
CONSTRUCTION CONDITION ELEMENT VALUES FOR SENSITIVE VIEWPOINTS[1,2]

Element	Viewpoint 1 Value		Viewpoint 2 Value		Viewpoint 3 Value		Viewpoint 4 Value		Viewpoint 5 Value	
	Before	After	Before	After	Before	After	Before	After	Before	After
Distance Zone	Mg	Mg	Mg	Mg	Mg	Mg	Fg	Fg	Fg	Fg
Scenic Attractiveness	B	B	B	B	C	C	A	A	C	C
Sensitivity/Concern Level	2	2	2	2	3	3	2	2	2	2
Scenic Class	3	3	3	3	6	6	2	2	2	2
Scenic Integrity	L	VL	L	VL	VL	VL	H	M	M	VL
Significant Change?	-	No	-	No	-	No	-	No	-	No

Note:
1. "Before" refers to pre-project conditions, as reflected in Table 4.13-2 (Existing Condition Element Values for Sensitive Viewpoints), prior to the commencement of construction activities.
2. "After" refers to site conditions during construction but does not include post-occupancy conditions.

Source: Environmental Impact Sciences

4.13.5.2 Operational Impacts

Physical Changes to Post-Construction Landscape Values

Environmental Impact 13-3*. Following the construction of individual planning areas and the project's build-out, those areas will continue to undergo physical changes affecting the site's evolving scenic qualities*.

***Preliminary Determination 13-3**. Potentially significant unless mitigation incorporated.*[38]

Once operational, changes will continue to occur within individual planning areas and throughout the project site as homes are occupied and the human element is brought into individual neighborhoods, children recreate in on-site park areas, attend school, and play in front yards, neighbors stroll along sidewalks and trails, shoppers patronize commercial establishments, employees commute to and from job opportunities created within the project boundaries, and introduced landscaping and neighborhoods mature. Once the project starts to become functional, except through the incremental contributions associated with the build-out of individual planning areas, these ongoing operational changes will occur at a substantially slower (and less apparent) rate than evident during construction period. As such, these changes will not be readily apparent to the casual observer. Similarly, both commercial and residential areas typically have their own daily and weekly cycles, corresponding with the activities of workers and residents.

To the extent that additional visual impacts would be produced during the operational life of the project, beyond those previously addressed under the assessment of construction-related visual impacts, those additional environmental effects are presented below. In the presentation of the following information, the Lead Agency has sought to avoid duplication of its previous analysis. Since there may not be a clear distinction between construction-term and operational impacts, readers are encouraged to review the following section in combination with the analysis presented in Section 4.13.5.1 (Construction Impacts) above.

- **Landform**. No additional landform changes are anticipated to occur following the completion of all construction operations.

- **Vegetation**. Nature evolves in an apparently more random pattern than is typically seen in a developed area where uniformity and symmetry are often highly prized. Trees in the natural landscape are not typically uniform either in height or health. In contrast, because irrigation improvements accompany the planting of trees in an urban setting, landscaping evident in the built environment is not subject to the same stringent constraints as native vegetation, is often planted in patterns that do not replicate nature, and selected solely for appearance and similarity.

  In the same manner that nature transitions between adjacent ecological communities (ecotones), natural and introduced landscaping can “soften” urban edges and reduce visual contrast between otherwise dissimilar elements. With regards to the proposed project, those retained open space areas which are located throughout the four neighborhoods serve to preserve some of the site’s pre-project visual qualities, visually and functionally link retained on-site open space areas with the natural environment beyond the project boundaries, and provide, promote, and/or facilitate the transition between the natural and built environments. In addition, introduced landscaping can create a sense of identity to a community and can create a visual and spatial buffer between uses. Landscaped parkways and streetscapes provide the purpose of separating vehicles from receptors, creating a separate area for non-motorized mobility, and adding open space and landscape character to an urban setting.

[38]/ Prior to mitigation, applicable or potentially applicable threshold standards relative to this preliminary determination include, but may not be limited to, the initial conclusion that the proposed project could: (1) substantially degrade the existing visual character or quality of the site and its surroundings; and (2) create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Before site disturbance occurs, the natural environmental is typically the visually dominant element. During grading operations, existing vegetation can be virtually eliminated from a project site, such that its significance wanes or disappears in its entirety. During the project's operational life, those landscape improvements that are planted during the construction process begin to take hold and mature. Once established, although seldom regaining its stature as the dominant visual element, landscaping can gain equal footing reduce the visual dominance of the built environment.

In established residential and commercial areas, street trees and other introduced landscaping will provide screening for buildings and visual relief to large expanses of pavement, produce an overall softening of hard surfaces (hardscape), provide shade and anchorage for swings and hammocks, contribute to opportunities for natural structural cooling, and allow for carbon sequestering. Ornamental landscaping provides sources of color and food, shelter, and nutriment for urban wildlife. Additionally, introduced landscaping kept green via watering or through the selection of drought-tolerant species, will provide beneficial visual impact.

- **Water**. Since the project design will not substantially disturb existing surface flows within Lytle Creek and Sycamore Creek or adversely affect groundwater recharge opportunities along Lytle Creek, no substantial changes will occur to existing water features. Project operations will not result in significant visual impacts affecting any on-site or near-site water resources.

- **Color and Hardscape**. With completion of construction, the site's color palette will be expanded as flowers and other ornamental landscaping is added to the neighborhood entries, along major thoroughfares, within individual development projects, and in the yards and patios of those homes that will occupy the project site. The retention of open space areas, both undisturbed and introduced, will add color and provide a softening effect of the hard surfaces constituting the built environment. Similarly, with the introduction of new cultural modifications, the architectural elements that comprise those improvements will add color and diversity to the site. While areas that were once open space will be replaced by those hardscape structures comprising the built environment, following the completion of construction operations, the site will possess a greater diversity of color, pattern, and texture than evident in either the pre-project or construction-term environments.

- **Lighting**. Presently, with the exception of Monier Lifetile, El Rancho Verde Royal Vista Golf Course, and motor vehicles passing along roadways abutting the project site, no artificial sources of light exist on the site. With the introduction of streetlights, automobile headlights, landscape accent lights, residential lighting, parking lot lighting, security lighting, sports lighting and other new lighting sources, the property will change from a "dark" site to an area more characteristic of an urban area. All new urban light sources contribute incrementally to "light pollution." The term is used to describe the overall impacts associated not only with localized but also regional sources of light and the incremental contribution that each light source has to the overall "sky-glow" effect. From an astronomical observation perspective, urban light sources reduce the ability of ground-based astronomers, as well as the general public, to observe the stars and other heavenly bodies. Each new light source adds to those impacts.

Besides its many positive attributes, lighting can produce adverse and potentially significant environmental effects. For example, "glare" constitutes the annoyance or discomfort caused by a direct viewing angle to the lighting source or by levels of illumination greater than those that our eyes can adapt to. Glare is categorized as either direct or reflective. Reflective glare (veiling reflection) is the glare resulting from reflections of high luminance from specular, glossy, or polished surfaces within the field of view. Direct glare is defined as the visual discomfort resulting from insufficiently shielded light sources in the field of view. Additionally, "light trespass" is defined as a light source shining beyond the area to be illuminated caused either by the uncontrolled direct component from a luminaire or from light reflected from the task being illuminated outward beyond the targeted area.

Most surfaces contain some level of reflectivity (e.g., a grass lawn produces approximately 6 percent reflectance while a concrete surface produces about 55 percent reflectance). Many building materials have a relatively high degree of reflectivity. Although the precise nature and composition of those materials has yet to be determined, the materials that will be used in the construction and operation of the proposed project and its various land uses will be similar to those materials already widely used in the construction of similar projects throughout the County without substantial loss of visual acuity. As such, in the absence of the planned construction of large office and industrial buildings within the project boundaries, reflective glare is not anticipated to manifest at a significant impact.

Direct glare can be effectively controlled through the positioning, orientation, and shielding of individual luminaires. Although representing new source of illumination, since all street lighting will conform to and be maintained in accordance with the standards of the City and the County, street lights do not constitute potential new sources of direct glare.

Most lighting in urban settings is of relatively low intensity. One primary exception is pole-mounting, high-intensity, outdoor sports field lighting installed in recreational areas to facilitate organized recreational activities during evening hours. Different sports and different levels of competition call for different levels of ground and aerial illumination. Lighting technology, including orientation and shielding, can ensure that no substantial levels of illumination extend beyond the boundaries of those recreational areas which the sports lighting are intended to illuminate. Since no sports lighting is presently identified in the proposed LCRSP, rather than examining all potential lighting options and settings, a mitigation measure (Mitigation Measure 13-6) has been formulated to minimize the intrusion of spilled lighting beyond the source of origination.

- **Adjacent Scenery**. As the landscaping and land uses installed and constructed on the project site mature, any dissimilarities between the uses found on the project site and those that exist in the general project area will become increasingly less apparent. Mining operations typically occur as remote activities, separated from residential and other urban uses. With the approval by the County of the LCNPDP and the commencement of residential construction of that adjoining property, urban uses now encircle the Cemex USA Lytle Creek Plant. Implementation of the proposed project will bring those uses into even closer proximity. If off-site quarry operations continue past the commencement of operations for authorized on-site land uses within Neighborhoods II and III, based on the operational differences between those uses, mining activities

would be increasingly perceived as disharmonious with site-specific activities. Screening and other mitigating actions have been identified under other topical assessments herein.

Adjacent scenery is also inclusive of Lytle Creek. Those portions of the project site located in proximity to active channel areas have been retained as open space. Protected residential areas adjoin the channel. From an operational perspective, the presence and proximity of Lytle Creek does not raise additional visual impacts. Similarly, much of the on-site areas abutting the National Forest are retained as open space. The retained on-site open space presents a transitional area between the natural environment of the National Forest and the built environment within the project site.

Adjacent scenery further includes the I-15 Freeway and SCE's existing Lugo-Mira Loma 500-kV transmission line. Based on the elevated and/or vertical design features of those uses, screening opportunities are limited. From a visual impact perspective, the proximity of the I-15 Freeway and overhead transmission towers is adverse but constitutes a less-than-significant impact. Prospective purchasers of property within Neighborhoods I, III, and IV will be provided with disclosure documents indicating the presence of those facilities. Buyers can, therefore, make an informed independent determination concerning the potential visual effects associated with proximity and elect to purchase or not purchase property based on their own independent assessment and application of their own aesthetic values.

- **Cultural Modifications**. CEQA focuses on assessing the significance of physical changes to the environment. Presently, only limited cultural modifications exist on the project site. Through the project's implementation, the site will be transformed from a primarily undeveloped to an intensively developed urban area, producing a substantial physical change to the visual character of the project site. The most apparent transformation will occur during the construction process. The visual impacts associated with the construction of those cultural modifications and associated physical changes will diminish during the maturation of the project.

  As noted, through the construction process, a substantial portion of the site will transition from open space to urban development, with some of the more sensitive portions of the project site retained as natural open space. From an aesthetics perspective, in order to determine the significance of this physical change, it is first necessary to determine whether the resulting change to the site's scenic resources substantially diminishes the scenic quality of those resources.

  Although scenic and functional qualities are directly related, in order to assess the significance of the visual changes associated with the project's development, the City first seeks to determine whether the retained open space results in the substantial retention of the site's open space value. Value is determined, in part, by the retained functionality that the retained or introduced landscape serves, including the landscape's ability to meet specific human needs.

  Functionally, open space can be considered to satisfy one or more of the following purposes: (1) open space for preservation of natural resources, such as habitats for protected species, important watersheds, rivers and streams, and other similar qualities; (2) open space for managed production of resources, including those uses that either

require open lands (e.g., farming and mineral production) or which harvest products from lands which have not been urbanized (e.g., grazing and harvesting of timber); (4) open space for recreation, including areas where visitors seek recreation by hiking, camping, picnicking, and off-highway vehicle (OHV) use; (5) open space for scenic resources preservation; and (6) open space for public health and safety, including areas set aside as buffers from hazardous conditions (e.g., earthquake faults and areas subject to flooding) and open lands that are themselves a part of a system built to protect health and safety (e.g., flood control channels and basins).

Since larger areas along Lytle and Sycamore Creeks will be preserved, under pre-project and post-project conditions, adequate open space will be retained for the preservation of natural resources, for the protection of plant and animal species, and for the protection of public health and safety. Since the site is privately owned, with the exception of the El Rancho Verde Royal Vista Golf Course, the property is not currently used for recreation; however, post-project conditions will incorporate areas for public recreational uses. Conversely, the site's development would foreclose the site's preservation for the managed production of resources (e.g., aggregate resources). Although existing open space acreage may be reduced, retained open space areas will serve a number of viable functional purposes. Functionality is, therefore, retained.

Currently, as private property, public access to the project site is restricted such that on-site open space areas serve only as a passive resource observed from off-site areas. The analysis of sensitive viewpoints shows that, with the exception of the golf course, only moderate to low levels of scenic integrity can be assigned to the existing site area. Upon implementation, except where access is restricted for resource conservation purposes, retained open space areas will jointly become a community resource that can be both actively and passively used and experienced. As a result, independent of any changes to the site's scenic integrity, the functionality of those areas will increase.

In the context of visual resource assessment, the focus is limited to a pre-project and post-project comparison of open space for scenic resources.

As previously stated, one of the factors to consider in assessing scenic integrity is the duration of time in which a view can be observed. Although greater in number, mobile observers, including golfers and recreationalists within the National Forest and GHRP, are generally less concerned with view conditions than static observers. With the exception of those views of the project site which can be obtained from the Las Colinas and County Club Estates neighborhoods (private unprotected viewsheds), public views of the project site are generally limited to those available to motorists as they travel along the I-15 Freeway and along local roadways. The scenic integrity of views afforded mobile observers can be assigned a moderate to low value. The existing static observers located along Riverside Avenue also have existing low valued scenic integrity.

Upon implementation, residents and non-residents will be provided access to active and passive open space areas provided as part of the project's development. As part of the Applicant's landscape plan and as mitigation for impacts to other jurisdictional areas on the project site areas, landscape enhancements are proposed to improve the habitat value of retained areas, facilitate use as a wildlife corridor, remove non-native invasive species, revegetate with native plant species, and address long-term maintenance and resource preservation. Through the site's development, although the total open space acreage may diminish, the scenic integrity of the retained open space will be enhanced.

Visual Impacts from Sensitive Internal and External Viewpoints

Environmental Impact 13-4*. Following the completion of construction, the project site will remain visible from adjacent and proximal publicly-accessible areas located off the site. As site improvements are completed and occupancy, use, and habitation occurs, further physical changes could alter the site's scenic qualities as perceived from those public vantage points.*

Preliminary Determination 13-4*. Less-than-significant impact.*

Upon completion of construction, the type and number of activities will be substantially different than those which now exist on the project site and those which will exist during the construction phase. As individual planning areas are completed, homebuyers will move into newly constructed dwelling units, tenants will occupy apartments and rental housing units, patrons will shop at on-site commercial areas, employees and other workers will work at on-site jobs, children will play in playgrounds and attend schools, and wildlife will return to open space areas and establish a delicate balance with proximal human occupants. Although these constitute changes to the ebb-and-flow of the subject property, the focus of this analysis is on the physical changes to the environment rather than on changes to human activities which relate, either directly or indirectly, to those physical changes.

To the extent that additional visual impacts would be produced during the operational life of the project, those additional environmental effects, as perceived from each of the identified sensitive viewpoints, are discussed below. Since this analysis examines additional visual changes that may occur once the project is operational, in the context of this analysis, the existing visual environment constitutes the "after" conditions identified in Table 4.13-3 (Construction Condition Element Values for Sensitive Viewpoints), examining the potential visual impacts that occur following the completion of construction.

- **Sensitive Viewpoint No. 1**. Once construction is completed and occupancy occurs, the foreground area will take on increased visual importance as natural open space areas are converted to active recreational use. Vegetation will become more dominant and active use of the park areas will be observed. Unless views are obscured by intervening vegetation or other design elements, the primary focus of Sensitive Viewpoint No. 1 (Neighborhood I from Clearwater Parkway) observers will likely remain middleground and upon elements of the built environment. Beyond the I-15 Freeway, commercial uses and single-family residences, in addition to open space buffer areas on slopes located adjacent to the National Forest, will be evident in the middleground.

  - ◊ **Distance Zone**. The distance zone will remain as middleground.

  - ◊ **Scenic Attractiveness**. The foreground view of developed open space and recreation areas, disturbed by the horizontal elements created by Glen Helen Parkway and the I-15 Freeway, will contrast with the proposed commercial and residential development in the middleground. As landscaping matures, the vegetation will serve to soften the effect of the introduced hardscape; however, roofs, walls, and other introduced structures will remain visible. The foothills and mountains in the background would remain evident and contrast with the built environment. The rating for scenic attractiveness retains the Class B (Typical) rating since views would remain generally common.

◊ **Sensitivity/Concern Level**. As illustrated in Figure 4.9-16 (Lytle Creek Ranch Specific Plan – Conceptual Trail System), a number of new additions to the existing regional trail system are proposed. These additions are, however, generally confined to the existing Clearwater Parkway right-of-way or lands directly adjacent thereto. As such, from public vantage points, the primary observers located along this viewshed will continue to be mobile viewers traveling along Clearwater Parkway and Glen Helen Parkway and, to a lesser extent, mobile and static users within GHRP. These viewers will retain a Sensitivity/Concern Level 2 (Moderate).

Upon occupancy of residential areas within Neighborhood I, new static viewers will be introduced into this viewshed. While the views from these futures residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 3 (Low).

◊ **Scenic Integrity**. As with the construction condition, the built environment will continue to produce a landscape where human activities alter and dominate the viewshed. As landscapes mature, the starkness that exists upon the completion of construction will diminish and additional character will be added to the visual environment. Additionally, since a substantial portion of the viewshed is retained as open space, as the starkness of the built environment subsides, based on the low density character of the area's residential development, the visual contrast between the built and natural environment will also diminish. As a result, the Very Low (Appears Highly Altered) scenic integrity that was evident during construction would improve to Low (Appears Moderately Altered), thus returning the scenic integrity of the viewshed to the site's pre-project scenic rating.

While the changes to the landscape character that occurs between the pre-project and construction-term environment would be deemed adverse but less than significant, the changes to the landscape character that occurs following the completion of construction would be deemed beneficial.

- **Sensitive Viewpoint No. 2**. Sensitive Viewpoint No. 2 (Neighborhood IV from I-15 Freeway) observers will continue to see the completed commercial and higher density residential structures in the middleground. Views of Lytle Creek Road will be partially obscured, as might views of some structures located along the west side of that roadway. Because much of Neighborhood IV will be retained as open space, foreground views will remain as in pre-project conditions. As with the construction condition, once operational, individuals traveling along the freeway will be able to observe Neighborhoods I, III, and IV. Those neighborhoods will include a variety of open space, residential, and commercial uses. Mobile viewers will discern that residential densities are lower in the Neighborhood I area (based on the single-family detached nature of the residential use) and higher in Neighborhoods III and IV (based on the multi-family attached nature of the residential use). Each of those land uses, however, constitute common elements in an urban environment and, upon occupancy, will be readily

recognizable and familiar to passing motorists. Background vistas of the San Gabriel and San Bernardino Mountains will not be obscured.

◊ **Distance Zone**. Similar to that evident during construction, from this viewpoint the middleground will remain the visually dominant distance zone. Natural open space will be retained in both the foreground and background. The built environment will, however, be the dominant visual element in the middleground. Residential and commercial development remains the dominant horizontal elements and the overhead steel-lattice transmission towers will remain the dominant vertical elements within this distance zone.

◊ **Scenic Attractiveness**. As with construction, the eye will continue to be drawn to the generally horizontal line of the introduced residential and commercial structures and the overhead transmission towers in the middleground. The Class B (Typical) scenic attractiveness rating does not change following the commencement of occupancy.

◊ **Sensitivity/Concern Level**. As southbound motorists traveling along the I-15 Freeway approach this vantage point, they will first perceive the San Gabriel Mountains in the background. Once in a location where they can see Neighborhood IV, mobile viewers will observe this middleground landscape for only a short duration. The built environment, consisting of residential and commercial structures and the overhead transmission towers, will become increasingly dominant the closer mobile viewers travel toward these elements. Based on the nature of viewers and the duration of views, the viewshed's Sensitivity/Concern Level 2 (Moderate) rating will be retained following the commencement of occupancy.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint remains the same as that which existed during construction, namely Scenic Class 3 (Moderate).

◊ **Scenic Integrity**. The completed structures will further emphasize the horizontal elements created by the existing rural residential properties, freeway-oriented commercial uses, and linear nature of street trees along Lytle Creek Road. Over time, the built environment will remain dominant in the middleground and, because of the intensity of the development and the presence of overhead transmission lines, will continue to appear as a highly altered human activity within a relatively natural environmental setting, resulting in the retention of this viewshed's Very Low (Appears Highly Altered) scenic integrity.

Following occupancy and use, all landscape elements will generally retain the viewshed's visual character established during the construction period. Because the scenic attractiveness is common and since mobile viewers will observe the scene for only a short duration, any further change to the visual character of this viewshed that may occur following project construction would be less than significant.

- **Sensitive Viewpoint No. 3**. Upon completion, the project site will contain a mix of residential, commercial, office professional, light industrial, institutional, recreational and open space use. In the foreground, Sensitive Viewpoint No. 3 (Neighborhood III from

Riverside Avenue) observers will see a landscaped parkway, a decorative perimeter wall, and structures located along and backing onto Riverside Avenue.

◊ **Distance Zone**. The foreground will be dominated by structures and other introduced elements located along Riverside Avenue. Those elements will serve to effectively block both middleground and background views of mobile viewer traveling along Riverside Avenue. With the exception of second-story vantage points afforded certain existing residences located along Riverside Avenue, middleground and background views of static viewers will be blocked or substantially limited.

◊ **Scenic Attractiveness**. The presence of residential and non-residential structures, in combination with the landscaped parkway, will dominate views along Riverside Avenue. From street-level vantage points, the overhead steel-lattice transmission towers will continue to be visible but, based on other introduced elements within the built environment, including multi-story structures and landscaping, will no longer constitute the dominant visual element. The viewshed's construction-term scenic attractiveness Class C (Indistinctive) rating will, however, remain.

◊ **Sensitivity/Concern Level**. For the motorist traveling along Riverside Avenue, Sensitive Viewpoint No. 3 will appear similar to parkway views of recently developed neighborhoods within the larger urban setting, in many ways replicating the character that now exists in the Las Colinas area. Urban development will be evident along both sides of the street and ornamental landscaping, a landscaped parkway, and block or stucco walls will serve to separate residential uses from the motorists traveling along the arterial highway. Although landscaped, there is little visual interest for the mobile viewer.

In contrast, residences located along Riverside Avenue place increased significance of middleground and background features from their second-story vantage points. However, while the existing view from abutting residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

As the introduced landscaping matures, middleground and background views will be further impeded. As a result, for static viewers, Sensitivity/Concern Level 3 (Low) is retained.

◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 6 (Low).

◊ **Scenic Integrity**. The highly altered landscape will be dominated by evidence of human disturbance and introduced structures, retaining the Very Low (Appears Highly Disturbed) scenic integrity rating that existed during construction.

Following occupancy, all landscape elements will generally retain the viewshed's visual character established during the construction period. Because the scenic attractiveness is common and since mobile viewers will observe the scene for only a short duration,

any further change to the visual character of this viewshed that may occur following project construction would be less than significant.

- **Sensitive Viewpoint No. 4**. Except where potentially modified through reconfiguration of the golf course layout, Sensitive Viewpoint No. 4 (El Rancho Verde Golf Course) mobile observers will continue to have foreground views of the golf course. Mobile views of Neighborhood II by golf course users will remain in the middleground. With the exception of limited mixed-use development along Riverside Avenue, the built environment within Neighborhood II will be limited to land uses which are common elements adjacent to golf courses (i.e., residential uses and open space).

  Those residents who live adjacent to or have static views of the course will continue to have views of the golf course and will observe Neighborhood II not as a foreground element but in the middleground. However, while the existing view from abutting residences is acknowledged, because those views observed from private properties constitute unprotected viewsheds, no sensitivity/concern level is assigned.

  - ◊ **Distance Zone**. With the golf course dominating the foreground, the foreground remains the distance zone. The project's built environment will be evident in the middleground and will remain a secondary visual element from this vantage point.

  - ◊ **Scenic Attractiveness**. Even though the golf course will remain the dominant visual element, except for the golf course itself, the built environment will visually contrast with the soft natural setting of the golf course. The contrast between the two will tend to draw the eye to the hardscape of the built environment. To the observer, a mild to moderate distraction in unity, intactness, order, harmony, pattern, balance, and interest will result. Over time, as introduced landscaping matures, the starkness of construction will subside and the new residential uses will more readily blend into the natural environment. Because the built environment will remain a secondary visual element to the dominant golf course, the viewshed's scenic attractiveness remains Class A (Distinctive).

  - ◊ **Sensitivity/Concern Level**. Since observers with foreground views of the golf course would highly prize those views, the Sensitivity/Concern Level 1 (High) is retained.

  - ◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint remains Scenic Class 1 (High).

  - ◊ **Scenic Integrity**. The foreground golf course's landscape character remains intact. In the middleground, the hard features of the built environment serve to create a visual demarcation line not evident prior to the commencement of construction. As introduced landscaping matures, the edge effect will soften the transition between the natural and built environments less distinct, thus expanding the perceived foreground area. Prior to the commencement of construction, the scenic integrity of this foreground was High (Appears Intact). During construction operations, the scenic integrity was reduced to Moderate (Appears Slightly Altered). Over time, based on the success of the landscaping plan, the scenic integrity could return to High (Appears Intact).

With the exception of scenic integrity, following occupancy and use, all landscape elements will generally retain the viewshed's visual character established during the construction period. As introduced landscaping matures, the viewshed's scenic integrity would increase from Moderate (Appears Slightly Altered) to High (Appears Intact), indicating that the visual impacts from this vantage point produced during construction would be of relatively short-term duration and that the visual character of this viewshed would generally retain its scenic integrity over time.

- **Sensitive Viewpoint No. 5**. The El Rancho Verde Royal Vista Golf Course is a public course offering views of the Neighborhood II area. After construction, the Sensitive Viewpoint No. 5 (Neighborhood II from El Rancho Verde Golf Course) observers, including both mobile views using the golf course and static viewers within the County Club Estates neighborhood, will view primarily residential and open space uses extending eastward to Lytle Creek.

  - ◊ **Distance Zone**. As with construction, the distance zone is the foreground because more distal views will be limited based on the intervening development. Middleground views, if available, will be comprised of tops of structures. Background views will likely be reduced or eliminated.

  - ◊ **Scenic Attractiveness**. The view of foreground multi-story structures will result in a landscape that is weak and missing attributes of variety, vividness, mystery, balance, and harmony. Views of occupied residential development are indistinctive, resulting in the retention of the Class C (Indistinctive) rating.

  - ◊ **Sensitivity/Concern Level**. Observers of this viewshed include golfers utilizing the course. Those mobile viewers are primarily focused on the skills required to play the game and not generally concentrating on the views beyond the course boundaries. The concern level for those viewers is Sensitivity/Concern Level 2 (Moderate).

  - ◊ **Scenic Class**. Using the distance zone and sensitivity/concern level matrix, the viewpoint is Scenic Class 2 (High).

  - ◊ **Scenic Integrity**. During construction, conversion of the foreground area from a natural to a built landscape will occur. Most middleground and background views from Sensitive Viewpoint No. 4 will be eliminated and viewers will look upon an urbanizing landscape. During construction, the viewshed's scenic integrity rating will diminish from Moderate (Appears Slightly Altered) to Very Low (Appears Highly Altered). However, once occupied, the viewshed will include both residential and open space areas and maturing landscape will serve to soften urban features and reduce visual contracts between developed and open space areas. Over time, the scenic integrity rating of this viewshed would likely return to Moderate (Appears Slightly Altered).

With the exception of scenic integrity, following occupancy and use, all landscape elements will generally retain the viewshed's visual character established during the construction period. As introduced landscaping matures, the viewshed's scenic integrity would increase from Very Low (Appears Highly Altered) to Moderate (Appears Slightly Altered), indicating that the visual impacts from this vantage point produced during

construction would be of relatively short-term duration and that the visual character of this viewshed would generally retain its scenic integrity.

As indicated in Table 4.13-3 (Construction Condition Element Values for Sensitive Viewpoints), as the project site is converted from a relatively natural landscape to a built environment, a number of visual changes are anticipated during the construction period. As further indicated in Table 4.13-4 (Operational Condition Element Values for Sensitive Viewpoints), following the completion of construction and following commencement of occupancy, the project's visual character will continue to evolve. As indicated, the anticipated visual changes that may occur following construction will not result in the introduction of significant adverse aesthetic impacts.

Table 4.13-4
OPERATIONAL CONDITION ELEMENT VALUES FOR SENSITIVE VIEWPOINTS[1,2]

Element	Viewpoint 1 Value		Viewpoint 2 Value		Viewpoint 3 Value		Viewpoint 4 Value		Viewpoint 5 Value	
	Before	After	Before	After	Before	After	Before	After	Before	After
Distance Zone	Mg	Mb	Mg	Mg	Mg	Fg	Fg	Fg	Fg	Fg
Scenic Attractiveness	B	B	B	B	C	C	A	A	C	C
Sensitivity/Concern Level	2	2	2	2	3	3	2	1	2	2
Scenic Class	3	2	3	3	6	5	2	1	2	2
Scenic Integrity	VL	L	VL	VL	VL	VL	M	H	VL	M
Significant Change?	-	No	-	No	-	No	-	No	-	No

Note:
1. "Before" refers to site conditions, as reflected under "after" in Table 4.13-3 (Construction Condition Element Values for Sensitive Receptors), during construction but does not include post-occupancy conditions.
2. "After" refers to post-occupancy conditions.

Source: Environmental Impact Sciences

Visual Impacts from On-Site Viewpoints

Environmental Impact 13-5*. A number of residential and institutionally-designated areas within Neighborhoods II, III, and IV will abut operating industrial-types uses, including the Cemex USA quarry, SCE transmission lines, and Monier Lifetile. The occupants of those properties may perceive those uses as visually incompatible with the aesthetic character of those residential and institutional uses.*

Preliminary Determination 13-5*. Less-than-significant impact.*

A portion of Neighborhoods II and III abut the Cemex USA quarry.[39] Depending on the height of the project's perimeter walls, the existence of landscape setbacks and berms, the rear yard

[39]/ On April 19, 2001, the San Bernardino County Planning Commission approved the Revised Reclamation Plan 93M-04 for the Lytle Creek Mine. The adopted plan is effective for a period of 25 years (with a two-year revegetation monitoring period), expiring on April 29, 2028. As described in the "Lytle Creek Reclamation Plan," final reclamation will consist of final contouring of slopes and the pit floor as mining is completed. Equipment and refuse will be removed within six months. Access into the quarries will be restricted by locked gates, rock barricades, fencing and safety berms. Compacted areas, including the process plant facilities (which may remain in use after the

setbacks associated with abutting on-site land uses, and the height of on-site structures, abutting properties will or may have unimpeded views of active mining areas and equipment staging areas.

The proposed LCRSP permits, but does not require, walls of up to 10 feet in height that may be constructed to separate residential areas from abutting mining operations and other light industrial or other similar uses. As depicted in the proposed LCRSP, the two neighborhoods abutting the Cemex USA Lytle Creek Plant are designed to have perimeter fencing and walls of at least six feet in height to provide visual separation from those uses. The project also proposes construction of a levee along the banks of Lytle Creek which lines at the northeastern edge of both Neighborhoods II and III and, therefore, provides both a physical and visual buffer of certain Cemex USA operations.

A mitigation measure (Mitigation Measure 1-6) has been formulated which specifies that prior to the approval of any tentative "B" level tentative subdivision map (excluding any "A" level subdivision map for financing purposes only) allowing for residential development or other sensitive land uses on lands abutting active mining areas, the Applicant shall delineate on the plan or map a buffer zone from the edge of those active mining areas and shall incorporate within that buffer zone solid fencing, with a minimum height of not less than six feet above finish grade, and landscaping acceptable to the City.

Although on-site views of quarry operations may be considered adverse because of the different visual characteristics of that use when compared to other allowable residential and non-residential uses, since none of the threshold criteria would be exceeded, public and private views of the Cemex USA quarry would be less than significant.

SCE operates the overhead Lugo-Mira Loma 500-kV transmission line within an approximately 150-foot to 355-foot wide right-of-way extending across Neighborhoods III and IV. This line was constructed in the 1960's and in the 1970's. Occupants of the residential parcels abutting that easement will have views of the transmission towers, transmission lines, and SCE easement.

Although on-site views of SCE lattice towers may be considered adverse because of the different visual characteristics and scale of those towers when compared to other allowable residential and non-residential uses, since none of the threshold criteria would be exceeded, public and private views of the high-voltage transmission towers and electrical lines would be less than significant.

4.13.5.3 Cumulative Impacts

Environmental Impact 13-6*. The southern California area is rapidly undergoing change. As development continues to occur both within the County and throughout the region, the visual character of the general project area and the region itself will increasingly become more urbanized.*

termination of mining subject to County regulations), will be revegetated and most haul roads will be scarified to a depth of one foot to promote plant growth. The settling pond area will be allowed to dry and any slopes pushed to 2:1 (horizontal:vertical) or less. The area will be covered with one foot of native alluvium material and revegetated. Upon final reclamation, the project will consist of revegetated open space with the availability of the two large recharge basins bisected by Lytle Creek to be utilized for groundwater recharge activities. The plant area will be graded for positive drainage to the southeast and will be revegetated.

***Preliminary Determination 13-6**. Less-than-significant impact.*

Since cumulative impacts must be examined in a broader context than otherwise available at a site-specific level, the visual impacts of those activities must be viewed in that same regional context. As a result, the diminution in the regional inventory of available vacant and natural lands constitutes the continuation of historic development patterns and not a substantial departure therefrom.

Municipalities formulate long-range planning documents with the intent of directing development activities to those areas deemed by those municipalities to be most conducive to growth based on a variety of factors (e.g., infrastructure available, minimization of environmental effects), including locally-established environmental values. Formal planning and environmental review processes are already in place to address individual development proposal seeking to either implement or modify some aspect of those long-range plans. When new development and redevelopment has the potential to impact identified scenic areas, those planning and environmental review processes incorporates locally-determined assessment of the impacts of those activities on those visual resources.

No development is authorized to occur in the absence of compliance with agency plans and policies. Demonstrated compliance with and conformity to the plans and policies outlined in the long-range planning documents of those agencies serves to mitigate the potential project-related impacts produced by the visual changes to existing landscapes associated with those development activities. While the further intensification of and urbanization within the region may constitute an adverse impact, the incremental and inevitable changes resulting therefrom would not be deemed a cumulatively significant impact on the region's existing visual resources.

4.13.6 Recommended Mitigation Measures

- **Mitigation Measure 13-1**. The project design shall include a detailed "freeway edge treatment" which incorporates both extensive landscaping and a 15-foot wide landscape easement adjacent to the freeway in the developed portions of Neighborhoods I and IV. Although no landscaping is proposed within the Caltrans' right-of-way, trees and shrubs selected for their height and visual appearance shall be utilized to create a landscaped edge that will serve as a visual screen separating the freeway from on-site land uses, will serve to demarcate the project site, and will frame the development that will occur beyond. A landscape plan shall be submitted to the City and approved by the City prior to the recordation of the final "B" level subdivision map.

- **Mitigation Measure 13-2**. Development projects proposed in all neighborhoods shall incorporate landscape buffer areas along those major arterial highways within and abutting those neighborhoods and shall incorporate decorative wall and fence treatments and architectural details designed to enhance the visual appearance of those neighborhoods, allowing for individual identity while including unifying design elements consistent with the development standards and design guidelines set forth in the LCRSP. A landscape plan shall be submitted to the City and approved by the City prior to the recordation of each final "B" level subdivision map within all neighborhoods.

- **Mitigation Measure 13-3**. Where feasible, because of projected long-term water demands, landscape vegetation shall be comprised of drought tolerant and low-water consuming species that provide color and a visual softening to the hardscape structures

that comprise the built environment. The landscape plan shall include a mix of such species and shall be approved by the City prior to recordation of the final "B" level subdivision map.

- **Mitigation Measure 13-4**. Areas that have been mass graded to accommodate later development upon which no project is immediately imminent shall be hydro-seeded or otherwise landscaped with a plant palette incorporating native vegetation and shall be routinely watered to retain a landscape cover thereupon pending the area's subsequent development. The landscape plan shall include a mix of such species appropriate for hydro-seeding and shall be approved by the City and appropriate fire departments (City and/or County) prior to the issuance of grading permits.

- **Mitigation Measure 13-5**. Grading within retained open space areas shall be minimized to the extent feasible. Graded open space areas within and adjacent to retained open space areas shall be revegetated with plants selected from a landscape palette emphasizing the use of native plant species.

- **Mitigation Measure 13-6**. Prior to the installation of any high-intensity, outdoor sports lighting within a park site and/or school facility, a detailed lighting plan shall be prepared for the illumination of active recreational areas, including a photometric analysis indicating horizontal illuminance, and submitted to and, when deemed acceptable, approved by the Development Services Director. Plans shall indicate that high-intensity, pole-mounted luminaries installed for the purpose of illuminating field and hardcourt areas include shielding louvers or baffles or contain other design features or specification, such as selecting luminaire with cut-off features, to minimize light intrusion to not more than 0.5 horizontal foot candle, as measured at the property boundary. Compliance with these standards shall not be required for adjoining public streets, school or recreational facilities, and other non-light-sensitive land uses.

4.13.7 Significant Unavoidable Adverse Effects

As mitigated, the approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative aesthetic impacts.

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4.14 ENERGY RESOURCES

As stipulated in Appendix F (Energy Conservation) of the State CEQA Guidelines: "The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include: (1) decreasing overall per capita energy consumption, (2) decreasing reliance on natural gas and oil, and (3) increasing reliance on renewable energy resources. In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy."

4.14.1 Technical Reports

The following technical studies, in combination with the City's independent analysis and other materials cited herein, serve, in part, as the basis for the Lead Agency's assessment of this topical issue:

- Crain & Associates, Lytle Creek Development Mobile Emissions Analysis Input, September 15, 2009 (see Appendix II-A-C).
- Environ International Corporation, Climate Change Technical Report – Lytle Creek Ranch, November 19, 2009 (see Appendix III-G).

Since each of the above referenced technical reports specifically address and describe on-site and/or near-site conditions, as authorized under Section 15150 of the State CEQA Guidelines, these documents are incorporated by reference herein and are made a part of this DEIR.

4.14.2 Regulatory and Policy Setting

4.14.2.1 United States

The United States Department of Energy (DOE) establishes federal standards to keep consistent national energy efficiency requirements for selected appliances and equipment. By law, DOE must upgrade standards to the maximum level of energy efficiency that is technically feasible and economically justified. On October 18, 2005, the DOE published (70 FR 60407) a final rule to codify fifteen energy efficiency standards for residential appliances and commercial equipment. The standards were established as part of the Energy Policy Act of 2005 (Public Law 109-58), as enacted on August 8, 2005.

4.14.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **Public Resources Code**. As specified in Section 25402 of the PRC, the State Energy Resources Conservation and Development Commission, more commonly known as the California Energy Commission (CEC), shall prescribe, by regulation "building design and construction standards that increase the efficiency in the use of energy for new residential and nonresidential buildings." In accordance therewith, all new buildings in

California must meet the energy standards and the administrative requirements outlined in Title 24, Parts 1-6 of the CCR.

- **Public Utilities Code**. The California Renewable Portfolio Standards (RPS) Program was established by SB 1078, effective January 1, 2003. It requires that a retail seller of electricity, such as the Southern California Edison Company (SCE), purchase a certain percentage of electricity generated by Eligible Renewable Energy Resources (ERR). The PRS program is set out in Section 399.11 *et seq*. of the Public Utilities Code (PUC). Each utility is required to increase its total procurement of ERRs by at least one percent of annual retail sales per year, so that 20 percent of its retail sales are supplied by ERRs by 2017. The State's 2003 "Energy Action Plan"[1] (EAP) called for acceleration of this RPS goal to reach 20 percent by 2010. On September 26, 2006, Governor Schwarzenegger signed SB 107 which officially accelerated the State's RPS targets to 20 percent by 2010, effective on January 1, 2007.

  The California Public Utilities Commission's (CPUC) Rules 15 and 16 govern the provision of natural gas and electricity to new residences.

- **California Code of Regulations**. The Warren-Alquist State Energy Resources Conservation and Development Act required the State Energy Resources Conservation and Development Commission to prescribe, by regulation, energy conservation design standards for new residential and new nonresidential buildings. California's "Energy Efficiency Standards for Residential and Nonresidential Buildings" (Title 24), codified in Title 24, Part 6 of the CCR, is updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods. The CEC adopted the most recent standards in 2004 (effective October 1, 2005),[2] as mandated by AB 970, to reduce California's electricity demand. All new construction in California must comply with the standards that are in effect on the date a building permit application is made and not the date when the building permit was issued.

  Referencing Section 15126.4(a)(1)(C) of the State CEQA Guidelines: "Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. Examples of energy conservation measures are provided in Appendix F [of the State CEQA Guidelines]." As indicated in Appendix F (Energy Conservation) of the State CEQA Guidelines: "The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include: (1) decreasing overall per capita energy consumption, (2) decreasing reliance on natural gas and oil, and (3) increasing reliance on renewable energy resources. In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Energy conservation implies that a project's cost effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, lifetime costs may be determined more by energy efficiency than by initial dollar costs."

[1]/ State of California, Consumer Power and Conservation Financing Authority, Energy Resources Conservation and Development Commission, and Public Utilities Commission, Energy Action Plan, May 8, 2003, p. 5.
[2]/ California Energy Commission, 2005 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, P400-03-001F, September 2004.

In July 2008, the California Building Standards Commission adopted the "California Green Building Standards Code" (24 CCR Part 11). Through a combination of more efficient appliances, use of efficient landscapes, and more efficient building design and operation, these standards will result in improvements in water usage for commercial and residential plumbing fixtures, target a 50 percent landscape water conservation reduction, and push builders to reduce energy use by 15 percent more than under standards. The code is composed of optional standards that will become mandatory in the 2010 edition of the code. As defined therein, "green building" is a "holistic approach to design, construction, and demolition that minimizes the building's impact on the environment, the occupants, and the community" (Section 202).

- **California Government Code**. In accordance with Section 53091(e) of the CGC, zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, or for the production or generation of electrical energy, facilities that are subject to Section 12808.5 of the PUC, or electrical substations in an electrical transmission system that receives electricity at less than 100,000 volts. Zoning ordinances of a county or city shall apply to the location or construction of facilities for the storage or transmission of electrical energy by a local agency, if the zoning ordinances make provision for those facilities.

  In 2007, AB 2160 added Section 15814.40 to the CGC. As stipulated therein, the CGC has been amended to encourage the implementation of energy efficiency measures in all new construction. Prior to its enactment, this encouragement is limited to requiring new public construction and certain public renovations and remodels to serving as models of energy efficiency. Under Section 15814.40, the California Department of General Services and the State Energy Resources Conservation and Development Commission must develop tools for facilitating private industry's implementation of energy efficiency measures. The statute requires the agencies to identify: (1) life cycle cost analysis model to be used in certain state building design and construction decisions; (2) Appropriate financing and project delivery mechanisms to facilitate state building energy and resource efficiency projects; (3) Obstacles to adoption of energy efficiency measures by private industry; and (4) Financial and other incentives to encourage private sector adoption of energy efficiency measures.

- **Executive Order S-20-04**. On December 14, 2004, Governor Schwarzenegger signed Executive Order S-20-04 committing the State "to aggressive action to reduce State building electricity usage by retrofitting, building and operating the most energy and resource efficient buildings by taking all cost-effective measures described in the Green Building Action Plan for facilities owned, funded or leased by the State and to encourage cities, counties and schools to do the same." As specified, in part, in the State's "Green Building Action Plan," the CPUC should assure that ratepayer-supported efficiency incentives and technical assistance programs for commercial and institutional buildings owners and tenants are strengthened or improved, as necessary, to contribute toward a 20 percent or more efficiency gain improvement by 2015 (compared to 2003).

- **California Public Utilities Commission General Orders and Decisions**. Pursuant to CPUC General Order No. 131-D, no electric public utility shall begin construction of any electric power line facility or substation at any voltage between 50 and 200 kilovolt (kV) or new or upgraded substation with high-side voltage exceeding 50 kV without the

CPUC having first authorized the facility's construction by issuance of a permit to construct. CPUC Decision 95-08-038 contains the rules for the planning and construction of new transmission facilities, distribution facilities, and substations and requires CPUC-issued permits for the construction of certain power line facilities and substations if the voltages exceed 50 kV or the substation would require the acquisition of land or an increase in the voltage rating above 50 kV. Although distribution lines and substations with voltages less than 50 kV do not need to comply with this decision, the utility must obtain any non-discretionary local permits as may be required for the facility's construction.

On October 18, 2007 (Decision 07-10-032), the CPUC affirmed cost-efficient energy efficiency (EE) as the State's highest energy priority, laying the foundation for making EE an integrated part of "business as usual" in California. The strategies and approaches adopted by the CPUC included: (1) directing the utilities to prepare a single, comprehensive Statewide long-term EE plan; (2) adopting initiatives requiring (a) all new residential construction in California to be "zero net energy" by 2020, (b) all new commercial construction in California to be zero net energy by 2030, and (c) heating, ventilation, and air conditioning (HVAC) industry to be reshaped to ensure optimal equipment performance; (3) developing the "next generation" of California utility EE programs for 2009-2011; and (4) committing in the near term to adopt utility EE goals through 2020. As noted by the CPUC, this "decision institutes a comprehensive, long-term energy efficiency strategy to achieve the ultimate goal of making energy efficiency a way of life. This goal reflects California's Energy Action Plan II policy of energy efficiency as the resource of first choice to meet California's growing energy demand. Energy efficiency is also projected to deliver a large portion of the greenhouse gas emissions reductions necessary to achieve the goals of the California Global Warming Solutions Act of 2006."[3]

With regards to residential new construction, as more specifically stated in Decision 07-10-032: "Because California continues to build major developments in anticipation of population growth, there is a substantial opportunity for deploying this energy efficiency strategy. The parties generally believe that a committed collaboration among the community of home builders, this [California Public Utilities] Commission, the Energy Commission, the utilities, and other key stakeholders could, by 2011, achieve energy savings that would exceed 2005 Title 24 standards by 35% in half of residential new construction. We adopt as a programmatic initiative that by 2020 all new housing in California IOU [Independent System Operator] service territories will be built to consume "zero net energy,'' using all cost-effective energy efficiency and other demand reduction/no or low carbon impact measures."

With regards to commercial new construction, as more specifically stated in Decision 07-10-032: "An aggressive program targeting new commercial construction offers substantial opportunities for energy savings. Commercial buildings today consume about one-third of all the electricity in California. Considerable growth is expected in the years ahead. An aggressive strategy could reduce energy demand by as much as 4,500 GWh and 950 MW. . .The utilities shall use the following milestones: [1] 2011: 30% of newly constructed buildings would incorporate energy efficiency measures so that the building specifications will exceed 2005 Title 24 requirements by 30% or more; [2] 2015: 50% of

[3]/ California Public Utilities Commission, Press Release – PUC Approves Innovative Plan to Make Energy Efficiency Business as Usual in California, October 19, 2007.

newly constructed buildings would incorporate energy efficiency measures so that building specifications will exceed 2005 Title 24 requirements by 30% or more; [3] 2020: 20% of newly constructed buildings would demand "zero net energy"; and [4] 2030: 100% of newly constructed commercial buildings would demand zero net energy."[4]

The CPUC has recently published a number of related documents relating to energy efficiency and GHG emission reductions.

◊ **Final Opinion on Greenhouse Gas Regulatory Strategies**. In October 2008, the California Energy Commission (CEC) and the CPUC adopted a final opinion on strategies to help reduce GHG emissions and meet AB 32 goals. The "Final Opinion on Greenhouse Gas Regulatory Strategies"[5] provides recommendations and outlines a variety of options for the CARB to consider in deciding how to design a program to achieve the GHG emission targets in the electricity sector.

In addition to a strategy of mandatory GHG emission reduction measures based on energy efficiency and renewable energy, the final opinion offers recommendations for structuring a market-based cap-and trade program to meet the goals set out in the CARB's "Climate Change – Proposed Scoping Plan, A Framework for Change"[6] (i.e., the draft scoping plan sets a goal that the electricity industry will contribute at least 40 percent of the total GHG emission reductions from direct mandatory approaches and measures).

Specifically, the final opinion: (1) reaffirms a commitment to pursue all cost-effective energy efficiency options in the State including more stringent building and appliance standards and advocates expanding renewable energy use to at least 33 percent for all retail providers; (2) concludes that the impacts of a cap-and-trade program will vary depending on service territory and on the design of the ultimate program; (3) recognizes the value of higher energy efficiency provided by combined heat and power (CHP) projects and recommends that the GHG emissions for electricity consumed on site and/or delivered to the grid be included in the cap-and-trade program and receive allowance allocations comparable to other electricity providers and consumers; (4) identifies auctioning as the preferred ultimate method to distribute emission allowances; (5) recommends that free allowances be allocated to "deliverers" based on energy output and electricity fuel source; (6) describes that auction revenues are to be used for AB 32-related purposes and all revenues auctioned by the retail providers be used to support investments in renewables, efficiency, new energy technology, infrastructure, and customer bill relief; and (7) requires that the key market design feature is maintaining environmental integrity.

◊ **California Long-term Energy Efficiency Strategic Plan**. In September 2008, prepared in collaboration with the State's regulated utilities and other stakeholders, the CPUC published the "California Long-term Energy Efficiency

[4]/ California Public Utilities Commission, Decision 07-10-032, Interim Opinion on Issues Relating to Future Savings Goals and Program Planning for 2009-2011 Energy Efficiency and Beyond, October 18, 2007.

[5]/ California Energy Commission and California Public Utilities Commission, Final Opinion and Recommendations on Greenhouse Gas Regulatory Strategies, CEC-100-2008-007-F, October 2008.

[6]/ California Air Resources Board, Climate Change – Proposed Scoping Plan, A Framework for Change, October 2008.

Strategic Plan." As defined therein, the plan "sets forth a roadmap for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals."[7] CPUC Decision 07-10-32 outlined the key goals, content, and development process outlined in that strategic plan.[8]

With regards to the residential sector, the following "goals" and "goal results" are identified in the State's long-term energy efficiency strategic plan[9]:

Goal	Goal Results
New construction will reach "zero net energy"[10] (ZNE) performance (including clean, on-site distributed generation) for all new single and multi-family homes by 2020.	By 2011, 50% of new homes will surpass 2005 Title 24 standards by 35%; 10% will surpass 2005 Title 24 standards by 55%. By 2015, 90% will surpass 2005 Title 24 standards by 35%. By 2020, all new homes will be ZNE.
Homebuyers, owners, and renovators will implement a whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g., HVAC systems), household appliances, lighting, and "plug load" amenities.	Energy consumption in existing homes will be reduced by 20% by 2015 and 40% by 2020 through universal demand for highly efficient homes and products.
Plug loads will be managed by developing consumer electronics and appliances that use less energy and provide tools to enable customers to understand and manage their energy demand.	Plug loads will grow at a slower rate and then decline through technological innovation spurred by market transformation and customer demand for energy efficient products.
The residential lighting industry will undergo substantial transformation through the deployment of high-efficiency and high-performance lighting technologies, supported by State and national codes and standards.	Utilities will begin to phase traditional mass market CFL bulb promotions and giveaways out of program portfolios and shift focus toward new lighting technologies and other innovative programs that focus on lasting energy saving and improved consumer uptake.

The CPUC reports that commercial buildings consume more electricity than any other end-use sector in California. In furtherance of the State's goal to reduce energy consumption from both the residential and non-residential sectors, the CPUC and the CEC have adopted the goal that all new commercial buildings be constructed to ZNE by 2020. With regards to the commercial sector, the following "goals" and "goal results" were identified in the State's long-term energy efficiency strategic plan[11]:

[7]/ California Public Utilities Commission, California Long-term Energy Efficiency Strategic Plan, September 2008, p. 1.

[8]/ *Ibid*., Section 1, p. 6.

[9]/ *Ibid*., Section 2, p. 11.

[10]/ "Zero net energy" (ZNE) homes apply a combination of energy efficiency design features, efficient appliances, clean distributed generation, and advanced energy management systems to result in no net purchases of energy from the transmission grid. The CPUC has defined "zero net energy" at the level of a single "project" seeking development entitlements and building code permits in order to enable a wider range of technologies to be considered and deployed, including district heating and cooling systems and/or small-scale renewable energy projects that serve more than one home or business (*Ibid*., Section 2, p. 13).

[11]/ *Ibid*., Section 2, pp. 30-33.

Goal	Goal Results
New construction will increasingly embrace zero net energy performance (including clean, on-site distributed generation), reaching 100 percent penetration of new starts in 2030.	An increasing percent of the 50-120 million square feet per year of new commercial construction will be progressively more efficient and all new construction will be ZNE by 2030.
50 percent of existing buildings will be equivalent to zero net energy buildings by 2030 through achievement of deep levels of energy efficiency and clean distributed generation.	250 million square feet (1/20th of the existing space) per year through 2030 reach deep levels of energy efficiency improvements and clean, distributed generation through whole building approaches.
The commercial lighting industry will undergo substantial transformation through the deployment of high-efficiency and high-performance lighting technologies, supported by State and national codes and standards.	Utilities will begin to phase traditional mass market CFL bulb promotions and giveaways out of program portfolios and shift focus toward new lighting technologies and other innovative programs that focus on lasting energy saving and improved consumer uptake.

4.14.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **County of San Bernardino General Plan**. As indicated in the County General Plan: "Conservation is the planned management, preservation, and wise utilization of natural resources. Conservation is one of the most important strategies for managing the County of San Bernardino's resources. Resources include, but are not limited to, water, energy, land, biodiversity, minerals, natural materials, recyclables, view sheds, and air.[12]

  In the context of the proposed project, those energy resource goals, objectives, and programs presented in the County General Plan that appear to be most closely related to the unincorporated County portion of the project site are presented below.

  - Goal CI18. The County will ensure efficient and cost effective utilities that serve the existing and future needs of people in the unincorporated areas are provided.

    - ◊ Policy CI18.1. Coordinate with Southern California Edison and other utility suppliers to make certain that adequate capacity and supply exists for current and planned development in the County.[13]

  - Goal CO8. The County will minimize energy consumption and promote safe energy extraction, uses and systems to benefit local regional and global environmental goals.

[12]/ *Op. Cit*., County of San Bernardino 2007 General Plan, Conservation Element, p. V-1.
[13]/ *Ibid.*, Circulation and Infrastructure Element, p. III-28.

◊ Policy CO8.4. Minimize energy consumption attributable to transportation within the County.

Programs. (1) Minimize the need to use the automobile and limit distance traveled by establishing mixed land uses and clustering development in nodes. (2) Through the land use zoning districts, encourage residences to be located near neighborhood commercial centers in new developments to encourage walking to nearby shops. (3) Encourage the development of recreational facilities within neighborhoods in new development. (4) Work with and adopt the policies and standards of SCAG and SANBAG in their regional transportation planning efforts, as required by the appropriate State laws and regulations. (5) Investigate telecommuting for County employees that would allow certain work to be done at home on a personal computer linked to their workplace computers. (6) Amend the Development Code to require new subdivisions to provide bicycle facilities consistent with the County bikeway master plan. (7) Provide appropriate facilities for safe bicycle and motorcycle and motorcycle traffic such as apartments, condominiums, recreational facilities, shopping centers, offices and industrial complexes. (8) All new large-scale housing projects will be required to provide designated motorcycle parking.

◊ Policy CO8.6. Fossil fuels combustion contributes to poor air quality. Therefore, alternative energy production and conservation will be required, as follows: (a) New developments will be encouraged to incorporate the most energy-efficient technologies that reduce energy waste by weatherization, insulation, efficient appliances, solar energy systems, reduced energy demand, efficient space cooling and heating, water heating, and electricity generation. (b) All new subdivisions for which a tentative map is required will provide, to the extent feasible, for future natural heating or cooling opportunities in the subdivision. This can be accomplished by design of lot size and configuration for heating or cooling from solar exposure or shade and breezes, respectively. (c) For all new divisions of land for which a tentative map is required, a condition of approval will be the dedication of easements, for the purpose of assuring solar access, across adjacent parcels and units.

◊ Policy CO8.7. Utilize source reduction, recycling and other appropriate measures, to reduce the amount of solid waste disposed in landfills.

◊ Policy CO8.8. Promote energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling.[14]

- **County of San Bernardino Development Code**. As stipulated in Section 87.06.030(f) in Chapter 87.06 (Subdivision Design and Improvement Requirements), each proposed subdivision shall be designed to provide maximum opportunities for energy conservation, including opportunities for passive or natural heating or cooling opportunities, in compliance with Section 66473.1 of the SMA. In addition, as further

[14]/ *Ibid.*, Conservation Element, pp. V-33 through V-37.

required under Section 87.06.050(f) therein, each approved parcel shall be provided connections to public utilities, including electricity, gas, water, sewer, and telecommunications services, which shall be installed as part of the subdivision improvements. Utility lines, including electric, telephone, communications, and street lighting, within or directly serving each subdivision, shall be placed underground. As stipulated in Section 87.06.050(i) therein, each proposed subdivision shall provide street lighting facilities designed and constructed in compliance with County infrastructure standards and specifications.

On August 28, 2007, the County established the San Bernardino County Green Builder Program (SBCGB). The SBCGB is a voluntary program established to encourage and support "green building practices" in new residential construction. Under the program, construction must satisfy the requirements of the California Green Builder (CGB) program, as developed by the California Building Industry Association (CBIA) to provide a green building program designed primarily for production homebuilders (defined as those builders who build at least 85 homes per year or build subdivisions with master plan approval for their building permits). The components of the CGB program include: (1) higher energy standards (exceed energy-efficiency standards established in Title 24 by at least 15 percent; provide improved insulation installation; a heating, ventilation, and air conditioning [HVAC] system designed by a licensed mechanical engineer; tight HVAC ducts; and inspection and verification by a certified rater); (2) water conservation (use at least 20,000 gallons less water per year than similar, newly constructed non-green homes by featuring innovative plumbing systems and fixtures, parallel hot water piping or hot water recirculation systems, water efficient landscaping, and weather-based irrigation controls); (3) wood conservation (CGB guidelines require engineered wood products manufactured with stock primarily from sustainable forests and the use of engineered wood products); (4) indoor air quality (utilize HVAC systems designed by a licensed engineer to recognize standards and equivalent; these systems are installed per engineered designs and specific filters are installed in return air grills; CGB homes utilize paints, lacquers, floor underlayments and carpets that emit no or low amounts of smog-producing pollutants into the air); and (5) waste reduction (at least 50 percent of construction waste is diverted from landfills through recycling).

Builders participating in this program shall complete the certification process through CGB, provide evidence of certification to the County at the time of submittal of plans, and meet CGB requirements for inspections and certifications. Participation in this program is voluntary but will result in incentives being provided to those builders who choose to participate. These incentives include priority processing for plan review, including guaranteed timelines and priority field inspection service. Although local agencies can adopt their own CGB programs, the SBCGB program is only applicable to County unincorporated areas.[15]

4.14.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City, either as part of a single action or as part of a phased action, will be annexed to the City and will be subject to the following statutes, regulations, and policies.

[15]/ Baine, Paul, Chairman and Second District Supervisor, Report/Recommendation to the Board of Supervisors of San Bernardino County, California and Record of Action, Agenda Item No. 77, San Bernardino County Green Builder Program, August 28, 2007.

- **City of Rialto General Plan**. The City General Plan notes that "[d]istribution systems for both natural gas and electricity are presently in place or planned for reasonable future development within the Rialto area."[16] In the context of the proposed project, those energy resource goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

  - Goal 7.1. Conserve scare energy resources.

    - ◊ Policy 7.1.1. Require the incorporation of energy conservation features in the design of all new construction and site development as required by State law.[17]

  Applicable or potentially applicable energy policies, as extracted from the City General Plan, including an assessment of the project's compliance or potential compliance with those policies, are presented in Table 4.1-7 (Preliminary Consistency Assessment - City of Rialto General Plan Policies).

- **City of Rialto Municipal Code**. As specified in Section 15.32.010(A) (General Requirements) in Chapter15.32 (Underground Utilities) in Title 15 (Building and Construction) of the City Municipal Code: "Except as provided in this chapter, all electrical distribution lines of sixteen thousand volts or less, telephone, cable antenna television, and similar service wires or cables, which provide direct service to the property being developed, shall be installed underground." Similarly, Section 17.20.080(B)(13) (Improvements Required) in Chapter 17.20 (Dedications and Improvements) in Title 17 (Subdivisions) of the City Municipal Code states that "[u]tility lines, including but not limited to electric, communications, street lighting and cable television, shall be required to be placed underground. All existing utility lines, including, but not limited to, electric, communications, street lighting and cable television located on, across or adjacent to the property being developed shall be placed underground. The subdivider is responsible for complying with the requirements of this section, and he/she shall make the necessary arrangements with the utility companies for the installation of such facilities. For the purpose of this section, appurtenances and associated equipment such as, but not limited to, surface-mounted transformers, pedestal-mounted terminal boxes and meter cabinets, and concealed ducts in an underground system may be placed above ground."

  As specified in Section 18.02.070 (Public Utility Lines) in Title 18 (Zoning) of the City Municipal Code: "The provisions of this title do not limit or interfere with the construction, installation, operation, and maintenance for public utility purposes, of water and gas pipes, mains and conduits, electric light and electric power transmission and distribution lines, telephone and telegraph lines, oil pipe lines, sewers and sewer mains, and incidental appurtenances."

  Except where specifically provided and subject to identified code requirements, Section 18.59.030 (Design Standards) of the City Municipal Code, specifies that certain transportation control measures (TCMs) shall be incorporated into all new and revised non-residential and multi-family developments of ten or more units. Identified TCMs include, but are not limited to, bicycle parking facilities, on-site pedestrian walkways and

[16]/ *Op. Cit*., City of Rialto General Plan, Conservation Element, p. X-14.
[17]/ *Ibid*.

bicycle facilities, passenger loading areas, preferred parking facilities, transit improvements, telecommuting facilities, and on-site video conferencing facilities.[18]

4.14.3 Environmental Setting

4.14.3.1 Regional Setting

Land Use and Transportation

As indicated by the CEC: "California's land use patterns have significantly shaped our use of energy and production of greenhouse gases. With the State's population expected to grow by 20 million additional residents by 2050, how we manage that growth will determine whether we meet our energy and greenhouse gas emission reduction goals. The energy choices embedded in the location and design of the new homes, schools, industry, offices and transportation infrastructure that will be planned and built over the next 50 years to accommodate California's new resident will last into the next century. These choices will determine our future energy demand and will affect the degree to which our climate is changed by human forces."

The CEC further notes that most "urban growth over the last 30 years has been characterized by travel-induced features: low-density; a lack of balance and accessibility between housing, jobs, and services; inefficient infrastructure design; and not designed for any mode of transportation except the single-occupancy vehicle. This growth pattern has resulted in vehicle miles traveled by California residents increasing at a rate of over 3 percent a year between 1975 and 204, markedly faster than the population growth rate over the same period, which was less than 2 percent. This increase in VMT directly correlates to an increase in petroleum use and GHG production and has led to the transportation sector being responsible for 41 percent of the State's GHG emission in 2004."[19]

The Draft 2008 RCP notes that strategies to reduce energy consumption include both where development occurs and how it is designed. Land-use patterns shape energy use by increasing the amount of travel necessary to reach jobs and services. Building design and housing types have a "strong relationship" to energy use. For example, single-family detached housing has been found to consume 22 percent more energy than multi-family housing and 9 percent more than single-family attached housing. Mixed land uses (defined as residential development near work places, restaurants, and shopping centers), with access to public transportation, has been shown to save consumers up to 512 gallons of gasoline per year. With this reduction, there is less overall energy consumption and less GHG emissions from personal vehicles.[20]

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[18]/ As reported by the United States Department of Energy: "Telecommuting is the most widely recognized trip-saving application of telecommunications. Telecommuting usually means office-based employees using telecommunications to work at their homes or at a nearby alternative office for a few days each week instead of commuting a longer distance to work. State-government-sponsored studies of telecommuting in California and Washington State have found that telecommuting produces an overall net reduction in all household driving, a net energy benefit even with some small additional energy use at the telecommuting site, and a generally positive performance and satisfaction result for both workers and their employers" (Source: Niles, John S., Beyond Telecommuting: A New Paradigm for the Effect of Telecommunications on Travel, United States Department of Energy, September 1994, Introduction.

[19]/ California Energy Commission, The Role of Land Use in Meeting California' Energy and Climate Change Goals, Draft Staff Report, CEC-600-2007-008-SD, June 2007, p. 7.

[20]/ *Op. Cit*., Draft 2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future, p. 68.

As indicated by the CEC: "Opportunities exist at all levels of government for integrated planning that would reduce energy demand and greenhouse gas emissions as well as eliminate redundant or conflicting efforts."[21] The California Attorney General (CAG) notes: "The Intergovernmental Panel on Climate Change of the United Nations found overwhelming evidence that global warming is occurring and is caused by human activity. The California Climate Change Center reports that temperatures in the State are expected to rise 4.7 to 10.5°F by the end of the century. These increases would have serious consequences, including substantial loss of snowpack, and increase of as much as 55% in the risk of large wildfires, reductions in the quality and quantity of agricultural products, exacerbation of California's air quality problems, and adverse impacts on human health from increased heat stress and heat related deaths, and increases in asthma, respiratory and other health problems. According to NASA's James Hansen, proceeding at the greenhouse gas emissions rate of the past decade will result in 'disasterous effects, including increasingly rapid sea level rise, increased frequency of droughts and floods, and increased stress on wildlife and plants due to rapidly shifting climate zones.' And, the experts tell us, we have less than a decade to take decisive action. If we continue our business-as-usual emissions trajectory, dangerous climate change will become unavoidable. To avoid this scenario, it is imperative to address GHG emissions form the transportation sector, which is the single largest source of GHG emissions in California. According to the California Energy Commission, transportation accounts for 41.2% of GHG emissions in the State in 2002."[22]

As reported in the 2008 RTP, transportation (defined as the movement of people and goods from place to place) accounts for approximately 40 percent of the total energy consumption in California in 2004 and 12 percent of the nation's total transportation energy consumption. Non-renewable energy products derived from crude oil (including gasoline, diesel, kerosene, and residual fuel) provide most of the energy consumed for transportation purposes by on-road motor vehicles, locomotives, aircraft, and ships. In addition, energy is consumed in connection with construction and maintenance of transportation infrastructure (such as highways, locomotives, runways, and berths). Trends in transportation-related technology foretell increased use of electricity and natural gas for transportation purposes.[23]

As indicated by the CEC, most urban growth over the last 30 years has been characterized by travel-inducing features, including low-density development; lack of balance and accessibility among housing, jobs, and services; inefficient infrastructure design; and focus on single-occupancy vehicle travel. This growth pattern has resulted in vehicle miles traveled (VMT) by California residents increasing at a rate of more than three percent a year between 1975 and 2004. This increase correlates to an increase in petroleum use and GHG production and has led to the transportation sector being responsible for 41 percent of the State's GHG emissions in 2004 (26 percent of the State's GHG emissions are from gasoline).[24] Caltrans estimates that VMT will continue to grow at nearly three percent per year into the foreseeable future.[25]

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[21]/ California Energy Commission, 2007 Integrated Energy Policy Report, Draft Committed Report, CEC-100-2007-008-CTD, October 2007, p. 248.

[22]/ Correspondence from Edmund G. Brown, Jr., California Attorney General, State of California Department of Justice to Jessica Kirchner, Southern California Association of Governments (Re: Comments on the Notice of Preparation for Draft Environmental Impact Report for the 2008 Regional Transportation Plan and 2008 Regional Comprehensive Plan [SCH Number 2007061126]), October 19, 2007, included in the "Draft 2008 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2007061126" (SCAG, January 2008).

[23]/ *Op. Cit*., Draft 2008 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2007061126, pp. 3.5-15 through 3.5-17.

[24]/ *Op. Cit*., The Role of Land Use in Meeting California's Energy and Climate Change Goals, Final Staff Report, CEC-600-2007-008-SF, pp. 9 and 17.

[25]/ *Op. Cit*., 2007 Integrated Energy Policy Report, Draft Committed Report, pp. 243-245.

Land-use patterns play a direct role in the rate and growth of VMT, influencing the distance people travel and the mode of travel chosen. A 2002 USEPA study compared the impacts of compact sprawling counties on transportation patterns. Sprawl was defined as a population widely dispersed in low-density residential development; a rigid separation of homes, shops, and workplaces; a lack of distinct, thriving activity centers; and a network of roads marked by very large block size and poor access from one place to another. The research suggested that counties with an inverse proportion of the above sprawl characteristics had significantly less average vehicle ownership, daily VMT per capita, annual traffic fatality rate, and maximum ozone level days. At the same time, shares of work trips by transit and walk modes increased to a substantial degree. A doubling of neighborhood density can be expected to result in approximately a five percent reduction in both vehicle trips and VMT per capita. Accessible, highly dense, mixed-use communities result in shorter length of vehicle trips.[26]

In addition, the length and number of work trips seem to be growing based on an imbalance between the availability and affordability of housing and the number and earning power of jobs. A balance of jobs and housing may reduce daily work-related VMT. Work trips, however, account for only a small and shrinking percentage of total trips. According to the United States Department of Transportation (USDOT), 45 percent of daily trips were made for family and personal reasons, such as shopping and running errands, 27 percent were made for social and recreational purposes, and only 15 percent were made for commuting to work.[27] It is estimated that households in transit-oriented developments drive 45 percent less than residents in auto-dependent neighborhoods.

Energy consumption by on-road motor vehicles reflects the types and numbers of vehicles, the extent of their use (described in term of VMT), and their fuel economy (described in terms of miles per gallon). Trends in energy consumption by on-road motor vehicles generally follow trends in population and per capita income, as well as trends in land-use development patterns. Diffuse land-use development patterns can result in an imbalance between jobs and housing which, in turn, can lead to longer average commute trips. A “smart growth” development plan that increases density by 30 percent, emphasizes infill and mixes land uses to a high degree, can be expected to reduce regional VMT by about 15 percent per capita over 30 years.[28]

To ensure a reliable and secure source of electricity and reduce residential GHG emissions, land-use planning must consider energy demand, supply, and infrastructure. Increasing on-site production of renewable energy, using distributed generation, orienting residences in relation to the sun, increasing shading, incorporating roofs that reflect heat, and installing energy efficient appliances produce energy savings.[29]

Petroleum Consumption

Based on 1998 data, Table 4.14-1 (Gasoline Consumption throughout the Los Angeles Metropolitan Area [1998]) shows the petroleum consumption data for all retail gasoline and diesel stations, fleet fueling facilities, and private storage tanks in the Los Angeles metropolitan area. As indicated therein, the highest per capita fuel use rates are not in the Inland Empire, as

[26]/ *Ibid*., p. 246.

[27]/ *Op. Cit*., The Role of Land Use in Meeting California’s Energy and Climate Change Goals, Final Staff Report, CEC-600-2007-008-SF, p. 22.

[28]/ *Op. Cit*., Draft 2008 Regional Transportation Plan Program Environmental Impact Report, SCH No. 2007061126, pp. 3.5-15 through 3.5-17.

[29]/ *Op. Cit*, 2007 Integrated Energy Policy Report, Draft Committed Report, CEC-100-2007-008-CTD, p. 248.

might be expected as a result of commute distances, but in Orange and Los Angeles County. Since traffic congestion increases energy use and requires additional fuel for starts and stops and travel at below optimal speeds. As a result, the increased per capita consumption is likely the by-product of higher population densities and increased traffic congestion in those counties.

Table 4.14-1
GASOLINE CONSUMPTION
THROUGHOUT THE LOS ANGELES METROPOLITAN AREA (1998)

Area	Population	Millions of Gallons Consumed	Annual Gallons Consumed per Person
Riverside County	1,441,000	547.2	380
San Bernardino County	1,631,500	620.6	380
Los Angeles County	9,587,300	3,660.2	382
Orange County	2,734,500	1,246.7	456
California	33,226,000	13,496.2	406

Notes:
1. California Department of Finance

Source: California Energy Commission, 1998 data (www.energy.ca.gov/fuels/gasoline_stations)

In 2006, Californians consumed an estimated 20 billion gallons of gasoline and diesel fuel on the state's roadways, an increase of nearly 50 percent over the last 20 years. This demand continues, even in the face of record petroleum prices, for several reasons, including: (1) population growth and more on-road vehicles; (2) low per-mile cost of gasoline use during the past two decades; (3) lack of alternatives to conventional gasoline and diesel fuels; (4) consumer preferences for larger, less fuel-efficient vehicles; (5) lack of mass transit; (6) lack of effective corporate average fuel economy (CAFÉ) standards; and (7) land-use planning that places jobs and housing farther apart without transportation integration. While the United States consumes nearly 25 percent of the world's petroleum, as a country, it maintains only two percent of the world's petroleum reserves.[30]

Electricity

According to the 2003 "Energy Action Plan" (EAP) the State annually consumes 265,000 gigawatt-hours (GWh) of electricity. Consumption is growing 2 percent annually. Peak demand is growing at about 2.4 percent per year, roughly the equivalent of three new 500-megawatt (MW) power plants per year.[31] Between 2005-2006, the State's peak demand increased by 10.7 percent. The all time peak demand in California was set on July 24, 2006 at 50,270 MW.[32]

The Center for Energy Efficiency and Renewable Technologies warns that "[w]ith growing demand for electricity, an aging fleet of power plants, and substantial increases in fuel prices, California' citizens and businesses could face another round of rate increases and power system failures as early as 2006."[33] In 2005, the CEC concluded: "Beyond 2006, if aging power

[30]/ California Energy Commission, State Alternative Fuels Plan, Commission Report, CEC-600-2007-011-CMF, December 2007, p. 11.

[31]/ California Energy Commission, California Public Utilities Commission, California Power and Conservation Financing Authority, Energy Action Plan, May 8, 2003, p. 4.

[32]/ Federal Energy Regulatory Commission, Market Oversight website (http://www.ferc.gov/market-oversight/mkt-electric/california.asp#dem).

[33]/ Center for Energy Efficiency and Renewable Technologies (MRW & Associates, Inc.), California's Electricity Market: The Need for Orderly Procurement, Working Draft Report, November 2, 2005, p. 1.

plants retire and are not replaced, California's electricity system will not be able to maintain the required 7 percent operating reserve margin during high-demand periods of very hot weather. Beyond 2005, if aging power plants retire and are not replaced, most of southern California will be unable to maintain this margin even under normal temperature conditions."[34]

According to the 2005 "Energy Action Plan II" (EAP II): "Significant capital investments are needed to augment existing facilities, replace aging infrastructure, and ensure that California's electrical supplies will meet current and future needs at reasonable prices and without over-reliance on a single fuel source."[35] As indicated in EAP II, with regards to the State's "priority sequence for actions," the "loading order identifies energy efficiency and demand response as the State's preferred means of meeting growing energy needs. After cost-effective efficiency and demand response, we rely on renewable sources of power and distributed generation, such as combined heat and power applications." As further therein, "cost effective energy efficiency is the resource of first choice for meeting California's energy needs. Energy efficiency is the least cost, most reliable, and most environmentally-sensitive resource, and minimizes our contribution to climate change."[36]

Electricity is not a natural resource, rather it is generated from oil, coal, natural gas, nuclear power, and falling water (hydropower) for the most part, with a small portion generated by alternative resources, such as wind, biomass, geothermal energy, and solar.[37]

As reported by the CEC, per capita electricity consumption is projected to remain constant between 2005 and 2016 at just below 7,500 kilowatt-hours (kWh) per person (ranging between 7,400 kWh in the low case to 7,700 kWh in the high case). Over the past 15 years, per capita consumption has been relatively constant, fluctuating between 7,200 and 7,800 kWh per person, depending on economic conditions.[38]

Load factor represents the relationship between average energy demand and peak. The smaller the load factor, the greater the difference between peak and average hourly demand. In California, the load factor has declined over the last twenty years, indicating a greater proportion of homes and businesses with central air conditioning. This trend is projected to continue. Energy-efficiency measures, such as more energy-efficient lighting, can contribute to the declining load factor by reducing overall energy use while having an insignificant effect on peak demand.[39] The CEC projects that electricity consumption will grow at a rate of 1.1 percent per year from 2010 to 2018 and that peak demand will grow an average of over 1.2 percent annually over that same period.[40]

The CEC presents periodic forecasts of electricity, end-user natural gas consumption, and peak electricity demands for the State, utility planning areas, and climate zones. Electrical service to the project area is provided by Southern California Edison (SCE). The SCE planning area is

[34]/ California Energy Commission, Revised California and Western Electricity Supply Outlook Report, Prepared for the 2005 Integrated Energy Policy Report Proceedings Docket #04-IEP-1, CEC-700-2005-019-ED2, July 2005, pp. 4 and 5.

[35]/ California Energy Commission and California Public Utilities Commission, Energy Action Plan II – Implementation Roadmap for Energy Policies, September 21, 2005, p. 7.

[36]/ *Ibid*., pp. 2-3.

[37]/ Kelly, Suedeen G., *et al*., Energy Law and Policy for the 21st Century, The Energy Group, 2000, p. 12-1.

[38]/ California Energy Commission, California Energy Demand 2006-2016, Staff Energy Demand Forecast, Staff Final Report, CEC-400-2005-034-SF-ED2, September 2005, p. 1-7.

[39]/ California Energy Commission, California Energy Demand 2010-2020, Staff Revised Forecast, CEC-200-2009-012-SF, September 2009, pp. 3-4.

[40]/ *Ibid*., p. 11.

comprised of four distinct climate zones: Zone 7 (southern San Joaquin Valley), Zone 8 (coastal part of Los Angeles Basin served by SCE), Zone 9 (inland part of the Los Angeles Basin served by SCE), and Zone 10 (Inland Empire). For the 2008-2016 planning period, Table 4.14-2 (SCE Planning Area Electricity Consumption by Climate Zone) and Table 4.14-3 (SCE Planning Area Peak Demand by Climate Zone) present the electricity consumption and peak forecast by climate zones. The highest growth is projected to occur in both the Inland Empire (Zone 10) and southern San Joaquin Valley (Zone 7) regions of the SCE planning area.[41]

Table 4.14-2
SCE PLANNING AREA ELECTRICITY CONSUMPTION BY CLIMATE ZONE

Year	Zone 7	Zone 8	Zone 9	Zone 10
	San Joaquin Valley	Coastal Los Angeles Basin	Inland Los Angles Basin	Inland Empire
Consumption (GWH)				
1990	4,055	42,957	17,979	17,079
2000	4,491	50,635	20,414	23,605
2005	5,589	48,621	19,119	25,932
2008	6,215	50,183	19,519	29,138
2013	6,879	52,935	20,747	33,254
2016	7,261	54,255	21,398	35,582
Average Annual Growth Rate				
1990-2000	1.03	1.66	1.28	3.29
2000-2005	4.47	-0.81	-1.30	1.90
2005-2008	3.60	1.06	0.69	3.96
2008-2016	1.96	0.98	1.16	2.53

Source: California Energy Commission

Table 4.14-3
SCE PLANNING AREA PEAK DEMAND BY CLIMATE ZONE

Year	Zone 7	Zone 8	Zone 9	Zone 10
	San Joaquin Valley	Coastal Los Angeles Basin	Inland Los Angles Basin	Inland Empire
Peak (MW)				
1990	809	8,530	3,973	4,668
2000	904	8,723	3,865	6,163
2005	1,526	9,421	4,174	6,975
2008	1,264	9,461	4,290	8,257
2013	1,404	9,993	4,589	9,272
2016	1,486	10,261	4,754	9,881
Average Annual Growth Rate				
1990-2000	1.12	0.22	-0.27	2.82
2000-2005	11.03	1.55	1.55	2.51
2005-2008	-6.08	0.14	0.92	5.78
2008-2016	2.04	1.02	1.29	2.27

Source: California Energy Commission

[41]/ California Energy Commission, California Energy Demand 2008-2018 – Staff Revised Forecast, CEC-200-2007-015-SF, October 2007, pp. 88-89.

Population is one of the key determinants of energy consumption, influencing demand for travel, housing, consumer goods, and services. Since 1990, the nation's population has increased by about 20 percent and energy consumption increased by about 18 percent. Population is projected to increase by 22 percent from 2006 to 2030. The DOE's reports that total primary energy consumption will grow by 19 percent between 2006 and 2030, representing an average annual growth rate of 0.7 percent per year. During that same period, total electricity consumption, including both purchases from electric power producers and on-site generation, is projected to grow at an average annual rate of 1.1 percent. In comparison, electricity consumption grew by annual rates of 7.3 percent, 4.2 percent, 2.6 percent, and 2.3 percent in the 1960's, 1970's, 1980's, and 1990's, respectively. The most rapid growth (1.7 percent/year) occurs in the commercial sector as building floor space is expanded to accommodate growing service industries. Growing use of electricity for computers, office equipment, and small electrical appliances is partially offset by improved energy efficiency.[42]

As reported by the United States Climate Change Science Program (CCSP): "California is unique in the United States as a state that has examined possible effects of climate change on its energy production and use in some detail. . .Generally, the analyses to date indicate that electricity demand will grow due to climate change, with an especially close relationship between peak electricity demand and temperature increases, and water supply – as an element of the 'energy-water nexus' – will be affected by a reduction in the Sierra snowpack (by as much as 70-90% over the coming century). Patterns of urbanization could add to pressures for further energy supplies. Adaptations to these and other climate change impacts appear possible, but they could be costly. Overall economic impacts will depend considerably on the effectiveness of response measures, which tend currently to emphasize emission reduction but also consider impact scenarios and potential adaptation measures. Other relevant studies of the California context for climate change effects reinforce an impression that effects of warming and snowpack reduction could be serious and that other ecosystems related to renewable energy potentials could be affected as well."[43]

As further indicated by the CCSP, globally, by the end of the century "primary energy consumption increases from over three to nearly four times 2000 levels as economic growth outpaces improvements in the efficiency of energy use. Non-fossil energy use grows from over four to almost nine times over the century, but this growth is insufficient to supplant fossil fuels as the major source of energy. As a result, global CO_2 emissions more than triple between 2000 and 2100, and emissions are rising at the end of the twenty-first century in all three reference scenarios. Combined with the effects of non-CO_2 GHGs, the increase in anthropogenic radiative forcing from preindustrial levels is substantial."[44]

Natural Gas

Approximately 40 percent of the natural gas consumed in California is used to generate electricity. Natural gas consumption in southern California represents approximately 50 percent of the Statewide total. The demand for natural gas in southern California is expected to increase

[42]/ Caruso, Guy, Statement of Guy Caruso, Administrator, Energy Information Administration, United States Department of Energy before the Committee on Energy and Natural Resources, United States Senate, March 4, 2008, pp. 4-5.

[43]/ United States Climate Change Science Program, Effects of Climate Change on Energy Production and Use in the United States, Synthesis and Assessment Product 4.5, October 2007, p. 102.

[44]/ United States Climate Change Science Program, Scenarios of Greenhouse Gas Emissions and Atmospheric Concentrations, Synthesis and Assessment Product 2.1a, July 2007, p. 5.

by approximately 40 percent from 1998 to 2025.[45] The State's more recent economic climate might suggest a lower forecast.

The Southern California Gas Company (SoCalGas) provides natural gas service in the Valley Region. The SoCalGas planning area is composed of the SCE, Burbank, Glendale, Pasadena, and Los Angeles Department of Water and Power (LADWP) electric planning areas. Table 4.14-4 (SCG Natural Gas Forecast) provides a forecast for natural gas consumption within the SCG planning area through 2018.[46]

Table 4.14-4
SOUTHERN CALIFORNIA GAS COMPANY NATURAL GAS FORECAST

Year	CEC Forecast
Consumption (MM Therms)	
1990	6,806
2000	7,938
2008	7,491
2010	7,290
2018	7,772
Annual Average Growth Rate (percent)	
1990-2000	1.55
2000-2008	-0.72
2008-2010	-1.35
2010-2018	0.80

Source: California Energy Commission

4.14.3.2 Local Setting

Electrical service is currently provided to the general project area, including the El Rancho Verde Royal Vista Golf Course (355 East Country Club Drive, Rialto) and Monier Lifetile (3511 North Riverside Avenue, Rialto), by SCE. Existing SCE facilities in the area include, but are not limited to, existing electrical distribution lines located in Glen Helen Parkway and Riverside Avenue. SCE's existing 500-kV Lugo-Mira Loma transmission line traverses the project site but does not provide direct electrical connections to the project area. A "will serve" letter has been provided by SCE to the Applicant. SCE has indicated that the electrical loads of the proposed project are within the parameters of projected load growth which SCE is planning to meet in the general project area. Electrical service can be provided to the project site in accordance with SCE's policies and rules on file with the CPUC at the time contractual arrangements are made.

Natural gas service is currently provided by SoCalGas. "Will serve" letters have been provided by SoCalGas to the Applicant (Gas Co. Ref. No. SBD-152, 453, 468 and FH21D20). Existing SoCalGas facilities in the area include, but are not limited to, an existing 4-inch diameter lines in Riverside Avenue, Sierra Avenue, and Country Club Drive. SoCalGas has indicated that service can be provided to the project site in accordance with SoCalGas' policies and rules on file with the CPUC at the time contractual arrangements are made.

[45]/ South Coast Air Quality Management District, Final Program Environmental Impact Report to the 2003 Draft AQMP, SCH No. 2002081137, August 2003, pp. 4.2-8 and 4.2-9.
[46]/ *Op. Cit*., California Energy Demand 2010-2020, Staff Revised Forecast, CEC-200-2009-012-SF, p. 155.

4.14.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant energy resource impact if the project or if project-related activities were to:

- Consume energy in a wasteful, inefficient, and unnecessary fashion during construction, operation, and/or maintenance.[47]

Besides the mandatory findings of significance identified in Appendix G of the State CEQA Guidelines, the Lead Agency has not identified other applicable or potentially applicable standards that can appropriately be extracted from other related policy or environmental documents and used as the basis for assessing the significance or potential significance of project-related and cumulative energy resource impacts.

4.14.5 Impact Analysis

4.14.5.1 Construction Impacts

Environmental Impact 14-1*. Construction activities will result in the consumption of petroleum products by gasoline and diesel-powered equipment and electricity for the operation of electric-powered equipment.*

Preliminary Determination 14-1*. Less-than-significant impact.*

Energy, primarily in the form of petroleum products and electricity, will be consumed during the construction of infrastructure systems and individual development projects associated with the proposed LCRSP. Fuel, primarily gasoline and diesel fuel, would be needed for and consumed by vehicles and construction equipment, including electrical generators. Since construction is, by its nature, short-term in duration, these temporary activities will neither result in excessive consumption nor produce long-term energy demands.

The CARB has imposed limitation requiring that commercial diesel-fueled vehicles restrict idling to five minutes or less (13 CCR 1956.8). While these requirements are designed to reduce emissions, restrictions on idling will also serve to reduce fuel consumption. In addition, a mitigation measure (Mitigation Measure 7-4) has been formulated stipulating that construction contactors use line power instead of diesel- or gas-powered generators at all construction sites where ever line power is reasonably available.

4.14.5.2 Operational Impacts

Environmental Impact 14-2*. At project build-out, on-site land uses are projected to consume approximately 55.47 megawatt hours of electricity per year (mWh/year).*

Preliminary Determination 14-2*. Less-than-significant impact.*

[47]/ *Op. Cit.,* State CEQA Guidelines, Appendix F.

Electrical service must be provided to the proposed land uses in accordance with SCE policies and extension rules on file with the CPUC at the time contractual agreements are made.

Implementation of the proposed project would result in an increase in demand for electricity. As indicated in Table 4.14-5 (Estimated Annual Electricity Consumption), the proposed project is projected to increase the consumption of electricity, generated off the project site at existing power plants, by approximately 55,465,145 kWh/year (55.47 mWh/year) of electricity.

Table 4.14-5
ESTIMATED ANNUAL ELECTRICITY CONSUMPTION

Land Use	Dwelling Units	Building Area	Population	Usage Factor	Electricity Consumption (kWh/year)
Residential					
Single-Family Detached	3,740[1]	-	-	5,211 kWh/DU/year[2,3]	17,764,299
Single-Family Attached	3,673[1]	-	-	4,028 kWh/DU/year[2,3]	14,794,844
Apartments in Buildings with 5 or more Units	1,325[1]	-	-	4,069 kWh/DU/year[2,3]	5,391,425
Subtotal	-				37,950,558
Non-Residential					
Retail/Office	-	849,420 sq. ft.	-	12.05 kWh/SF/year[4]	10,237,481
School	-	261,360 sq. ft.[5]	-	9.19 kWh/SF/year[4]	2,401,816
Subtotal				-	12,639,297
Public Lighting	-	-	32,720	149 kWh/capita/year[5]	4,875,280
Public Lighting					
Total					55,465,145

Notes:
1. From Table 2-2 (Lytle Creek Ranch Specific Plan - Detailed Statistical Summary).
2. Usage factors derived from the National Renewable Energy Laboratory's "Building America Research Benchmark Definition Technical Report NREL/TP-550-44816 (Hendron, R., December 2008, updated December 19, 2008).
3. Environ, Climate Change Technical Report – Lytle Creek Ranch, September 28, 2009, Table 4-12.
4. *Ibid*., Table 4-22.
5. *Ibid*., Table 4-28.

Source: Environmental Impact Sciences

The El Rancho Verde Royal Vista Golf Course and Monier Lifetile are both existing on-site consumers of electricity. Under the approved ERVSP and proposed LCRSP, the golf course will be retained but reconfigured and clubhouse facilities expanded. With regards to Monier Lifetile, it is assumed that tile manufacturing activities will terminate either at the end of the existing lease term or at a later point in time and replaced by an alternative land use(s). In recognition of the existence of existing on-site electrical consumers, projections of the net increase should consider existing demand loads created by those operating land uses and subtract those loads from the projected consumption attributable to those proposed land uses authorized under the LCRSP. However, for the purpose of this analysis, it is assumed that electrical consumption by those existing land uses is diminimis.

Because the estimated electrical consumption totals presented herein do not include those recreational facilities and infrastructure systems likely to be developed on the project site or operated beyond the project boundaries, projections of electrical consumption should be seen as estimates and subject to refinement as individual uses are proposed.

Although the proposed project will result in the off-site generation of electricity, project-related electrical consumption would neither be expected to be wasteful nor inefficient. In order to reduce electrical demands, the proposed LCRSP includes a number of energy-efficiency measures relating, either directly or indirectly, to electrical consumption. Those measures include passive design strategies, use of high-performance windows (such as "Low-E" or Energy Star windows), installation of high-efficiency lighting systems with advanced lighting controls, and use of high-solar reflective roofing materials in commercial applications. In addition, the Applicant shall comply with guidelines provided by the SCE with regards to the establishment of new utility easements, easement restrictions, construction guidelines, and potential amendments to rights-of-way in the areas of any existing easement.

Detailed information, including subdivision maps and plot plans, shall be made available to SCE as they become available in order to facilitate engineering, design, and construction of improvements necessary to provide utility services to the project site.

Environmental Impact 14-3*. At project build-out, on-site land uses are projected to consume about 228,736 million British thermal units (MBtu) of natural gas per year.*

Preliminary Determination 14-3*. Less-than-significant impact.*

Natural gas service must be provided to the proposed land uses in accordance with SoCalGas policies and extension rules on file with the CPUC at the time contractual agreements are made.

Implementation of the proposed project would result in increased natural gas demand. As indicated in Table 4.14-6 (Estimated Annual Natural Gas Consumption), the proposed project is projected to increase the consumption of natural gas, including off-site consumption associated with the generation of electricity and on-site consumption for space heating, by approximately 228,736 million British thermal units of natural gas per year.

The El Rancho Verde Royal Vista Golf Course and Monier Lifetile are both existing on-site natural gas consumers. Under the approved ERVSP and proposed LCRSP, the golf course will be retained but reconfigured and clubhouse facilities expanded. With regards to Monier Lifetile, it is assumed that tile manufacturing activities will either terminate at the end of the existing lease term or at a later point in time and replaced by an alternative land use(s). In recognition of the existence of existing on-site natural gas consumers, projections of the net increase should consider existing demand loads associated with those uses and subtract those loads from the projected consumption attributable to those proposed land uses authorized under the LCRSP. However, for the purpose of this analysis, it is assumed that natural gas consumption by those existing land uses is diminimis.

Because the estimated natural gas consumption totals presented herein do not include those recreational facilities and infrastructure systems likely to be developed on the project site or operated beyond the project boundaries, projections of natural gas consumption should be seen as estimates and subject to refinement as individual uses are proposed within the project boundaries.

Table 4.14-6
ESTIMATED ANNUAL NATURAL GAS CONSUMPTION

Land Use	Dwelling Units	Building Area	Usage Factor	Electricity Consumption (MBtu/year)
Residential				
Single-Family Detached	3,409[1]	-	37 MBTU/DU/year[2,3]	126,133
Single-Family Attached	3,673[1]	-	18 MBtu/DU/year[2,3]	66,114
Apartments in Buildings with 5 or more Units	1,325[1]	-	18 MBtu/DU/year[2,3]	23,850
Subtotal				216,097
Non-Residential				
Retail	-	849,420 sq. ft.	0.01205 MBtu/SR/year[4]	10,237
School	-	261,360 sq. ft.[4]	0.00919 MBtu/SR/year[4]	2,402
Subtotal			-	12,639
Total				228,736

Notes:
1. From Table 2-2 (Lytle Creek Ranch Specific Plan – Detailed Statistical Summary).
2. Usage factors derived from the National Renewable Energy Laboratory's "Building America Research Benchmark Definition Technical Report NREL/TP-550-44816 (Hendron, R., December 2008, updated December 19, 2008).
3. Environ, Climate Change Technical Report – Lytle Creek Ranch, September 28, 2009, Table 4-12.
4. *Ibid*., Table 4-22.

Source: Environmental Impact Sciences

Although the proposed project will result in the on-site consumption of natural gas, project-related natural gas consumption would neither be expected to be wasteful nor inefficient. Additionally, the projected additional demand on natural gas supplies and distribution infrastructure is within the service capabilities of SoCalGas.

In order to reduce natural gas demands, the proposed LCRSP includes a number of energy-efficiency measures relating, either directly or indirectly, to natural gas consumption. Those measures include passive design strategies, use of energy-efficient heating and cooling system in conjunction with thermally efficient building shells, utilization of light colors for roofing and wall finish materials, installation of high R-value wall and ceiling insulation. The Applicant shall comply with guidelines provided by the SGC with regards to the establishment of new utility easements, easement restrictions, construction guidelines, and potential amendments to rights-of-way in the areas of any existing easement.

Detailed information, including tract maps and plot plans shall be made available to all involved utilities as they become available in order to facilitate engineering, design, and construction of improvements necessary to provide the respective utility services to the project site.

Environmental Impact 14-4*. Although the proposed project will generate a total of 91,513 total trip ends, a number of those trips which stop at the project site are already on the street network. Based on a production trip analysis, project implementation will result in an estimated 47,545 new regional trips, adding 498,387 added vehicle miles traveled*

and resulting in the annual average estimated consumption of approximately 21,754 gallons of gasoline daily.

***Preliminary Determination 14-4**. Less-than-significant impact.*

With regards to vehicle trips, two separate analyses have been performed. As part of the traffic impact analysis, the total number of vehicle trips (VT) assignable to all land uses was calculated. As part of the assessment of GHG impacts, the Lead Agency calculated the number of VT that would be added on a broader basis as a result of the project's implementation. That latter number of VT is used herein to calculate VMT and calculate fuel consumption.

In the derivation of VT and VMT, the number of trips added by the project was estimated. This analysis was taken from and is consistent with the traffic analysis conducted for the proposed project. The site generation values were taken from the computerized East Valley Transportation Model[48] (EVTM) used in the traffic analysis. The weekend trip generation value was compared to the weekday trip generation value based on Institute of Transportation Engineers (ITE) trip estimates. Although the ITE rates are less specific to the project, the difference between the ITE rates and the Urban Transportation Planning Software (UTPS) package results was less than 10 percent assuming the proposed project; however, a distinction exists with regards to the model's generation analysis.

The model, as well as the "trip" generation rates reflected in ITE's "Trip Generation Manual," estimates trip ends. For most smaller land-use projects where one trip end is at the project site but the other trip end is outside the study area, this distinction is not important. As was the case in the GHG emissions analysis, the study area is the entire SCAG region. The vast majority of trips will have both ends of the trip within the larger study area. Unlike the limited area used in the traffic analysis for which a single trip end is included for each trip, both trip ends were included for each trip in the GHG emissions analysis. The number of trip ends within the LCRSP area matches the traffic study and other localized analyses, but due to trips which stop at the site and are already on the street network (such as people diverted to a newly built store nearer their home), the adopted method in the EVTM model is to set the number of trips equal to the number of production trip ends.[49]

Table 4.14-7 (Summary of Total Trip Ends and Productions) presents a summary of the number of productions (added regional trips) for each of the project's traffic analysis zones (TAZs) and the proposed LCRSP as a total. The calculated factor for each zone in the LCRSP area (with a weighed average of 52 percent) was applied to the vehicle trip ends. In addition, the VTs assigned by the model to the network were augmented to also include the VTs which stayed within a zone. This estimate, therefore, is constitutes the total vehicle trips which will be added to the southern California basin by the proposed project.

Once the number of added trips (as opposed to trip ends) was calculated, the trip length could then be multiplied by the number of trips for each TAZ in order to determine the amount of VMT added to the region by the proposed project. The project computer model used by SCAG was used for average trip length calculation. The trip length of each zone was determined from the

[48]/ The EVTM model was run by SCAG and was an appropriate modification of their RivSan Model used in order to reflect the proposed project. The RivSan Model was the model developed for this area and used to project traffic volumes for the San Bernardino County CMP. This model was developed from the regional model which SCAG uses for regional analyses. The regional model is the standard tool in use for air quality and other regional analyses and utilizes the federally issued Urban Transportation Planning Software (UTPS) package.

[49]/ Each trip is a connection between a production end and an attraction end.

model output data. This result was then applied to the added vehicle trips as determined above. As indicated in Table 4.17-8 (Total Projected Vehicle Miles of Travel), the proposed project is projected to add about 47,545 VTs which would add about 498,387 VMT to the region.[50]

Table 4.14-7
SUMMARY OF TOTAL TRIP ENDS AND PRODUCTIONS

Zone	Neighborhood	Total Trip Ends	Percent Productions	Productions (Added Trips)
80	I	7,533	68.1	5,130
81	I	2,697	72.1	1,945
82	II	24,225	54.6	13,227
82	III	46,614	46.3	21,582
84	IV	10,444	54.2	5,661
Total				47,545

Source: Crain & Associates

Table 4.17-8
TOTAL PROJECTED VEHICLE MILES OF TRAVEL

Zone	Neighborhood	Vehicle Trips		Average Trip Length (miles)	Added Vehicle Miles of Travel	
		Daily	Yearly		Daily	Yearly
80	I	5,130	1,872,450	14.5	74,385	27,150,525
81	I	1,945	709,925	14.4	28,008	10,222,920
82	II	13,227	4,827,855	9.2	121,688	44,416,120
82	III	21,582	7,877,430	9.3	200,713	73,260,245
84	IV	5,661	2,066,265	13.0	73,593	26,861,445
Total		47,545	17,353,925		498,387	181,911,255

Source: Crain & Associates

As presented in Table 4.14-9 (Light-Duty Vehicle Average On-Road Fuel Economy), for the period 2005-2030, the California Energy Commission (CEC) has formulated estimates of average annual on-road fuel economy for light-duty vehicles based on a number of scenarios, including the presence of GHG standards and fuel prices. As projected by the CEC, fuel economies of both the high fuel price case without GHG standards and the low fuel price case with GHG regulations are nearly the same (e.g., high fuel prices can drive consumer demand toward fuel efficient vehicles in a similar way that implementation of GHG standards can drive the introduction of new efficient vehicles into the market.[51]

Since a number of variables can influence average annual fuel economy at the time of project build-out (2025), the lowest estimated on-road fuel economy is assumed (22.91 miles per gallon). Assuming a project-related contribution of 498,387 daily VMT and 181,911,255 annual VTM, it is estimated that project-implementation will result in the consumption of 21,754 gallons of gasoline per day and 7,940,256 gallons of gasoline per year. Of that, some portion of the projected demand would be for diesel fuel. The Lead Agency has not attempted to differential between those two fuel types. Similarly, no estimate of projected jet fuel demand associated with airline travel by project occupants is presented herein.

[50]/ Crain & Associates, Lytle Creek Development Mobile Emissions Analysis Input, September 15, 2009.
[51]/ California Energy Commission, Transportation Energy Forecasts for the 2007 Integrated Energy Policy Report, Final Staff Report, CEC-600-2007-009-SF, September 2007, p. 15.

Table 4.14-9
LIGHT-DUTY VEHICLE AVERAGE ON-ROAD FUEL ECONOMY
(miles per gasoline gallon equivalent)

Year	No GHG Standards			GHG Standards		
	Low Fuel Price	Base Fuel Price	High Fuel Price	Low Fuel Price	Base Fuel Price	High Fuel Price
2005	20.16	20.16	20.16	20.16	20.16	20.16
2010	20.05	19.95	20.67	20.67	20.67	20.69
2015	20.91	20.63	22.47	22.50	22.52	22.62
2020	21.99	21.71	24.50	24.80	24.84	25.51
2025	22.91	22.70	26.23	26.61	26.66	27.97
2030	23.50	23.50	27.63	27.98	28.04	29.81

Source: California Energy Commission

The CEC concludes that the "overall demand for transportation fuels will continue. . .Staff expects that this growing demand will exceed likely infrastructure capacity expansions currently under construction or to which the industry is committed. Numerous uncertainties can affect these estimates of future import infrastructure needs, including changes in fuel prices, rates of adoption of new technologies and alternative fuels, demand for fuels in California and neighboring states, decline rates of oil production in California, refinery and other infrastructure capacity expansions, and greenhouse gas reduction rules and standards. However, this potential capacity shortfall leads staff to conclude that certain specific kinds of infrastructure capacity expansions must occur to prevent substantial economic losses to State consumers."[52]

As indicated in other sections of this analysis, certain aspects of the project design (e.g., the inclusion of residential and non-residential development and non-motorized trail system) have the potential to reduce VMT. In addition, a number of mitigation measures have been formulated to promote further reductions in VMT, including enhanced bicycle and pedestrian linkages (Mitigation Measure 7-11) and park-and-ride/park-and-pool facilities (Mitigation Measure 7-13), and to eliminate potential impedance (Mitigation Measure 1-4) to the operation or expansion of existing on-site infrastructure allow the importation of petroleum products (e.g., CalNev interstate pipeline) to regional markets.

Because the proposed project will not result in the consumption of energy in a wasteful, inefficient, and unnecessary fashion, project-related impacts on petroleum resources and infrastructure systems constitutes a less-than-significant impact and no further mitigation is required or recommended.

4.14.5.3 Cumulative Impacts

Environmental Impact 14-5*. Additional areawide development will increase existing demands for electricity, natural gas, and petroleum products.*

Preliminary Determination 14-5*. Less-than-significant impact.*

The general project area is located within the individual service areas of the SCE and SoCalGas. In accordance with CPUC regulations, SCE and SoCalGas are required to provide electrical and natural gas service to existing and proposed developments within their respective

[52]/ *Ibid*., p. 3.

service areas. Both SCE and SoCalGas have the ability and capacity to meet the electric and natural gas service demands attributable to both the proposed and other related projects.

Increased mandatory conservation efforts, including energy efficiency requirements under Title 24 of the CCR, will reduce cumulative energy demands to the maximum extent feasible.

4.14.6 Recommended Mitigation Measures

- No mitigation measures required or recommended.

4.14.7 Significant Unavoidable Adverse Effects

The approval, construction, occupancy, use, and habitation of the proposed project will not result in any significant unavoidable adverse project-related or cumulative impacts on energy resources.

5.0 GROWTH INDUCEMENT

5.1 Technical Reports

No site-specific or project-specific technical reports focusing specifically on the issues of growth inducement were prepared or examined by the Lead Agency. The "Housing Background Report" (County of San Bernardino, November 1, 2005) and "Circulation and Infrastructure Background Report" (County of San Bernardino, February 21, 2006) provide general information germane to regional land-use changes. In addition, many of the technical reports referenced elsewhere in this EIR have possible relevancy to the existence of possible constraints affecting localized and/or regional growth and development and were considered by the Lead Agency in the preparation of this analysis.

5.2 Regulatory and Policy Setting

5.2.1 United States

Other than those statutes and regulations cited in other sections of this document, no additional federal policy documents have been identified by the Lead Agency which are directly applicable to this topical issue.

5.2.2 State of California

The following information presents a general discussion of certain State statutes and regulations that may be applicable to an understanding of the project's regulatory setting.

- **California Government Code**. As specified in Section 65580 of the CGC: "the availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order. The early attainment of this goal requires the cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians of all economic levels. . .Local and State governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community. The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental, and fiscal factors and community goals set forth in the general plan and to cooperate with other governments and the state in addressing regional housing needs."

- **California Code of Regulations**. Section 15126(d) of the State CEQA Guidelines requires a discussion of a project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth inducement is any growth that exceeds planned growth of an area and results in new development that would not have taken place without the implementation of the project. Infrastructure is typically identified as growth inducing if it removes an obstacle to growth. A project may also be growth inducing if it fosters population growth or overburdens services or facilities. According to CEQA, growth inducement is not considered necessarily detrimental or beneficial. Growth inducement is considered a

significant impact only if it directly or indirectly[1] affects the ability of agencies to provide needed public services or if it can be demonstrated that the potential growth could significantly affect the environment.

With regards to growth-inducing impacts, even if a lead agency determines growth-inducing impacts to be significant, those impact need not be mitigated. CEQA requires only that the EIR generally inform the governmental agencies of "the effects a project will have on areas outside the boundaries of the project area" (Napa Citizens for Honest Government v. Board of Supervisors). While an EIR must discuss the ways that the project might foster population growth or the construction of additional housing in the surrounding area, CEQA does not require that the EIR to anticipate and mitigate the effects of a project on general growth in other jurisdictions.

5.2.3 County of San Bernardino

The following information presents a general discussion of certain County statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. A portion of the project is currently within the jurisdiction of the County but, as proposed, will be annexed into the City. Should any portion of the project site remain in the County or until such time as annexation to the City occurs, the County General Plan and County Development Code policies and ordinances will continue to apply.

- **County of San Bernardino General Plan**. As indicated in the County General Plan FPEIR: "Based on population forecasts approved by SCAG, the population will increase by a maximum of 436,500 by the year 2030. In addition, the update to the San Bernardino County General Plan will increase the amount of economic activity resulting from the direction and strategies within the County. Therefore, the update to the San Bernardino County General Plan will be growth inducing, but the growth will be consistent with the regional growth forecasts adopted by SCAG."[2] In the context of the proposed project, those goals, objectives, and programs presented in the County General Plan that appear to be most closely related to the unincorporated County portion of the project site are presented below.

  - Goal CI9. The County will ensure the quality of life by pacing future growth with the availability of public infrastructure.

    - ◊ Policy CI9.1. Control the timing and intensity of future development and ensure that future development is contingent on the provision of infrastructure facilities and public services.

    - ◊ Policy CI9.4. Ensure that new development pay a fair share of the costs to provide infrastructure facilities required to serve such development. If

[1]/ A project can have direct and/or indirect growth-inducement potential. Direct growth inducement would result if a project, for example, were to involve the construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand.

[2]/ County of San Bernardino (URS Corporation), Final Program Environmental Impact Report, San Bernardino County – 2007 General Plan Program, SCH No. 2005101038, certified March 13, 2007, p. VII-2.

an applicant is required to pay more than a proportional share, reimbursement agreements or other mechanism shall be used.

- Goal CI10. Ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of current and future County residents.[3]

- **County of San Bernardino Development Code**. No County Development Code excerpts are cited herein.

5.2.4 City of Rialto

The following information presents a general discussion of certain City statutes, regulations, and policies that may be applicable to an understanding of the project's regulatory setting. If the project is implemented, those lands located within the boundaries of the proposed LCRSP that are not currently within the corporate boundaries of the City will be annexed to the City and will be subject to the following statutes, regulations, and policies.

- **City of Rialto General Plan**. In the context of the proposed project, those goals, objectives, and programs presented in the City General Plan that appear to be most closely related to the proposed project are presented below.

  - Goal 4.1.1. Encourage annexations which will demonstrate net benefit to the City before being considered for approval.

    - ◊ Policy 4.1.1.3. Based on the approved specific plan for large annexations, impact fees will be charged on new development sufficient to assure timely construction of public facilities and provision of expanded City services. Impact fees shall provide full mitigation of financial costs to the City, and protect its existing levels of service from deterioration.[4]

- **City of Rialto Municipal Code**. No City Municipal Code excerpts are cited herein.

5.3 Environmental Setting

5.3.1 Regional Setting

Numerous State, regional, and local documents have been adopted which demonstrate that areawide and localized growth can be reasonably predicted independent of any actions by the City with regards to the proposed project. A number of those documents are identified below.

Statewide Housing Plan

Section 50450 of the H&SC requires the development of a "California Statewide Housing Plan" which is to be developed in cooperation with the private housing industry as well as regional and local housing and planning and other agencies. As indicated in the current CSHP: "Few issues facing California are as important as the State being able to meet its future housing needs.

[3]/ *Op. Cit*., San Bernardino County General Plan, pp. III-11 and 12.
[4]/ *Op. Cit*., City of Rialto General Plan, Land Use Element, pp. II-22 and II-24.

Between 1997 and 2020, California will likely add more than 12.5 million new residents and should form approximately 5 million new households. Almost all of this growth will occur in metropolitan areas. To meet the housing needs of California's growing population, homebuilders and developers will have to build an average of 220,000 housing units each year between now and 2020. Achieving this level of production will be difficult."[5]

With regards to the State's projected population growth, the California Department of Housing and Community Development has noted: "Barring a major disaster or depression, California's population will grow from its current size of just under 34 million to 40 million by 2010, and to 45.5 million by 2020. While these are smaller growth increments than had previously been forecast, they represent a huge and ultimately transforming increase in the [S]tate's population."[6] In order to address these concerns: "California will need an unprecedented amount of new housing construction - more than 200,000 units per year through 2020 - if it is to accommodate projected population and household growth and still be reasonably affordable. California will need more suburban housing, more infill housing, more ownership housing, more rental housing, more affordable housing, more senior housing, and more family housing. California will also need more diverse housing, and more diverse neighborhoods. California's high land and construction costs, coupled with the cumbersome and open-ended nature of the local entitlements process, have served to discourage innovative land planning, site design, and building design."[7]

It is State's conclusion that "[s]hould annual rates of housing production during the next twelve years mirror those of the last twelve, the future of housing in California will be one of extreme shortages. Among the State's major metropolitan regions, the six-county Greater Los Angeles Metropolitan Region would suffer an average yearly production deficit of 48,400 housing units."[8]

Southern California Compass - Growth Vision Report

Centering along transportation corridors, the 2004 "Southern California Compass – Growth Vision Report"[9] (2004 Compass Blueprint) constitutes SCAG's regional growth vision for the future of the Los Angeles metropolitan area through 2030. As indicated therein: "California's biggest challenge is the extraordinary growth that it has experienced and will continue to experience. In recent years, Southern California has faced some of the most dramatic growth seen anywhere in the world for decades. The U.S. Census reports that between 1980 and 2000 the overall population in the region grew by 5 million people, from 11.5 million to 16.5 million. Projections indicate that 6.3 million more people will be added to the region between 2000 and 2030, bringing the total population to 22.8 million. The dynamic interplay between immigration, out-migration, and natural increase accounts for the complexity of the population change."[10]

With regards to housing, SCAG acknowledged that recent trends and existing housing conditions point to an unmet demand for greater housing diversity which will continue to grow absent a regional long-term planning effort. With regards to land supply, the 2004 Compass

[5]/ *Op. Cit*., Raising the Roof: California Housing Development Projections and Constraints, 1997-2020, May 2000, Chapter 1 (Summary).
[6]/ *Ibid*., Chapter 7 (Conclusions and Policy Challenges).
[7]/ *Ibid*., Chapter 1 (Summary).
[8]/ *Ibid*.
[9]/ Southern California Association of Governments, Southern California Compass – Growth Vision Report, June 2004.
[10]/ *Ibid*., p. 9.

plan noted that the SCAG region has a "severe limit on the amount of undeveloped land suitable for development, which hinders its ability to accommodate new housing and jobs. . .Under current general plans, capacity on vacant land accommodates only 238,000 new households. That means that only 29 percent of the SCAG 2030 growth projections for this area could be accommodated through new development on vacant land."[11]

Regional Transportation Plan

On May 8, 2008, SCAG certified the "Final 2008 Regional Transportation Plan Program Environmental Impact Report" and adopted the "Final 2008 Regional Transportation Plan: Making the Connection" (2008 RTP). The 2008 RTP emphasizes the importance of system management, goods movement, and innovative transportation financing, strives to provide a regional investment framework to address the region's transportation and related challenges, and looks to strategies that preserve and enhance the existing transportation system and integrate land use into transportation planning.

SCAG's projected population, household, and employment growth forecasts for the County and for the City,[12] as reflected in the 2008 RTP, are presented in Table 3-4 (Population, Household, and Employment Forecasts for the County of San Bernardino – 2008 Regional Transportation Plan) and in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), respectively. As indicated therein, between 2010 and 2030, the County's population is projected to increase by 775,704 persons and the City's population is projected to increase by 10,121 persons. Similarly, during that same period, employment within the County and the City will increase by 324,727 and 14,063 new jobs, respectively.

Regional Comprehensive Plan

The 2008 "Regional Comprehensive Plan – Helping Communities Achieve a Sustainable Future" (2008 RCP), as adopted in October 2008, acknowledge that the SCAG region is "still growing – the region is expected to add another seven million residents by 2035. The new arrivals are members of our own growing families and those attracted by the strong regional economy and we can expect this growth regardless of the land use decisions we make."[13]

SCAG recognizes that growth is both inevitable and will occur independent of local or regional land-use decisions. However, "by linking responsible land sue and transportation planning, we can accommodate growth while maintaining the region's mobility, livability, prosperity and sustainability."[14]

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[11]/ *Ibid*., p. 17.

[12]/ SCAG projects city level demographic trend projections using the housing unit method, which is one of the most widely used methods for estimating and projecting local area households and population for planning purposes. The housing unit method consists of the following four procedures. First, occupied housing units (households) are estimated by extrapolating the past trend of occupied housing units. Second, household (residential) population is estimated by multiplying occupied housing units (households) by the projected average household size. Third, projected group quarters population is added to projected household population. Fourth, projected total population of local jurisdictions are adjusted or smoothed out in order to maintain its consistency with the projected County population (Source: http://www.scag.ca.gov/forecast/methods.htm).

[13]/ *Op. Cit*., Regional Comprehensive Plan – Helping Communities Achieve a Sustainable Future, October 2, 2008.

[14]/ *Ibid.*

5.3.2 Local Setting

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies and conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth within a community.

As indicated in the City General Plan MEIR: "The primary objectives of the proposed project [City General Plan] include accommodating projected growth and maintaining a reasonable 'quality of life.' A number of goals are included in the GPU to this end, including provision of adequate and affordable public services and housing, coordination of inter-jurisdictional land use densities, protection of natural resources, and support of a viable and balanced economic structure. Attainment of these goals is facilitated by numerous resource-specific policies and guidelines. . .The GPU includes a number of policies designed to accommodate projected growth through means such as support of economic expansion, provision of public services, and consolidation of land use densities. All of these measures are tied to existing (and future) population projections by appropriate organizations and theoretical buildout of proposed land use designations. As a result of the nature of their implementation, however, these types of policies can potentially induce growth by providing services, housing, or economic capabilities in excess of actual demand. In this case, the GPU is considered growth inducing."[15]

With regards to the project site, the City General Plan MEIR noted that the "City has extensive spheres of influence contiguous to its northern and southern boundaries. In the event that these areas are annexed to the City, it will have significant impacts on public facilities, circulation and other components of the General Plan, dependent on the nature of future development. The Land Use Element will address this issue, to the extent possible, because there are no firm plans for the northern sphere, only general statements can now be made on the future effects of this possible annexation."[16]

5.4 Threshold of Significance Criteria

Presented herein is the threshold of significance criteria identified by the Lead Agency relative to this topical issue. Each of the environmental effects identified herein has been evaluated relative to these criteria to determine whether that impact, prior to the imposition of any mitigation measures, exceeds the identified threshold. In accordance therewith, the proposed project would normally be deemed to produce a significant or potentially significant growth-inducing impact if the project or if project-related activities were to:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

[15]/ City of Rialto (The Keith Companies), Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, March 31, 1992, pp. 9-2 through 9-4.
[16]/ *Ibid*., pp 4.1-2 and 3.

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).[17]

5.5 Impact Analysis

As indicated in Napa Citizens for Honest Government v. Napa County Board of Supervisors: "Nothing in the [State CEQA] Guidelines, or in the cases, requires more than a general analysis of projected growth. The detail required in any particular case necessarily depends on a multitude of factors, including, but not limited to, the nature of the project, the directness or indirectness of the contemplated impact and the ability to forecast the actual effects the project will have on the physical environment. In addition, it is relevant, although by no means determinative, that future effects will themselves require analysis under CEQA."

The assessment of growth-inducing impacts does not lend itself to the same categorization of many of the other topical issues examined herein. As with land use, the distinction between construction and operation, as used throughout this EIR, may not be directly relevant to the assessment of growth-inducement. As such, the Lead Agency has elected to deviate from its categorization of impacts as directly or more closely related to construction, operational, or cumulative. In place of that categorization, all identified growth-inducing impacts have been grouped under a single heading.

> ***Environmental Impact 15-1****. Because the project's effectuation requires both a General Plan amendment and a zone change, as well as designated sphere of influence areas, the project may result in on-site development activities that exceed current development assumptions. Although the project area has been included in the master plan for services of water and other utilities and is surrounded by other already developed or entitled areas, the project will have growth-inducing effects with respect to sewer as it requires the provision of new facilities that provide additional capacity, thus permitting growth that can use the excess capacity.*
>
> ***Preliminary Determination 15-1****. Significant and unavoidable impact.*[18]

Growth in an area may result from the removal of physical impediments or restrictions to growth, as well as the removal of planning impediments resulting from land-use plans and policies. Planning impediments may include restrictive zoning or general plan designations.

California State law requires that every city and county prepare and adopt a long-term, comprehensive general plan for its future development. A general plan may not be a "wish list" or a vague view of the future but rather must provide a concrete direction. The general plan serves as a "constitution for development" and the foundation upon which all land-use decisions in a city or county are to be based.[19]

As illustrated in Figure 4.1-16 (City of Rialto General Plan - Land-Use District Designations) and Figure 4.1-17 (City of Rialto General Plan – Northern Sector Planning Sector), the City has

[17]/ *Op. Cit*., State CEQA Guidelines, Appendix G, Section XII (Population and Housing).

[18]/ Prior to mitigation, the applicable or potentially applicable threshold standard relative to this preliminary determination includes, but may not be limited to, the initial conclusion that the proposed project could induce substantial population growth in an area, either directly or indirectly.

[19]/ Governor's Office of Planning and Research, State of California General Plan Guidelines, 1990, p. 5.

prezoned those unincorporated County lands which are part of the proposed LCRSP as a "Special Study Area" and "Specific Plan Zone." Although so designated, neither the City General Plan nor the City General Plan MEIR identified specific development types, levels, or intensities within that area. As indicated in the City General Plan MEIR: "At this time, the nature of development proposed for these lands has not yet been made known" and "impacts cannot be planned for until the specific plans are presented to the City, and the character of the planned development is revealed."[20]

As indicated in the 1992 Housing Element, which was adopted at the same time the City General Plan was approved and which has been subsequently updated and superseded, with regards to the project site, the City noted: "That portion of the Pharris land, lying north of Riverside Boulevard and within City boundaries was zoned for residential purposes. Because this land is subject to a specific plan which is currently being studied, the zoning designation was removed, and it is now shown as SPZ (Specific Plan Zone). It is assumed that the greatest part of this land will be in industrial use. Because this land represents 2.85% of the City's area, its removal from the inventory of vacant residential land has made a significant difference in the estimated population at 'build-out.'"[21] While no specifics are provided, the City General Plan stated the City's assumption that the project site would be primarily developed for "industrial use."

With the adoption of the proposed LCRSP, specificity will be established with regards to those land-use designations applicable to the project site and the nature, type, and intensity of residential and non-residential development which would be authorized within the specific plan boundaries. The resulting change from uncertainty to certainty with regards to land use and the concomitant change from the deferral of impact analysis to reasonable clarity with regards to potential environmental effects can be appropriately construed as both a change in existing land-use policies and level of environmental review with regards to the allowable use of the project site. Through those actions, in combination with the proposed annexation of a portion of subject property, the Lead Agency will change both the jurisdictional authority over those lands so affected and the land-use designations governing the use of that real property. If adopted, the proposed public policies will control the future use of the project site while existing public policies will continue to control the use of the lands beyond the project boundaries.

The changes in jurisdictional authority and land-use regulations will result in an intensification of uses within the City beyond those which would otherwise be anticipated in the absence of those discretionary actions contemplated herein. As described in Section 7.5.2 ("Existing Zoning Designations" Alternative), under existing land-use policies and based on prior discretionary approvals by the City (e.g., ERVSP) and by the County (e.g., GHSP and LCNPD), independent of any actions that the Lead Agency may take with regards to the proposed LCRSP, portions of the project site would likely undergo development.

Under the provisions of the ERVSP, a total of 300 dwelling units and 19,339 square feet of non-residential use (clubhouse expansion) would be authorized within the City. Within that portion of the GHSP which has been included in the proposed LCRSP, a total of 17 dwelling units and 182,952 square feet of non-residential use (based on a 0.35 FAR) could be developed. Within that portion of the LCNPD which has been included in the proposed LCRSP, a total of 147 dwelling units and 648,750 square feet of non-residential use would be authorized in the County. In total, based on the entitlements authorized under the ERVSP, GHSP, and LCNPD, a

[20]/ *Op. Cit.*, City of Rialto General Plan, p. II-22; *Op. Cit.*, Final Master Environmental Impact Report - City of Rialto General Plan Update, SCH No. 91022040, p. 4.1-24.

[21]/ *Op. Cit.*, City of Rialto General Plan, Housing Element, approved March 31, 1992, p. VI-27.

total of 164 dwelling units and 851,041 square feet of non-residential use could be developed on the project site.

Under the existing City and County zoning designations applicable to the project site, development activities (inclusive of residential and non-residential uses and new internal roadways) would be confined to an approximately 1,215.5-acre portion of the 2,447.3-acre project site. An approximately 1,231.8-acre portion of the subject property would be retained as natural or improved open space (including floodway, parklands, open space, and the existing SCE right-of-way). Based on existing zoning, a total of approximately 2,215 single-family dwelling units and 1,097,418 square feet of commercial and light industrial development could be constructed, primarily in Neighborhoods II and III.

In contrast, under the proposed LCRSP, a total of 8,407 dwelling units and 849,420 square feet of non-residential development, in combination with other public facilities (e.g., new school sites), would be authorized within the project boundaries and a total of 1,253.8 acres would be retained as natural or improved open space. When viewed simplistically, when proposed land-use policies are compared to what might otherwise be allowable under existing City and County zoning, those differences translate into approximately 6,192 additional dwelling units, 247,998 fewer square feet of non-residential use, and a 22.0 acre increase in the size of the development footprint beyond those levels that would otherwise occur in the absent the proposed LCRSP. Assuming an average size of 3.896 individuals per household and a jobs rate of one new primary job for each 250 square feet of non-residential development, when compared to existing zoning designations, the proposed LCRSP would foster a population increase of 24,124 individuals and result in a reduction of 992 primary jobs.

Although the term “substantial” is neither defined under CEQA nor the State CEQA Guidelines, it can be reasonably construed that the land-use policy changes described herein would contribute, either directly or indirectly, to substantial population growth in the general project area. As a result, this growth-inducing impact is deemed to be significant. CEQA notes that “[i]t must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment” (14 CCR 15126.2[d]).

> ***Environmental Impact 15-2****. Project implementation will increase the City’s population and add new employment opportunities within the City. At build-out, an estimated 32,720 individuals may reside on the project site. Excluding on-site schools, recreational facilities, and any indirect or induced jobs, proposed non-residential development may result in an estimated 3,398 permanent jobs. Localized increases in population and employment, including the infrastructure proposed to support project development, could contribute to growth beyond the project boundaries.*
>
> ***Preliminary Determination 15-2****. Less-than-significant impact.*

The evaluation of whether the proposed project has the potential to produce growth-inducing effects focuses on assessing whether the project will: (1) produce a potential for individuals to in-migrate to the project area in response to project-related employment and housing opportunities; (2) result in an increased localized demand for goods and services at levels sufficient to induce additional commercial development beyond that readily available in the general project area; (3) result in the removal of economic, physical, and political obstacles and constraints to development; and/or (4) facilitate other peripheral development through the extension of facilities, services, or infrastructure to areas presently absent or underserved by those services or systems.

An affirmative response alone, however, does not signify the presence of a significant unavoidable adverse impact. If an affirmative response is provided, the result response must then be examined in the context of the identified threshold of significance criteria. With regards to the proposed project, each of the above referenced factors is separately discussed below.

- **In-migration in response to employment and housing opportunities**. As discussed in Section 4.2 (Population and Housing), based on the number of workers required for the project's construction, to be phased over a 20-year construction period, the workforce required for the project's construction can be drawn from the available local labor pool. As a result, no substantial in-migration of workers from outlying areas is expected.

  The proposed project will result in the development of an additional 6,192 dwelling units and 247,988 fewer square feet of non-residential use above levels which might otherwise be anticipated in the absence of the proposed LCRSP. As described in Section 4.2 (Population and Housing), the projected 20-year areawide demand for new housing exceeds the projected supply of new residential dwellings. As such, the proposed residential development serves to respond to an identified housing demand rather than creating a separate demand.

  Commercial uses proposed on the project site are intended primarily to be neighborhood serving, designed to accommodate the retail and service-oriented needs of the immediate service area. Since commercial development does not typically predate demand for commercial services but responds to an existing identified demand, proposed on-site employment opportunities (independent of the square footage) are not anticipated to produce a significant growth-inducing impact.

- **Localized demand for goods and services**. As discussed in Section 4.2 (Population and Housing), for the purpose of CEQA compliance, an on-site population estimate of 32,754 persons is used herein because it likely over-estimates the actual resident population which would result from the project's build-out and, therefore, reflects a potential worst-case scenario. Population and jobs growth are the typical by-products of new development. As indicated in the State CEQA Guidelines: "It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment" (14 CCR 15126.2[d]). As a result, considered on their own, there is no "good or bad" value judgment associated with the population and/or jobs growth attributable to the implementation of the LCRSP.

  With regards to employment, construction workers over the course of the project may impose demands on local businesses, such as nearby restaurants. Those localized demands will, however, cease upon completion of construction activities. A wide range of businesses now exist and are expected to expand over the next 20 years near the project site, irrespective of whether or not the proposed project is constructed. Construction-term demands on those businesses are not anticipated to be so substantial as to warrant business expansion based solely on project-related activities. Since construction jobs are short-term in duration, even though the project's construction will be phased over 20 years, those jobs are generally not of the type that predicate substantial increases in the localized demand for goods and services.

As reported in a recent analysis commissioned by the CBIA, housing construction activities are an important contributor to the State's economy. The CBIA asserts that for every dollar spent on new construction, another $0.80 in total economic activity is generated. The CBIA further asserts that each job created through residential construction supports an additional 1.2 jobs.[22]

With regards to short-term employment, recent increases in unemployment statistics indicate that those direct and indirect (induced) jobs generated during the project's construction can be adequately accommodated by the existing regional workforce.

From a broad-based perspective, non-residential development can generally be considered to generate one job for each 250 square feet of employment-generating land use.[23] Based on a total of 849,420 square feet of commercial and other non-residential uses, excluding the proposed school sites, private recreational facilities (e.g., El Rancho Verde Royal Vista Golf Course) and other public facilities that may be constructed on the project site, individuals that are self-employed and working from home, individuals providing on-site services (e.g., gardeners, construction workers, and care givers), and any indirect and/or induced off-site employment, an estimated 3,398 new permanent jobs would be created within the project boundaries as a direct result of the project's proposed non-residential development.

In addition to the estimated 3,398 new permanent jobs that would be created within the project boundaries as a direct result of project non-residential development, jobs associated with housing include, but are not limited to, landscape and pool maintenance, interior designers, and associated construction trades. Jobs indirectly related to housing include medical professionals, manufacturers and retailers, and associated service providers. Each new residence will, therefore, incrementally increase existing demands for manufacturing, service-related, and professional jobs.

With regards to long-term employment, recent increases in unemployment statistics indicate that those direct and indirect (induced) jobs generated during the project's construction can be adequately accommodated by the existing regional workforce.

Based on the localized availability of goods and services, the incremental impact of the proposed project on long-term employment opportunities would not result in a significant growth-inducing impact. The resulting incremental contribution on localized, regional, and national employment opportunities, as associated with the proposed housing construction, would not, in and of themselves, create additional significant secondary impacts.

- **Removal of economic, physical, and political constraints**. Since at least 1992, the City General Plan has assumed that the project site would be the subject of a specific plan. As indicated therein: "More than six square miles of vacant land north of Riverside Avenue is currently categorized as 'Specific Plan Zone.' A small part of this land lies within the City boundaries, the rest is within the City's sphere of influence. A Specific

[22]/ Sacramento Regional Research Institute, The Economic Benefits of Housing in California, June 2006, pp. iii and 12.

[23]/ These new jobs are the direct jobs generated. As development becomes larger, there will be additional indirect jobs generated as more dollars are funneled into the area's economy. These dollars will "multiply" through the local economy, thus resulting in indirect, secondary job generation.

Plan for about 3,500 acres of land, located in the Lytle Creek area (known as the Pharris property) is now in process, and plans for development of the Sycamore Flats area are expected later. At this time, the nature of the development proposed for these lands has not yet been made known."[24]

Proposed are a number of discretionary actions including, but not limited to, the annexation of all or a portion of the LCRSP area, the adoption of City General Plan and City Municipal Code amendments, and execution of a development agreements and pre-annexation development agreements involving City, County, and the Applicant. The intent and/or consequence of those actions is to promote the development of the project site for a range of uses and at densities higher than otherwise authorized in the absence of those actions. Land use designations for substantial portions of the project site will be modified, thus signaling a general agency willingness to allow development to proceed.

Under the provisions of the development agreement, the Applicant will commit to the provision of specified infrastructure improvements, bearing a nexus with the proposed development. Through the provision of requisite services and systems at levels greater than now evident on the project site, those improvements will allow those development activities authorized under the proposed LCRSP to proceed. In addition, levee improvements will reduce or remove existing flood hazards affecting portions of the project site. As a result, the project's approval will remove certain economic, physical, and political constraints now affecting the project site.

The level of development now proposed would be inconsistent with the City General Plan and City Municipal Code. However, development would not be allowed to proceed absent a substantial modification to those policy documents. Since development could not occur absent those amendments, as subsequently modified, no conflicts with any applicable land use plan, policy, or regulation would be anticipated to occur. The environmental consequences of the proposed City General Plan and City Municipal Code amendments with regards to their potential to induce substantial population growth in the project area are separately addressed under Environmental Impact 15-1 above.

- **Facilitate other peripheral development**. With regards to Neighborhood I, currently, the main infrastructure required to service Neighborhood I already exists within the neighborhood's boundaries. These facilities, constructed in 2006 as part of the LCNPD, include backbone street facilities, sewer and water facilities, storm drain systems, power, telephone, and cable television. In order to accommodate the proposed development, these existing facilities will need to be extended and tied together, looping the services from the west side to the east side of the I-15 Freeway within the improved street section of Glen Helen Parkway. Additionally, the WVWD needs to complete the off-site construction of Reservoir 8-3 in order to provide the appropriate water pressure to service this neighborhood. Since all infrastructure improvements are designed to be project specific, the construction of those improvements in the area of Neighborhood I are not anticipated to facilitate other peripheral development.

  Within Neighborhood II, PAs 95-103 currently have existing 100-year flood protection and would be allowed to develop upon completion of off-site infrastructure improvements by the WVWD and the City. Additional improvements include the widening of Country

[24]/ *Op. Cit*., City of Rialto General Plan, Land Use, p. II-22.

Club Drive at the proposed main access to the proposed project and upgrading the existing Sycamore Ave access at the southeasterly corner of Neighborhood II. The development of the remainder of Neighborhood II (PAs 80-94) will require that the proposed Lytle Creek levee be constructed through and along PAs 80-85, including a off-site portion extending northwesterly from PA 82 to the existing Cemex USA levee. Prior to occupancy of PAs 80-94, improvements to Riverside Ave will be constructed between PA 89 and PA 91. Since all infrastructure improvements are designed to be project specific, the construction of those improvements in the area of Neighborhood II are not anticipated to facilitate other peripheral development.

The development of Neighborhood III is expected to be done in multiple phases moving from the southerly boundary northerly to the I-15 Freeway. It is expected that the main infrastructure will be constructed in phases to service each phase as development moves northerly. There are, however, two exceptions to the phased development of infrastructure for this neighborhood. The first exception is that the Lytle Creek levee, extending from the Cemex USA levee at the easterly corner of PA 62, needs to be constructed northwesterly to the point of intersection with Glen Helen Parkway north of the I-15 Freeway prior to occupancy of PAs 29-41, 44-46, 50-58, and 60-63. Portions of PAs 59, 62, and 64, and all of PAs 42, 43, 47-49, and 65-78 fall behind the existing USACE groins (offering 100-year flood protection and allowing for phased development). The second exception is the realignment of Riverside Avenue along PAs 33 and 34. With the exception of improvements to Riverside Avenue, since all infrastructure improvements are designed to be project specific, the construction of those improvements in the area of Neighborhood III are not anticipated to facilitate other peripheral development.

The development of Neighborhood IV requires the extension of the proposed Lytle Creek levee from its Neighborhood III termination point (at the intersection of Glen Helen Parkway) to the intersection of the northwesterly boundary of Neighborhood IV with Lytle Creek Road and the extension of the sewer main from its termination point within Neighborhood III. All other infrastructure required for development currently exists adjacent to the neighborhood boundary. Since all infrastructure improvements are designed to be project specific, the construction of those improvements in the area of Neighborhood IV are not anticipated to facilitate other peripheral development.

Since, except as otherwise noted, none of the threshold criteria would be exceeded, the identified growth-inducing impact would be less than significant and no further mitigation is recommended or required.

5.6 Recommended Mitigation Measures

- No feasible mitigation measures have been identified.

5.7 Significant Unavoidable Adverse Effects

The proposed land-use policy changes will induce or facilitate substantial population growth in the general project area. As a result, the project's growth-inducing impact is deemed to be significant. No feasible measures or other conditions of approval have been identified by the Lead Agency which would effectively mitigate this growth-inducing impact to a less-than-significant level.

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6.0 IRREVERSIBLE CHANGES

6.1 Regulatory and Policy Setting

As required under Sections 15126(c) and 15126.2(c) of the State CEQA Guidelines, EIRs are required to identify any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. As further indicated in Section 15127 therein, "[t]he information required by Section 15126(c) concerning irreversible changes, need be included only in EIRs prepared in connection with any of the following activities: (a) The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency; (b) The adoption by a local agency formation commission of a resolution making determinations; or (c) A project which will be subject to the requirements for preparing an environmental impact statement pursuant to the requirements of the National Environmental Policy Act." As indicated in Section 2.0 (Project Description) herein, the proposed project includes amendments to the County General Plan and City General Plan, the adoption of the LCRSP, and the adoption of a resolution by LAFCO.

As indicated under Section 15126.2(c) of the State CEQA Guidelines, the focus of this analysis is on: (1) the use of non-renewable resources; (2) the potential for environmental accidents associated with the project; and (3) any irretrievable commitment of resources associated with the proposed project. Potential cumulative impacts are not specifically addressed herein but are addressed as part of the analysis of each of the topical issues herein. In compliance with Section 15126.2(c), this analysis does not address potential impacts on renewable resources. Mineral resources are separately addressed in Section 4.3 (Geology and Soils) and water resources are separately addressed in Section 4.10 (Utilities and Service Systems).

6.2 Environmental Setting

The world now consumes about 82 million barrels of oil a day. A barrel is the equivalent of 42 gallons (159 liters). World demand is generally expected to continue growing at an average annual rate of between one and two percent. It is estimated that the world's original endowment of recoverable oil is no more than about 2,400 billion barrels. Cumulative worldwide consumption had exceeded 900 billion barrels by the end of 2003. The United States relies on imported oil for over 60 percent of its domestic needs.[1]

As they burn, fossil fuels emit carbon dioxide (CO_2) due to oxidation of the carbon contained in the fuel, as well as a number of other greenhouse gases. As indicated by the CEC: "Burning fossil fuels is a major contributor to global warming, as carbon monoxide is added to an atmosphere already containing 25% more than it did two centuries ago. Carbon dioxide and other gasses add an insulating layer to the earth that leads to global climate change. California Energy Commission research shows that most of the sectors of the State economy face significant risk from climate change including water resources (from reduced snow pack), agriculture, forests and the natural habitats of a number of indigenous plants and animals. Most scientists recommend that actions be taken to reduce emissions of carbon dioxide and other greenhouse gases."[2]

[1]/ The Oil Depletion Analysis Center (http://www.odac-info.org/).
[2]/ California Energy Commission, Residential Manual for Compliance with the 2001 Energy Efficiency Standards for Low-Rise Residential Buildings, Report No. P 400-01-022, September 5, 2001, pp. 1-2 and 1-3.

Based on projections given by the United Nations Intergovernmental Panel on Climate Change and results from the United Kingdom Hadley Centre's climate model, by 2100, temperatures in California could increase by about 5°F (with a range of 2-9°F) in the winter and summer and slightly less in the spring and fall. Appreciable increases in precipitation are projected: 20-30 percent (with a range of 10-50 percent) in spring and fall, with somewhat larger increases in winter.[3]

6.3 Irreversible Changes

6.3.1 Use of Non-Renewable Resources

Fossil Fuel Consumption

During project construction, fossil fuels, in the form of gasoline, diesel fuel, natural gas, oils, and associated lubricants, primarily associated with the operation of internal combustion engines, will be consumed on and off the project site by material manufacturers, fabricators, and construction workers and will be utilized to power equipment used in the construction process and in the fabrication and transport of building materials. Transportation-related activities account for approximately one-half of all the petroleum products consumed in California. While State and federal policies, such as the California Low-Emission Vehicle Program and the Federal Energy Policy Act of 1992, are increasing the use of alternative-fuel and low-emission vehicles, the consumption of non-renewable resources, such as fossil-fuels, remains high and points to the local, State, and federal need to increase conservation efforts relative to the use of those energy resources.[4] Once consumed, fossil fuels are permanently expended and, through their consumption, become unavailable for other future or alternative uses.

In 1996, SCAG stated that the State "has an abundance of natural resources. . .coupled with significant fossil fuel reserves, California boasts among the most diverse energy systems in the world - one which utilizes wind, geothermal, hydroelectric, solar, and nuclear energy, as well as conventional fossil fuels, to power homes, businesses, and industry."[5] Despite these rosy declarations, the State's and the nation's fossil fuel resources are a diminishing commodity whose current use has specific long-term environmental implications. In 2002, with regards to energy, SCAG acknowledged that "[m]uch has changed in California's energy situation since the original energy chapter was written."[6]

The amount of fossil fuel consumption associated with the construction of the proposed project cannot be easily determined; however, that amount is substantially less than will be consumed over the project's operational life. In the building sector, which includes both residential and commercial end users, building structures are long-lived assets that affect energy consumption through their overall design and "shell integrity" against unwanted heat transfers in or out of the building. A typical building may remain in the stock for 75 years.

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[3]/ United States Environmental Protection Agency, Climate Change and California, EPA 230-F-97-008e, September 1997, p. 2.

[4]/ California Department of Transportation, Environmental Handbook, Volume I: Guidance for Compliance, Chapter 13, April 18, 2004.

[5]/ *Op. Cit*., Regional Comprehensive Plan and Guide, p. 12-1.

[6]/ Southern California Association of Governments, Regional Comprehensive Plan and Guide, Energy Chapter Update, 2002, p. 5.

Section 25402 of the PRC directs the CEC to prescribe, by regulation, "building design and construction standards which increase the efficiency in the use of energy for new residential and nonresidential buildings." The energy efficiency standards for residential and non-residential buildings, as codified in Title 24, Part 1 of the CCR (Title 24), were established in 1978 in response to a State mandate to reduce California's energy demand. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. All new buildings in California must meet those Title 24 standards in effect on the date a building permit application is made (not when the building permit is issued). Compliance with those standards will ensure that the proposed project maximizes energy conservation efforts in both design and development.

Beyond the structure itself, the energy-consuming equipment in a building typically lasts from 10 to 30 years. Limited capability for fuel-option switching is the rule rather than the exception for equipment in buildings. In the residential sector, however, consumers have some limited choices between electricity and other fuels for a given energy service. Over the last several decades, residential electricity demand has increased as more uses for electricity have emerged. Between 2005 and 2030, an average 1.3 percent annual increase in electricity consumption is projected as more electric devices and larger television sets with digital capability continue to penetrate residential markets. Changes in natural gas and liquid fuels consumption in the residential sector over the past 20 years have been less dramatic. For residential natural gas consumption, an annual growth averaging 0.4 percent from 2005 to 2030 is projected.[7]

Building Material Consumption

During construction, a variety of natural resources will be consumed, including water, sand and gravel, asphalt, other petrochemical construction materials, metals, and metal products. Once utilized, these materials will be either irretrievably consumed or committed to the project site on a relatively long-term basis.

Many construction products are renewable or can be replenished through prudent industry-related activities. For example, sand and gravel used in construction is mined in alluvial fan areas and is the product of natural erosion. As those natural forces continue, additional alluvial materials are deposited along river systems and flood plains. Those activities, however, occur over centuries and are not considered to be renewable within the project's lifespan. Certain building products, such as lumber, are clearly renewable and will remain available over the long term if the nation's forests and those of the countries from which wood products are imported are effectively managed. In certain circumstances, opportunities are available to utilize renewable materials in place of non-renewable resources. During construction, homebuilders can use metal (nonrenewable), wood (renewable), or recycled materials (renewed) as substitutes relative to their specific application.

Real Property Commitments

The decision to approve or conditionally approve the proposed project or an alternative use of the project site constitutes a relatively long-term commitment of the subject property for that use. Once a particular property is allocated for a particular use, the site's availability for an

[7]/ United States Department of Energy, Energy Information Administration, Annual Energy Outlook 2007 with Projections to 2030, February 2007, pp. 42 and 74.

alternative use diminishes. The greater or more pronounced the physical change, the more difficult and costly the process of returning a particular property to its pre-altered condition or converting it to an alternative use.

In southern California, growth is inevitable. About half of California's annual growth is due to net migration from other countries and states, while the remainder is due to natural increase (births minus deaths). The Legislative Analyst's Office warns that continued growth will "produce additional strains on the State's physical and environmental infrastructure, including demands on the energy sector, transportation system, parks, and water-delivery system."[8] In recognition of these factors, government must play a key role in managing the growth that does occur. SCAG notes that growth management "does not mean curtailing growth through population, economic, or land use policies. Instead, growth management means encouraging local land use actions which could ultimately lead to the development of an urban form that will help minimize development costs, save natural resources, and enhance quality of life in the region."[9]

Forfeiture of Mineral Resources

Implementation of the proposed project will threaten the potential to extract those aggregate resources that now exist on the project site. Although those resources will remain in-situ, the introduction of residential and non-residential land uses would likely make the subsequent extraction of those resources infeasible.

6.3.2 Environmental Accidents

During construction and throughout the operational life of the proposed project, hazardous materials, petroleum products, and pesticides will be stored and/or consumed on the project site. The accidental or uncontrolled release of these materials could produce an environmental accident detrimental to human health and safety, adverse to water quality, and potentially hazardous to on-site and near-site biological resources.

In the context of this analysis, "environmental accidents" relate to the on-site discharge into the air, ground, or surface waters of hazardous materials, petroleum products, and pesticides that may be used during the construction and subsequent operation of the proposed project. Based on the specific nature of the proposed project, there does not appear to exist conditions that would produce an inordinate likelihood of an environmental accident that would produce significant health and safety risks to either on-site or off-site receptors or to the environment.

During construction, stored fuels are required for heavy equipment used during site grading. Fuels are typically stored in either 55-gallon drums or other types of portable tanks, transported to the project site and used with a hand pump or horizontally in a rack. No underground fuel storage tanks will be installed on the project site either during construction or as part of the project's continuing operation.

The use of such fuels creates the potential for an environmental accident. Should fuels be accidentally released into the environment, the contractor or other party responsible for that release is obligated to take immediate and appropriate actions to assess the magnitude of the

[8]/ California Legislative Analyst's Office, The 2001-02 Budget Bill: Perspectives and Issues, California Legislative Analyst's Office, February 2001.
[9]/ *Op. Cit*., Regional Comprehensive Plan and Guide, p. 3-1.

resulting hazard, to notify appropriate agencies of the presence of such conditions, and to take remedial actions to mitigate any environmental hazards associated with their release. Adequate regulatory controls are in place to minimize any environmental accidents that may be associated with those events.

Throughout the project's operational life, limited quantities of fuel and hazardous materials will be located and consumed on the project site. These materials are typically associated with household activities and are not anticipated to be in sufficient quantities as to create potential environmental risks when safely handled and appropriately disposed of in accordance with manufactures' specifications and City and County requirements.

Larger quantities of potentially hazardous materials, such as pesticides and synthetic fertilizers, may, however, be associated with the proposed in-tract park and other public and private landscaped areas. Pesticides are potent agents used for the control of undesirable organisms. In addition to their benefits, conflicts have developed over their use with respect to environmental quality issues. Once applied, pesticides can be transported to different locations via a number of different ways, including: (1) aerial drift and evaporation from application sites; (2) deposition of airborne pesticides; (3) transportation through the food chain; and (4) irrigation or rainwater runoff.

Pesticide residues have been associated with adverse environmental and potential human health effects, including: (1) reduction of certain predator bird populations; (2) appearance of detectable residues in aquatic ecosystems; (3) implication of many pesticides as potential human carcinogens; (4) long-term contamination of soils with persistent pesticides; (5) contamination of drinking water, surface water, and ground water; (6) destruction of non-target organisms; (7) elevation of non-pest species to pest status; and (8) evolution of resistant insect strains. Even small quantities of pesticide residues can migrate from turf grass areas to impact other lands, the atmosphere, and water.

All pesticide products created for use in the United States must be registered by the USEPA. This process includes extensive testing to determine the toxicity of the product and its potential for threatening the health of people, wildlife, and the environment. Laws and regulations apply to all pesticides, including disinfectants, fungicides, insecticides, and weed-killers.

When a pesticide is registered by USEPA, the manufacturer is required to label it with specific instructions as to use, disposal, and any special precautions associated with use or exposure. If later scientific data indicate the presence of an unsuspected danger associated with the continued use of that produce, the registration can be suspended, canceled, or amended. Use, storage, and disposal of pesticides in accordance with manufacturers' specifications would not result in conditions whereby a significant environmental accident could occur.

Additionally, the project design must incorporate specific design features and BMPs in order to conform to applicable water quality standards. The construction and maintenance of those features and the on-going application of those best management practices will ensure that all dry weather and wet weather flows discharged from the project site meet of exceed adopted standards.

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7.0 ALTERNATIVES ANALYSIS

7.1 Introduction to the Alternatives Analysis

An EIR is required to describe a range of reasonable alternatives to the project or the location of the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (15 CCR 15126.6[a]). An EIR need not consider every conceivable alternative to the project but must consider a "reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation." An EIR is not required to consider alternatives that are infeasible.[1,2] The range of alternatives required in an EIR is governed by a "rule of reason" that required the EIR to set forth only those alternatives necessary to permit a reasoned choice (14 CCR 15126.6[f]). The State CEQA Guidelines stipulate that the alternatives analysis must include a discussion of a "no project" alternative.

The construction and implementation of the proposed project may result in the creation of certain significant unavoidable adverse impacts that cannot be feasibly eliminated or mitigated to a less-than-significant level. In accordance with CEQA requirements, this section focuses on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly (14 CCR 15126.6[g]).

7.2 Housing Projects Subject to CEQA Compliance

As established by the State Legislature, it is the overriding goal of all-local planning endeavors to provide a "decent home and suitable living environment for every California family."[3] This Statewide housing policy is emphasized in Section 21000(g) of CEQA which states that it is the intent of the Legislature that all agencies of the State government which regulate the activities of private individuals, corporations, and public agencies that are found to affect the quality of the environment, shall regulate those activities so that major consideration is given to preventing environmental damage while providing a decent home and satisfying living environment for every Californian.

CEQA imposes specific agency limitations with regards to the consideration of alternatives for housing projects. Section 21085 of CEQA states that public agency shall not reduce the

[1]/ The courts, in Sierra Club v. County of Napa (2004), have concluded that CEQA does not require that an EIR evaluate economic feasibility. In that case, the court held that, when agency decision makers decide whether to approve a project, the decision makers are entitled to weigh economic information about the feasibility of alternatives and mitigation measures that is noted anywhere in the record, and such information is not required to be included in the EIR. The court allowed economic feasibility determinations to be based on the entire record. This case also affirms that an EIR evaluates alternatives that are initially determined to be "potentially feasible." Later on, when the project comes before the decision makers, the ultimate determination of what is feasible is based on the entire record and decision makers may reject as infeasible alternatives that were earlier determined to be potentially feasible.

[2]/ Referencing California Native Plant Society v. City of Santa Cruz (Sixth District, 2009): "The issue of feasibility arises at two different junctures: (1) in the assessment of alternatives in the EIR and (2) during the agency's later consideration of whether to approve the project. [Citation.] But 'different factors come into play at each stage.' [Citation.] For the first phase – inclusion in the EIR – the standard is whether the alternative is potentially feasible. [Citation.] By contrast, at the second phase – the final decision on project approval – the decision-making body evaluates whether the alternatives are actually feasible. [Citation.] At that juncture, the decision-makers may reject as infeasible alternatives that were identified in the EIR as potentially feasible."

[3]/ Section 65580(a), CGC; Section 50003(b), H&SC.

proposed number of housing units as a mitigation measure or project alternative for a particular significant environmental effect if the agency determines that there is another feasible mitigation measure or alternative that would provide a comparable level of mitigation. Although the term "housing project" is not expressly defined under CEQA, since the LCRSP project includes 8,407 dwelling units, it can be appropriately considered a housing project within the context of these CEQA provisions.[4]

7.3 Alternatives Considered but Rejected

The range of alternatives is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.[5] The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decisionmaking. The following is a list of those alternatives that were considered, but were screened from detailed consideration herein because they: (1) failed to meet the preponderance of the project's stated objectives; (2) were found to be infeasible; or (3) failed to avoid or substantially lessen significant environmental effects of the project (14 CCR 15126.6[c]). Presented below are those alternatives that were initially identified by the Lead Agency but which were subsequently rejected for further analysis based on the reasons stated herein.

7.3.1 Alternative Location (Alternative Site)

The Lead Agency considered whether any of the significant effects of the proposed project would likely be either avoided or substantially reduced if the proposed project were to be developed at another location. In recognition of the project size, the City first considered whether any other alternative locations, generally comparable to the proposed project, could be identified in the City or in the reasonable proximity to the project site. A description of the possible alternative locations which were identified and the Lead Agency's assessment of the potential feasibility of those sites for residential and/or non-residential development, at a scale reasonably comparable to the proposed project, are addressed below.

Given the extensive acreage of the project site, the Lead Agency has not identified similar undeveloped areas of similar size either within the City of its adopted sphere of influence that would be a suitable alternative site for the proposed project. The Lead Agency also requested information from the Applicant as to the Applicant's property holdings within the City and its immediate area that may provide suitable alternative sites for the proposed project. The Applicant does own approximately 11.5 acres within the City located along Linden Avenue; however, in addition to not being suitable in terms of size, a residential development project (Tract 18014) has been approved by the City for that site.

[4]/ CEQA requires that EIRs "be written in plain language. . .so that decisionmakers and the public can rapidly understand the document" (14 CCR 15140).

[5]/ In Big Rock Mesas Property Owners Assn. v. Board of Supervisors (1977), the petitioners challenged the EIR associated with a tentative tract map for a proposed residential subdivision. The appellate court found the EIR adequate, notwithstanding that it did not describe alternatives to the amount of grading proposed for the project or the location and character of a proposed access road. The court explained: "Petitioners contend the EIR does not meet the requirements of California law in that it fails to discuss 'alternatives to the enormous amount of grading and the filling and construction of an unlawfully steep access road in a natural canyon.' The pertinent statute and EIR guidelines require that an EIR describe alternatives to the proposed project [Citation]. We interpret such requirement as applicable only to the project as a whole, not to the various facets thereof, such as grading and access roads."

The Applicant has other real property holdings in the County which are neither proximate to the City nor its sphere of influence and would not be capable of being annexed into the City and, therefore, would not accommodate the Lead Agency's objective of enhancement to its northern gateway. These real property holdings include: (1) an approximately 153 acre property located along Lytle Creek Road approximately two miles north of the project site; and (2) approximately 38.27 acres within the unincorporated community of Lytle Creek, approximately six miles north of the project site.

The key question in an alternative location analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location (14 CCR 15126.6[f][2][A]]). With the exception of those site-specific impacts identified herein (e.g., biological resources), development of a comparable project on another site in the City or in the general surrounding area in the County would likely produce a similar set of environmental impacts, many of which relate to cumulative development occurring throughout the general project area.

As noted above, the Applicant has other real property holdings in the County; however, none of those holdings would provide a feasible alternative located to the proposed project site. The project site is located adjacent to the I-15 Freeway and provides convenient access to the project site. In addition, the project site is located adjacent to existing streets and arterials (e.g., Riverside Avenue, Sierra Avenue, and Glen Helen Parkway) which also provide access to the proposed development. The project site is also located in close proximity to adjacent residential communities in the Cities of Fontana and Rialto and in the County (e.g., Rosena Ranch). Consequently, those developed communities are already served by existing infrastructure to which the proposed development can feasibly connect to provide water, sewer, and other utility service to the project site. In addition, the project site incorporates an area covered by the ERVSP and integrates the existing golf course into the proposed development as a recreational amenity for the overall master-planned community. None of the Applicant's other real property holdings are located close to a freeway corridor or an established circulation network or to established communities. Because the Applicant's other holdings are located in currently undeveloped areas, not presently served by established infrastructure (e.g., streets, water and sewer systems), in addition to the direct impacts to the site itself, development of those properties would be expected to have greater environmental consequences because development would require the construction of infrastructure to access and serve those remote areas. Due to the fact that those alternative sites are located in more remote areas of the County and would development would have greater environmental impacts, the Lead Agency has determined that none of the alternative sites would be feasible to support development of the proposed project and has determined that an alternative site is not a feasible alternative to reduce the potential impacts of the proposed project.

Since development of an alternative site would not likely result in the avoidance or substantial reduction of the project's significant exogenous environmental effects, the City has not elected to undertake an alternative site analysis.

7.3.2 Jurisdictional Alternative (Non-Annexation)

Under this option, the project site or some portion thereof would not be annexed into the City of Rialto but would be developed, in the manner described in this EIR, under the jurisdiction of another local land-use agency, ostensibly the County of San Bernardino. Under this alternative, Neighborhoods I and IV would remain in and be processed through the County. Under another

variation, those lands not presently within the City's corporate boundaries would remain outside the City's jurisdiction and this development application, or some portion thereof, would be processed by and through the County.

Both versions of this alternative could potentially impact the provision, delivery, performance, and/or cost of public services. However, a jurisdictional change alone would not be reasonably expected to eliminate or substantially reduce any of the unmitigated significant environmental effects resulting from the development of the proposed project. In addition, the physical impacts of development under this alternative would be similar to those associated with the proposed project (which assumes the annexation of the project site into the City's corporate boundaries) or those associated with the "no project/existing zoning designations" alternative (which assumes development of the project site based on existing City and County land-use policies).

Based on its failure to reasonably satisfy CEQA requirements specifying that the selected alternatives should reasonably allow for a reduction in one or more of the proposed project's significant environmental effects, this alternative was eliminated from further consideration.

7.3.3 Alternative Land Uses

A variety of potential alternative land uses were considered. The following uses are not prevented as variations of the proposed project but constitute departures from the types of land uses that have been proposed by the Applicant. In addition to the reasons set forth below for rejecting further discussion of these alternative land uses, none of the land uses described below would meet the "project's underlying fundamental purpose."[6]

- **Windfarm**. In light of its size and location and given the interest in developing alternative sources of energy, consideration was given to whether the project site could provide a location for a windfarm. However, insufficient meteorological information is available to ascertain the feasibility of existing conditions (wind duration, force, and frequency) within the general project area (extending northward to the Cajon Summit) to support a wind-energy facility. The "Cajon Pass" has been identified as a "marginal" (average annual wind speeds in the range of 6 to 7 m/s) wind energy resource area.[7] Absent a demonstrated resource potential, this potential use is not considered feasible.

- **Theme park**. This alternative has the potential to generate more traffic, noise and aesthetic (e.g., lights) impacts than the proposed project and was screened from further consideration on this basis. Because the project site is situated between existing residential areas (Rosena Ranch, Las Colinas, Country Club Estates), a theme park alternative raises additional issues concerning land-use compatibility and impacts on adjoining receptors.

[6]/ The California Supreme Court (In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceeding [June 5, 2008]) has stated that "an EIR should not exclude an alternative from detailed consideration merely because it 'would impede to some degree the attainment of the project objectives.' [Citation.] But an EIR need not study in detail an alternative that is infeasible or that the lead agency has reasonably determined cannot achieve the project's underlying fundamental purpose. . .feasibility is strongly linked to achievement of each of the primary program objectives."

[7]/ Bretz, Sarah, Marnay, Chris, Osborn Julie, and Sezgen, Osman, Using GIS to Analyze the Profitability of Potential Wind Power Sites in the Competitive California Electricity Market, The Profitability of Potential Wind Power Sites (http://gis.esri.com/library/userconf/proc99/proceed/papers/pap781/p781.htm).

- **Active outdoor recreational center**. An active outdoor recreational center (e.g., an off-road vehicle park) has the potential to generate similar or greater biological, noise, and aesthetic (e.g., sports lighting) impacts than the proposed project and was, therefore, screened from further consideration.

- **Professional sports stadium**. A commercially operated sports stadium (e.g., NFL team arena) has the potential to generate greater traffic volumes, as well as noise, land-use compatibility, and aesthetic (e.g., high-intensity sports lights) impacts, than the proposed project and was, therefore, screened from further consideration.

- **Hotel and casino**. The development of a gaming casino is currently dependent upon designation of land for a federally-recognized Native American tribal organization for which gaming would be covered by State and federal compacts regulating gaming on tribal properties. The project site is not designated as tribal lands and gaming is not a permitted use within the City and/or the County. As such, this use could not be developed by a private party under existing local or State laws and was, therefore, screened from further consideration.

- **Resource conservation**. The Lead Agency considered a conservation-based alternative whereby the entire project site would be permanently retained, in total, in some form of open space (e.g., public acquisition, transfer of development rights), inclusive of possible public access and recreational use. This alternative differs from a "no project" alternative which is based on the assumption that the project site remains fallow but that no controls are imposed that would preclude the property's subsequent development. The Lead Agency elected to reject this alternative based on the lack of assurance that conservation would occur over the long term without public participation and based on existing land-use policies designating portions of the project site for residential and non-residential use and the Applicant's stated objectives promoting some form of residential development on the subject property.

- **Aggregate mining**. Although the majority of the site's underlying aggregate resources will be retained in-situ, the site's development will reasonably preclude the subsequent extraction of those materials, resulting in their regional forfeiture of an estimate 41 million tons of construction-grade aggregate for use as construction materials. From an engineering perspective, within Neighborhoods II and III, there exists an approximately 300.0-acre and 240-acre area which has the potential to accommodate surface mining, respectively. The Lead Agency considered but elected to reject an aggregate mining alternative because such alternative would constitute only a short-term use (i.e., limited to the term of the mining operations), would not result in the avoidance of the project's air quality, noise, or growth-inducing impacts, and would reasonably result in greater air quality, biological resource, and traffic-related impacts.

7.4 Summary of Unavoidable Significant Environmental Impacts

The focus of this alternatives analysis is directed toward the avoidance or reduction of one or more of the significant or potentially significant environmental impacts attributable to the proposed project. Based on the project-specific and cumulative analysis presented in this EIR, a number of environmental impacts have been identified which cannot be feasibly mitigated to below a level of significance. Where the alternative has the ability to either avoid or substantially reduce one or more of these significant impacts, that information is provided in this

analysis. Where the alternative may result in new or different environmental impacts as compared to the proposed project, that analysis is also provided in this alternatives analysis. The significant, unavoidable impacts of the proposed project are identified below. The numbers assigned to each of the identified impacts refer to the corresponding technical analysis presented in the EIR.

- **Air quality** (Impacts 7-1, 7-2, 7-4, and 7-7 through 7-10). Based on the size of the proposed project and the development phasing plan now proposed, other than through a substantial reduction in the level of development associated with the proposed project, imposition of severe constraints on the number of acres to be grading during any single daily period, the number of dwelling units or non-residential space to be painted, and the square footage of area that could be paved on a daily basis, no feasible mitigation measures exist to reduce construction-term air emissions to below a level of significance. All feasible mitigation measures have been included herein. Those measures will reduce but will not result in an avoidance of construction-term air quality impacts. Similarly, during the project's operations, based on the number of vehicle trips generated by each of the proposed on-site land uses and the number of vehicle miles traveled attributable to those trips, mobile source emissions will remain significant and unavoidable.

  With respect to potential impacts to on-site residential uses from off-site sources of toxic air contaminants, although mitigation is recommended which would substantially reduce exposure by on-site receptors to carcinogens, air quality impacts would, however, remain significant and unavoidable.

  From a project-specific perspective, because the proposed project could impede local and regional goals, the project could be deemed to be inconsistent with the South Coast Air Quality Management District's (SCAQMD) "Final 2007 Air Quality Management Plan" (2007 AQMP). Although attainment can be demonstrated from a broader areawide perspective, based on the threshold criteria cited herein, non-compliance with the current AQMP would constitute a significant environmental effect.

  With the continuing presence of significant construction and operational air quality impacts, in accordance with the SCAQMD's recommended threshold of significance criteria, cumulative air quality impacts will remain significant.

- **Noise** (Impacts 8-2 and 8-6). With respect to off-site traffic, the project would contribute a maximum noise level increase of 4.4 dBA along roadway segments adjacent to the project site. Mitigation is recommended to reduce the off-site traffic noise to new developments along most roadway segments adjacent to the project site to a less-than-significant level. Because of driveway configuration and orientation of existing residences, in combination with existing legal constraints, there are no feasible mitigation measures for sensitive receptors located along Riverside Avenue (between Alder Avenue and Locust Avenue) and along Country Club Drive (north of Riverside Avenue). Off-site traffic noise levels would, therefore, result in a significant and unavoidable impact for the existing residents located along those roadway segments.

  In addition, because the project's contribution exceeds 3.0 dBA community noise equivalency level (CNEL), off-site traffic noise levels would result in significant and unavoidable cumulative impacts for sensitive receptors located along Riverside Avenue

(between Alder Avenue and Locust Avenue) and along Country Club Drive (north of Riverside Avenue).

- **Growth inducement** (Impact 15-1). The changes in both jurisdictional authority and land-use regulations will logically result in an intensification of uses within the City beyond those which would otherwise be anticipated in the absence of those discretionary actions contemplated herein based on those entitlements already in place, including the LCNPD, GHSP, and ERVSP. Under existing land-use policies and based on prior discretionary approvals, independent of any actions that the Lead Agency may take with regards to the proposed LCRSP, portions of the project site would likely undergo development.

  Under the provisions of the ERVSP, a total of 300 dwelling units and 19,339 square feet of non-residential use (clubhouse expansion) would be authorized within the City. Within that portion of the GHSP which has been included in the proposed LCRSP, a total of 17 dwelling units and 182,952 square feet of non-residential use (based on a 0.35 FAR) could be developed. Within that portion of the LCNPD which has been included in the proposed LCRSP, a total of 147 dwelling units and 648,750 square feet of non-residential use would be authorized in the County. In total, based on the entitlements authorized under the ERVSP, GHSP, and LCNPD, a total of 164 dwelling units and 851,041 square feet of non-residential use could be developed on the project site.

  Under those existing zoning designations applicable to the project site, development activities (inclusive of residential and non-residential uses and new internal roadways) would be confined to an approximately 1,215.5-acre portion of the 2,447.3-acre project site. An approximately 1,231.8-acre portion of the subject property would be retained as natural or improved open space (including floodway, parklands, open space, and the existing SCE right-of-way). Based on existing zoning, a total of approximately 2,215 single-family dwelling units and 1,097,418 square feet of commercial, office, and light industrial development could be constructed, primarily in Neighborhoods II and III.

  In contrast, under the proposed LCRSP, a total of 8,407 dwelling units and 849,420 square feet of non-residential development, in combination with other public facilities (e.g., new school sites), would be authorized within the project boundaries and a total of 1,253.8 acres would be retained as natural or improved open space. When viewed simplistically, when proposed land-use policies are compared to what might otherwise be allowable under existing City and County zoning, those differences translate into approximately 6,192 additional dwelling units, 247,998 fewer square feet of non-residential use, and a 22.0 acre increase in the size of the development footprint beyond those levels that would otherwise occur in the absent the proposed LCRSP. Assuming an average size of 3.896 individuals per household and a jobs rate of one new primary job for each 250 square feet of non-residential development, the proposed LCRSP would foster a population increase of 24,124 individuals and result in a reduction of 992 primary jobs. Although the term “substantial” is neither defined under CEQA nor the State CEQA Guidelines, the proposed land-use policy changes would contribute, either directly or indirectly, to substantial population growth in the general project area. As a result, the project’s growth-inducing impact is deemed to be significant.

As indicated in the EIR, each of the above described environmental impacts cannot be feasibly mitigated to below a level of significance. In addition to those unavoidable adverse impacts, the

EIR identifies other potentially significant environmental effects which, in the judgment of the Department, can be mitigated to a less-than-significant level through the adoption and implementation of certain mitigation measures. Those potentially significant impacts include: (1) land use (Impacts 1-1 through 1-5, 1-7, and 1-8); (2) geology and soils (Impacts 3-1, 3-2, 3-4, and 3-6); (3) hydrology and water quality (Impacts 4-4 through 4-7); (4) biological resources (Impacts 5-1, 5-4, and 5-7 through 5-10); (5) transportation and traffic (Impacts 6-1 through 6-4); (6) noise (Impacts 8-3 and 8-4); (7) public services and recreation (Impacts 9-5, 9-7, 9-8, 9-11, and 9-12); (8) utilities and service systems (Impact 10-1); (9) hazards and hazardous materials (Impacts 11-3 and 11-5); (10) cultural resources (Impacts 12-1 and 12-2); and (11) aesthetics (Impacts 13-1 and 13-3). Because the certainty of the Lead Agency's adoption of the recommended mitigation measures cannot be determined prior to consideration by the Lead Agency's decision-making body,[8] as optional means of avoiding or substantially reducing the those potentially significant impacts, the Lead Agency is authorized to consider mitigation measures or alternatives in response to those environmental effects.[9] As a result, one or more of the alternatives identified herein have been formulated in response to one or more of those potentially significant environmental effects.

7.5 Alternatives under Consideration

A total of six scenarios have been examined by the Lead Agency. Those alternatives include: (1) a "no project/no development" alternative; (2) a "no project/existing zoning designations" alternative; (3) three variations of a "habitat avoidance" alternative; and (4) a "reduced residential/increased commercial" alternative. With the exception of the "no project/no development" alternative; which is required under CEQA, these options were selected because they had the potential to eliminate or substantially reduce one or more of the project's significant or potentially significant project-related impacts.

Since the existing setting remains as described under each of the topical headings examined in this EIR, no further discussion of pre-project conditions is presented as part of this alternatives analysis. Similarly, those related projects listed in Table 3-4 (Related Project Summary) are assumed to advance independent of any site-specific or project-specific actions. The same threshold criteria used to assess the significance of project-related impacts has been applied to the assessment of the identified alternatives.

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[8]/ Referencing Kings County Farm Bureau v. City of Hansford (Fifth District, 1990): "State agencies are required to certify the completion of an EIR 'on any project they propose to carry out or approve.' (§ 21100.) As a matter of logic, the EIR must be prepared before the decision to approve the project. Not until project approval does the agency determine whether to impose any mitigation measures on the project. [Citation.] One cannot be certain until then what the exact mitigation measures will be, much less whether and to what degree they will minimize environmental effects."

[9]/ The EIR identifies a number of environmental effects which the Lead Agency has deemed to be significant but which could be mitigated to a less-than-significant level through the imposition of specified mitigation measures. Relying on the word "or" in Section 21002 and 21002.1 of CEQA ("agencies should not approve projects as approved if there are feasible alternatives or feasible mitigation measures") and understanding the requirement to be disjunctive so that agencies need only adopt mitigation measures or alternatives but not both, the courts have stated that agencies need not even consider the feasibility of project alternatives if they adopt mitigation measures that "substantially lessen or avoid" projects' significant adverse impacts (Laurel Hills Homeowners Association v. City Council [Second District, 1978]). The EIR must "contain a meaningful discussion of both alternatives and mitigation measures. . . Therefore, we conclude if there is evidence of one or more potentially significant impacts, the report must contain a meaningful analysis of alternatives or mitigation measures which would avoid or lessen such impacts" (Kings County Farm Bureau v. City of Hanford [Fifth District, 1990]).

Except where noted, it is assumed that reasonable and feasible mitigation measures, similar to those presented throughout this EIR, would be adopted by the Lead Agency should the City elect to approve one of the following alternatives in lieu of the proposed project. Except in those instances where a significant impact would be avoided through the selection of the stated alternative, for the purpose of this alternatives analysis, it is assumed that mitigation measures similar to those recommended under each of the topical sections of this EIR would accompany each of the development-based alternatives examined in detail herein.

The State CEQA Guidelines do not require the same level of detail in the alternatives analysis as in the analysis of the proposed project. As indicated therein: "The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed" (14 CCR 15126[d]). In accordance therewith, each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the proposed project. Additionally, each alternative is evaluated to determine whether the project's stated objectives, as outlined in Section 2.3 (Project Objectives), can be reasonably fulfilled through the alternative's implementation.

Each of the alternatives which have been examined by the Lead Agency, including the Lead Agency's assessment of each alternative's comparative ability to reduce or substantially avoid those significant impacts, are included in Table 7-1 (Comparative Evaluation of Project Alternatives – Environmental Considerations). The Lead Agency's assessment of each alternative's ability to accomplish the proposed project's stated objectives is presented in Table 7-2 (Comparative Evaluation of Project Alternatives – Attainment of Stated Objectives).

7.5.1 "No Project/No Development" Alternative[10]

A "no project" alternative is specifically required under the State CEQA Guidelines and serves as a baseline against which all other development alternatives can be compared.[11] Typically, an EIR's discussion of the "no project" alternative will proceed along one of two lines, depending on whether the proposed project is the revision of an existing land use or regulatory plan, policy, or on-going operation or a development project (14 CCR 15162.6[e][3][A]-[B]).

The proposed project includes both the revision of an existing land-use plan and a proposed development project. As such, the EIR includes an analyses of a "no project/no development" alternative which assumes that the proposed project does not proceed and that the project site remains in its current condition. The "no project/no development" alternative generally reflects the conditions and associated environmental impacts that would predictably occur should the Lead Agency elect to either deny the proposed project or fail to take action on the proposed development application, resulting in, at least temporarily, retention of the site in its existing

[10]/ This alternative was not formulated in response to any specific Lead Agency-identified significant or potentially significant environmental effect but is a variation of an alternative which is explicitly required under the State CEQA Guidelines.

[11]/ As indicated in Section 15126.6(e)(1) of the State CEQA Guidelines: "The no project alternatives analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline."

condition. The denial of the current development application or the cessation of the current process would not preclude the submission of a subsequent development application to the City and/or to the County.

- **Alternative description**. A "no project" alternative is required under CEQA. As specified in the State CEQA Guidelines, "the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved" (14 CCR 15126.6[e][3][B]). In compliance therewith, the objective of this alternative is to establish an environmental baseline by presenting a "no project" alternative which assumes that the property remains in its existing state.

  Under this alternative, no physical changes to the project site would occur, no improvements to the site would be authorized, and no change in organization (e.g., annexation) would be pursued. Those uses now being conducted (e.g., Monier Lifetile and El Rancho Verde Royal Vista Golf Course), those utility rights-of-way now being utilized (e.g., SCE, SoCalGas, and CalNev), and those functions now being performed (e.g., groundwater recharge and biological resource conservation) would continue at their existing levels. For the purpose of this analysis, it is assumed that those land-use entitlements governing portions of the project site, including those existing entitlements associated with the adopted County-approved GHSP and LCNPD (Neighborhood I) and City-approved ERVSP (Neighborhood II), would not be acted upon in any fashion that would produce a physical change to the subject property. No landform alternations would occur and no on-site vegetation would be impacted, except in the course of reasonable and routine maintenance (weed abatement) activities conducted in compliance with City and County fire department directives.

  Those portions of the project site not presently located within the City's corporate boundaries would not be annexed. Under the "no project/no development" alternative, no new land uses, additional areas of physical disturbance, Applicant-funded infrastructure improvements, new residential dwellings, additional non-residential square footage, and/or additional vehicle trips would predictably occur within and from the project site. Operational activities associated with existing land uses could, however, expand or contrast based on market demands for and the successful continued operation of those uses.

  While cumulative land-use impact may be incrementally reduced through the retention of the existing non-operational portions of the project site as open space and the preservation of existing on-site vegetation and habitat areas, related project activities will continue to result in the general urbanization of the broader project area. Independent of the Lead Agency's actions with regards to the project site, the urbanization of the region and subregion will continue to diminish the inventory of open space lands, resource conservation areas, and areas of existing agricultural productivity.

- **Alternative environmental impact analysis**. Presented below is a qualitative, comparative analysis of this alternative's potential ability to eliminate or substantially reduce those significant project-related impacts identified herein.

Table 7-1
COMPARATIVE EVALUATION OF PROJECT ALTERNATIVES - ENVIRONMENTAL CONSIDERATIONS

	Proposed Project	Alternatives					
		No Project		Habitat Avoidance			Reduced Residential Increased Commercial
		No Development	Existing Zoning Designations	SBKR / LBV Occupied Habitat	RAFSS Areas	Jurisdictional Waters	
Development Assumptions							
Number of Dwelling Units	8,407	0	2,215	7,484	4,873	5,846	6,090
Non-Residential Sq. Footage	849,420	0	1,097,418	820,540	602,827	730,893	7,037,118
Significant Unmitigable Environmental Effects							
Air Quality	-	-	-	-	-	-	-
Construction	Significant	Not Significant	Significant	Significant[3]	Significant[3]	Significant	Significant
Operation	Significant	Not Significant	Significant	Significant[3]	Significant[3]	Significant	Not Significant
Noise	Significant	Not Significant	Significant	Significant	Significant[3]	Significant	Significant[4]
Growth Inducement	Significant	Not Significant	Not Significant	Significant	Significant	Significant	Significant
Additional Introduced Impacts	None	None	None	None	None	None	Hazards[4]
No. of Significant Impacts	4	0	3	≤4	≤4	4	≥3
Potentially Significant Mitigable Environmental Effects							
Biological Resources	Potentially Sign.	Not Significant	Potentially Sign.	Potentially Sign.	Potentially Sign.	Potentially Sign.	Potentially Sign.
Transportation and Traffic	Potentially Sign.	Not Significant	Potentially Sign.	Potentially Sign.	Potentially Sign.	Potentially Sign.	Potentially Sign.
No. of Potentially Sign. Impacts	2	0	2	2	2	2	2
Attainment of Some or Most of the Stated Objectives							
Lead Agency Objectives	Attainment	No	Yes	Yes	Yes	Yes	Yes
Applicant Objectives	Attainment	No	Yes	Yes	Yes	Yes	Yes
Feasibility							
Economic[2,6]	Feasible	Infeasible	Feasible	Feasible	Feasible	Feasible	Feasible
Legally / Socially / Technologically	Feasible	Infeasible	Feasible	Feasible	Feasible	Feasible	Feasible
Environmentally Superior Alternative							
Environmental Ranking[1]	5 (tie)	1	2	4 (tie)	4 (tie)	5 (tie)	3

Notes:
1. Assuming that all significant environmental impacts are weighted equally.
2. No detailed economic analysis, marketing study, or real property appraisal of the proposed project was considered in the formulation of this preliminary determination.
3. Below that associated with the proposed project but still at a level deemed to be significant.
4. The resulting impact would be anticipated to be greater than the corresponding environmental effect associated with or attributable to the proposed project.
5. Impact may be deemed beneficial.
6. Feasibility cannot be properly assessed except through detailed environmental, economic, and technical analyses.

Source: Environmental Impact Sciences

Table 7-2
COMPARATIVE EVALUATION OF PROJECT ALTERNATIVES
ATTAINMENT OF STATED OBJECTIVES[1]

Stated Objectives	Proposed Project	Alternative					
		No Project		Habitat Avoidance			Reduced Residential Increased Commercial
		No Development	Existing Zoning Designations	SBKR/LBV Occupied Habitat	RAFSS Areas	Jurisdictional Waters	
Lead Agency's Objectives							
Encourage annexation which will demonstrate net benefit to the City (GP-1).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Attain
Demonstrate compatibility of land uses both within and adjacent to the planning area (GP-2).	Attain	**Not Attain**	Attain	Attain	Attain	Attain	Attain
Demonstrate protection of all resources valued by the citizens of Rialto, including, but not limited to, views, trees and other landscaping features, aquifers, surface water courses, and historic buildings (GP-3).	Attain	Partially Attain	Partially Attain	Attain	Attain	Attain	Attain
Ensure that development is adequately served with essential public services and infrastructure including, but not limited to, streets, water, surface drainage, sanitary sewers, law enforcement, fire protection, and public schools (GP-4).	Attain	**Not Attain**	Attain	Attain	Attain	Attain	Attain
Accommodate development activities both within the City of Rialto and its Sphere of Influence that further the overall intent of the City General Plan (LA-1).	Attain	**Not Attain**	Partially Attain	Attain	Attain	Attain	Attain
Protect and enhance residential neighborhoods, commercial districts, and other areas by encouraging physical development that is of high quality and is compatible with the character, scale, and function of surrounding areas (LA-2)	Attain	**Not Attain**	Partially Attain	Attain	Attain	Attain	Partially Attain
Provide for and encourage development that contains a compatible mix of residential and nonresidential uses within close proximity to each other (LA-3).	Attain	**Not Attain**	Partially Attain	Attain	Attain	Attain	Attain
Respond to local and regional needs for additional housing opportunities in response to anticipated areawide population growth (LA-4).	Attain	**Not Attain**	Partially Attain	Partially Attain	Partially Attain	Partially Attain	Partially Attain

Table 7-2 (Continued)
COMPARATIVE EVALUATION OF PROJECT ALTERNATIVES
ATTAINMENT OF STATED OBJECTIVES

Stated Objectives	Proposed Project	Alternative					
		No Project		Habitat Avoidance			Reduced Residential Increased Commercial
		No Development	Existing Zoning Designations	SBKR/LBV Occupied Habitat	RAFSS Areas	Jurisdictional Waters	
Lead Agency's Objectives (Continued)							
Unless identified hazards can be effectively reduced, restrict or otherwise limit future develop in those areas containing identified public safety hazards (LA-5).	Attain	Partially Attain	Attain	Attain	Attain	Attain	Attain
Provide for and/or facilitate the introduction and expansion of economic opportunities and benefits for the City and its residents (LA-6).	Attain	**Not Attain**	Attain	Attain	Attain	Attain	Attain
Reduce, to the extent feasible, adverse impacts to City and County services, service providers, and systems resulting from permitted development (LA-7).	Attain	Attain	Attain	Attain	Attain	Attain	Attain
Ensure that man and nature can effectively coexist (LA-8).	Attain	**Not Attain**	Partially Attain	Attain	Attain	Attain	Attain
Ensure that sufficient sewer capacity and other requisite services and systems are available to accommodate projected demand (LA-9)	Attain	Attain	Attain	Attain	Attain	Attain	Attain
Private development activities should be deemed by the City to be fiscally prudent (LA-10)	Attain	Attain	Attain	Attain	Attain	Attain	Attain
Applicant's Objectives							
Build upon the platform of high-quality design, architecture, and landscaping established by neighboring residential communities to provide a northern gateway to the City of Rialto that offers new and exciting amenities to residents (A-1).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	**Not Attain**
Establish a conservation-based community through the creation of open space preservation areas that will provide functioning habitats for sensitive, threatened, and endangered species, preserve Lytle Creek and minimize impacts to its riparian and alluvial fan sage scrub habitats, while providing other wildlife benefits (A-2).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Attain

Table 7-2 (Continued)
COMPARATIVE EVALUATION OF PROJECT ALTERNATIVES
ATTAINMENT OF STATED OBJECTIVES

Stated Objectives	Proposed Project	Alternative					
		No Project		Habitat Avoidance			Reduced Residential Increased Commercial
		No Development	Existing Zoning Designations	SBKR/LBV Occupied Habitat	RAFSS Areas	Jurisdictional Waters	
Applicant's Objectives (Continued)							
Locate and integrate the design of open space areas with significant blocks of native habitat and natural vegetation landscaping through the provision of habitat linkages and wildlife movement corridors in the region (A-3).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Attain
Maximize opportunities for using native plant material/species in the project landscaping, especially in areas where such landscaping is located in proximity to areas of preserved native habitat (A-4).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Attain
Develop freeway-oriented commercial areas to serve regional needs and stimulate job and revenue growth in the City (A-5).	Attain	**Not Attain**	Partially Attain	Attain	Attain	Attain	Attain
Concentrate development within neighborhoods to promote greater efficiency of land use and promote walking and bicycling by providing a network of pleasant, safe, and convenient pedestrian trails and bike lanes (A-6).	Attain	**Not Attain**	**Not Attain**	Attain	Partially Attain	Attain	Attain
Respond to the unmet need for active adult communities in the Rialto area by providing residents with a golf course-oriented community and a variety of conveniently located on-site amenities (A-7).	Attain	**Not Attain**	Partially Attain	Attain	**Not Attain**	Attain	Attain
Provide the City and surrounding community with a redesigned public golf course and clubhouse, recreation and open space areas, parks, and trails to meet the City General Plan goals to provide such facilities to maintain and enhance the City's quality of life (A-8).	Attain	**Not Attain**	Attain	Attain	**Not Attain**	Attain	Attain

Table 7-2 (Continued)
COMPARATIVE EVALUATION OF PROJECT ALTERNATIVES
ATTAINMENT OF STATED OBJECTIVES

Stated Objectives	Proposed Project	Alternative					
		No Project		Habitat Avoidance			Reduced Residential Increased Commercial
		No Development	Existing Zoning Designations	SBKR/LBV Occupied Habitat	RAFSS Areas	Jurisdictional Waters	
Applicant's Objectives (Continued)							
Address the City's current and projected housing needs for all segments of the community by providing a range of family-oriented single- and multi-family residences, as well as an active adult golf course community (A-9).	Attain	**Not Attain**	**Not Attain**	Attain	Partial Attain	Partially Attain	Partially Attain
Establish a mix of land uses and local-serving activities that meet the City General Plan's objectives concerning community character and pedestrian-friendly design (A-10).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Partially Attain
Implement the City General Plan's Land Use Element goal to facilitate annexation of large areas of land that are governed by a specific plan, which provides for compatibility of land uses, fiscal balance, recreation, and resource protection (A-11).	Attain	**Not Attain**	**Not Attain**	Attain	Partially Attain	Attain	Attain
Create a transportation network that will fulfill the policies of the City General Plan's Circulation Element by allowing residents to live within proximity to schools, recreational opportunities, retail centers, and commercial development, and by minimizing vehicle trips utilizing access to a variety of transportation opportunities, including pedestrian pathways, bikeways, regional freeways, transit, and Metrolink (A-12).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Attain
Address regional infrastructure concerns by locating development in areas where opportunities for groundwater recharge are maintained and the life of groundwater aquifers are protected (A-13).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Attain
Incorporate "green" and sustainable practices, as practicable, in developing buildings and infrastructure (A-14).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Attain

Table 7-2 (Continued)
COMPARATIVE EVALUATION OF PROJECT ALTERNATIVES
ATTAINMENT OF STATED OBJECTIVES

Stated Objectives	Proposed Project	Alternative					
		No Project		Habitat Avoidance			Reduced Residential Increased Commercial
		No Development	Existing Zoning Designations	SBKR/LBV Occupied Habitat	RAFSS Areas	Jurisdictional Waters	
Applicant's Objectives (Continued)							
Identify and address safety hazards, such as wildfire and flooding dangers, through implementation of design safety features and levee improvements (A-15).	Attain	**Not Attain**	**Not Attain**	Attain	Attain	Attain	Attain
Undertake development of the project site in a manner that is economically feasible and balanced to address both the Applicant's and the City's economic concerns (A-16).	Attain	**Not Attain**	Partially Attain	Partially Attain	Partially Attain	Partially Attain	Partially Attain

Notes:
1. As defined, the terms "Attainment" (Attain) and "Partially Attain" are assumed to be inclusive of those recommended mitigation measures identified by the Lead Agency and/or such similar mitigation measures and/or conditions of approval as may be reasonably imposed by the Lead Agency with regards to those alternatives identified herein.

Source: Environmental Impact Sciences

◊ **Air quality**. Under this alternative, no construction activities would occur on the project site and no further intensification of the subject property would be authorized. As a result, there would be no increase in either construction-term or operational emissions above existing baseline levels. As such, the "no project/no development" alternative would not directly contribute to the generation of any additional cumulative emissions.

Since the "no project/no development" alternative assumes only the avoidance of physical change to the project site, other related projects would continue to be developed. Because the SCAB is classified as a non-attainment air basin, related development activities and ambient growth will incrementally contribute to regional emission. An agency's decision regarding any individual project would not likely result in the avoidance of cumulative air quality impacts; therefore, cumulative air quality impacts would be projected to remain significant independent of the development or non-development of the site.

◊ **Noise**. The "no project/no development" alternative ignores the existence of other land-use authorizations for those properties collectively comprising the project site (including the ERVSP, LCNPD, and GHSP) and assumes that no new uses and no intensification of existing uses would occur thereupon. Under this alternative, traffic volumes along County Club Drive (north of Riverside Avenue) would not be expected to substantially increase since the El Rancho Verde Royal Vista Golf Course would not undergo improvement. Because traffic along Country Club Drive would not materially increase, traffic noise affecting abutting residential properties would generally remain at current levels. Similarly, although traffic volumes along Riverside Avenue (between Alder Avenue and Locust Avenue) would increase as a result of related project traffic and ambient growth, that increase would be substantially less than would be expected to occur should the LCRSP be approved. While found to be cumulatively significant with the inclusion of traffic associated with the proposed LCRSP, it is likely that off-site traffic noise levels along Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Alder Avenue and Locust Avenue) would not increase to a level of significance under the "no project/no development" alternative.

◊ **Growth inducement**. Under this alternative, no jurisdictional changes and no changes to those existing land-use policies that regulate the development of the project site would occur. Similarly, no new infrastructure systems would be constructed and no existing infrastructure systems would be improved which would serve the project site or have the potential to serve other outlying areas. As a result, under the "no project/no development" alternative, growth-inducing impacts would be reduced to a less-than-significant level.

▪ **Additional impacts**. Looking at growth from a different perspective, the proposed project seeks, in part, to fulfill an identified demand for housing and create additional long-term employment opportunities. Should the "no project/no development" alternative be selected, no additional housing units would be provided and no new job opportunities would be created on the project site. If an incremental contribution toward the fulfillment of those identified regional and localized housing and employment demands cannot be provided on the subject property, it is reasonable to assume that additional development

pressures for the provision of that housing and the creation of those new jobs would be placed on other properties located throughout the City and within proximal unincorporated County areas.

Selection of the "no project/no development" alternative would, therefore, likely result in increased growth-inducing impact with regards to other properties located beyond the project boundaries and accelerate the timing in which those properties, which may themselves be conducive to development (developable), would become urbanized.

This alternative would not contribute toward the efforts to fulfill the City General Plan (Housing Element) obligations to provide its "fair share" of housing within the region, would shift the provision of housing elsewhere within the region, and would produce corresponding impacts on population and employment. This alternative would also have land-use impacts in that it would conflict with the City General Plan (Land Use Element) which designates the project site for development pursuant to a specific plan. While this alternative would not result in any direct impacts to existing biological resources on the project site, it could have greater indirect impacts as the proposed conservation measures that would be implemented to protect sensitive habitat areas and resources would not occur and the introduction of additional residents in the general vicinity could result in additional human intrusion into those on-site areas.

- **Ability to meet stated objectives**. Because the project site would generally remain in its current condition, the "no project/no development" alternative generally fails to meet the Lead Agency's broad-based objectives of promoting the annexation of those lands located within the City's adopted SOI, encouraging development that is responsive to and addresses identifiable local and regional needs, creating economic opportunities for City residents, and furthering the advancement of the City General Plan. As indicated in Table 7-2 (Comparative Evaluation of Project Alternatives – Attainment of Stated Objectives), a limited number of City General Plan-based and other objectives may still be satisfied, such as reducing adverse impacts to public services (LA-7).

Because the "no project/no development" alternative neither allows for a reasonable use of the Applicant's property nor creates an opportunity to develop a mix of land uses and local-serving activities that meet the City General Plan's objectives and/or respond to the unmet need for active adult communities, this alternatives does not allow for the attainment of any of the Applicant's objectives. Finally, it is unrealistic to assume that privately-owned property would remain permanently undeveloped; therefore, it is reasonable to assume that ultimately some level of development and economic use of the project site would be pursued by the landowner. As such, the "no project/no development" alternative would ultimately be infeasible in that it would not be "accomplished in a successful manner" over time because of the desire of the landowner to pursue some form of development on its property.

7.5.2 "No Project/Existing Zoning Designations" Alternative[12]

A "no project" alternative is explicitly required under CEQA. As specified in the State CEQA Guidelines: "When the project is the revision of an existing land use or regulatory plan, policy or

[12]/ This alternative was not formulated in response to any specific Lead Agency-identified significant or potentially significant environmental effect but is a variation of an alternative which is explicitly required under the State CEQA Guidelines.

ongoing operation, the 'no project' alternative will be the continuation of the existing plan, policy or operation into the future" (14 CCR 15126.6[e][3][A]). In compliance therewith, the purpose of this alternative is to present a second variation of the "no project" alternative representing the continuation of existing plans, policies, and operations into the future. This alternative is depicted in Figure 7-1 (Conceptual "No Project/Existing Zoning Designations" Alternative) and its associated development assumptions are outlined in Table 7-3 ("No Project/Existing Zoning Designations" Alternative – Land Use and Development Assumptions).

Table 7-3
"NO PROJECT/EXISTING ZONING DESIGNATIONS" ALTERNATIVE
LAND USE AND DEVELOPMENT ASSUMPTIONS

Notation	Designation	Acreage	Density Assumptions	Dwelling Units	Square Footage
GCS	Golf Course Community (GHSP)	266.0	1 DU/20 acres	12	-
SD - RES	Special Development (LCNPD)	35.0	10,000 S.F. min.	147	-
SD - RES	Special Development (LCNPD)	64.7	6,000 S.F. min.	328	-
RL	Rural Living (County)	13.1	2.5 acre min.	5	-
R-1 A	Single-Family Zone (City)	385.0	10,000 S.F. min. (70% coverage)	1,175	-
RS-20M	Single Residential (County)	112.5	20,000 S.F. min. (100% coverage)	245	-
RS-10M	Single Residential (County)	0.7	10,000 S.F. min. (100% coverage)	3	-
GCR	Golf Course Residential GHSP)	64.0	-	300	-
FW	Floodway (County)	1,197.5	-	-	-
	Commercial (LCNPD)	40.8	-	-	648,750
CTS	Commercial – Travel Service (LCNPD)	12.0	0.4 FAR	-	209,088
M-2	General Manufacturing (City)	11.0	0.5 FAR	-	239,580
	Golf Course (ERVSP)	157.0	-	-	-
	Park (LCNPD)	11.0	-	-	-
	Open Space (LCNPD)	6.2	-	-	-
	SCE Right-of-Way	17.1	-	-	-
	Existing Roads	53.7	-	-	-
Total		2,447.3		2,215	1,097,418

Source: KTGY Group, Inc.

- **Alternative description**. As opposed to the "no project/no development" scenario discussed above (whereby the site is assumed to remain generally fallow), this "no project/existing zoning designations" alternative constitutes a variation of the "no project" scenario and examines the potential changes to the project site that would be anticipated to occur in the event that the Lead Agency were to either deny or take no action with regards to the LCRSP but development were to nonetheless occur in accordance with those existing City and County zoning policies as applicable to the jurisdiction in which those portions of the project site now reside.

  Although existing zoning ordinances do not constitute actual entitlements allowing the underlying property owner to proceed with development in accordance therewith, zoning policies can be interpreted as indicative of the nature of the land uses and development intensities that the municipality with jurisdiction over those lands seeks to promote.

Development consistent with those land-use designations and intensities could likely proceed merely through the approval of subdivision maps. Approval of a tentative subdivision map constitutes a discretionary action subject to CEQA.

With regards to the subject property, other than those uses now operating thereupon and with the possible exception of that portion of the LCNPD (Tract 15900) which will be carved out of Rosena Ranch and included in the proposed LCRSP, no vested rights to any definitive use(s) has been established since no development agreements have been executed, no vesting maps have been recorded, no building permits have been issued, and no construction activities are underway. As used herein, "existing zoning designations" are not intended to describe established vested development right but serves to present a general description of those land uses that might predictably occur on the subject property based on the existing designations and current development standards outlined in applicable City and County zoning ordinance provisions.

Independent of the LCRSP, the City and the County have previously adopted "general," "specific," and/or "planned development" plans governing the future development of portions of the subject property. Those entitlements include, but are not limited to, the County-approved GHSP and LCNPD (Tract 15900) (governing portions of Neighborhood I) and the City-approved ERVSP (governing portions of Neighborhood II). Additionally, those portions of the project site located outside the boundaries of the GHSP, LCNPD, and ERVSP contain general plan and zoning designations promoting for the development of residential and non-residential uses thereupon. Although constituting a variation of a "no project" alternative, those municipal land-use policies provide the basis for determining an alternative development-related use of the project site.

Under the proposed LCRSP, an approximately 278-acre portion of the GHSP has been included within Neighborhood I. In accordance with the policies contained in that County planning document, 17 dwelling units and a maximum of 182,952 square feet of non-residential uses could be constructed within that area. In addition, an approximately 46.0-acre portion of the LCNPD has been included within the boundaries of Neighborhood I. As indicated in the LCNPD, north of the I-15 Freeway, excluding that area comprising the west entry to the Lytle Creek North development and the landscaped buffer located to the west of that public right-of-way, planned development activities include approximately 44.5 acres of "Commercial (C)" use and 4.2 acres of "Open Space (OS)." As stipulated in the Lytle Creek North FEIR, 678,450 square feet of retail commercial use (e.g., community commercial, general/highway commercial, and/or service-oriented commercial uses) could be developed within that planned development area. In addition, a total of 147 dwelling units can be developed in lands to be withdrawn from the LCNPD located south of the I-15 Freeway.

The entirety of the 221.0-acre ERVSP has been included within Neighborhood II. Pursuant to the City-approved ERVSP, subject to the approval of a tentative subdivision map, a total of 300 dwelling units can be constructed therein, the existing clubhouse could be enlarged to 19,339 square feet (3,878 square feet larger than the existing clubhouse), and certain street improvements would be authorized (e.g., widening of Peach Street at North Riverside Avenue).[13]

[13]/ City of Rialto (The Planning Associates), Addendum – Revised El Rancho Verde Specific Plan, certified July 5, 2006; City of Rialto, Final Environmental Impact Report for the El Rancho Verde Specific Plan, SCH No. 1992082028, certified August 1, 1995.

Under this alternative, in addition to those actions now allowable under the GHSP, LCNPD, and ERVSP, other on-site development would be anticipated to occur in such manner and at such density as may now be authorized in accordance with the City General Plan and City Municipal Code and the County General Plan and County Development Code.

Separate and apart from those organization and reorganization changes that would be required to provide needed public services, no annexation activities would occur but development would nonetheless proceed under the authority of the applicable land-use entity. Development activities (inclusive of residential and non-residential uses and new internal roadways) would be confined to an approximately 1,215.5-acre portion of the project site. An approximately 1,231.8-acre portion of the subject property would be retained as natural or improved open space (including floodway, parklands, open space, and the existing SCE right-of-way). Under this alternative, a total of 2,215 dwelling units and 1,097,418 square feet of commercial, office, and light industrial development would be constructed, primarily in Neighborhoods II and III.

- **Alternative environmental impact analysis**. Presented below is a qualitative, comparative analysis of this alternative's potential ability to eliminate or substantially reduce those significant project-related impacts identified herein.

  - ◊ **Air quality**. Because the SCAB is categorized as a non-attainment basin, large-scale projects have generally been determined to exceed the threshold of significance criteria recommended by the SCAQMD. Based on the number of acres associated with the project, the acreage that would likely be graded during this alternative's implementation, and the number of vehicle trips attributable to 2,215 dwelling units and 1,097, 418 square feet of commercial, office, and light industrial uses, construction-term and operational air quality impacts would be projected to remain significant. Both the short-term (construction) and long-term (operational) air quality impacts of this alternative would be similar to the proposed project. In addition, this alternative proposes over 200,000 square feet of non-residential uses, including "General Manufacturing (M-2)," as compared to the proposed project. This increase would be expected to generate a greater number of truck trips than associated with the proposed project and could increase the exposure of on-site (and possibly off-site) residential uses to toxic air contaminants, primarily from diesel emissions associated with the additional truck trips.

  - ◊ **Noise**. Absent a definitive site plan, the precise number of new vehicle trips accessing the project site via Country Club Drive (north of Riverside Avenue) under this alternative cannot be accurately depicted. Traffic along that roadway, however, is presently limited to those single-family residential uses tributary to that street and vehicle going to and departing from the El Rancho Verde Royal Vista Golf Course. Generally, mobile source traffic noise can be predicted to increase by 3 dBA for each doubling of traffic volume traveling past a receptor location. For the purpose of this alternatives analysis, it can be reasonable assumed that, under this alternative, traffic volumes along Country Club Drive would more than double as a result of the additional residential development that is already permitted under the ERVSP. As a result, traffic noise along Country Club Drive (north of Riverside Avenue) would remain significant.

Based on alternative-related traffic, as well as contributions from other related projects and ambient growth, it is anticipated that increased traffic noise levels along Riverside Avenue (between Alder Avenue and Locust Avenue) would remain cumulative significant.

◊ **Growth inducement**. Under this alternative, no jurisdictional changes and no changes to those existing land use policies that regulate the development of the project site would occur. Similarly, no new infrastructure systems, beyond those already authorized by the applicable permitting agencies, would be constructed. As a result, under the "Existing Entitlements" alternative, growth-inducing impacts would be reduced to a less-than-significant level.

- **Additional impacts**. This alternative may have greater land-use impacts than the proposed project in that it would be developed in accordance with existing zoning which includes several different specific plans and planned developments under different jurisdictions. The project site would, therefore, not be developed under one comprehensive development plan and would conflict with the City General Plan which envisions the area developed pursuant to a comprehensive specific plan. Absent one comprehensive development plan, the commitment to set aside open space and the protection of certain biological resources may not occur in as organized a manner as under the proposed project. As such, this alternative could have greater direct and indirect biological resource impacts than compared to the proposed project. The lack of a well-integrated community developed pursuant to a comprehensive specific plan may not result in a design that provides for "green" development or energy conservation to the extent of the proposed project. As such, this alternative could have a greater cumulative contribution to global climate change.

- **Ability to meet stated objectives**. Although this "no project/existing zoning designations" alternative would provide new residential and commercial development consistent with existing zoning designations, it would not meet or only partially meet a number of the Lead Agency's objectives. Some of the Lead Agency's objectives that would not be met include encouraging annexation and combined residential and non-residential development, establishment of a conservation-based community, and integration of open space areas. As this alternative contemplates development under existing zoning, the project site would be developed under three separate land-use programs (including the County-approved GHSP and LCNPD and the City-approved ERVSP) and the City would not establish unified design and development standards governing the site's development.

  This alternative would not meet many of the Applicant's objectives as development under existing plans would not provide for the comprehensive planning of the project site, would not reasonably allow for a comparable mix or location of land uses, and would not ensure compatibility with surrounding development and adjacent environments. Because development would proceed in multiple jurisdictions under the authority of a number of disparate entitlements, this alternative would neither provide the unified specific plan platform of achieving high-qualified design, architecture, and landscaping otherwise obtainable under a unified specific plan nor provide for the same degree of conservation standards and resource protection that is achievable under the proposed project. Based on the fragmentation of development, this alternative may not allow for or adequately promote the development of a northern gateway to the City,

provide for a broad range of housing types, provide for the development of senior housing, and/or promote land-use efficiency and pedestrian-oriented development. Because development would occur in accordance with previously-adopted plans, this alternative would not ensure the incorporation of "green" development standards.

While this alternative does provide for some level of development and could be implemented, it would not completely address either the Lead Agency's or the Applicant's stated objectives.

7.5.3 "Habitat Avoidance" Alternatives[14]

As proposed, implementation of the LCRSP would result in potentially significant impacts to Riversidian alluvial fan sage scrub (RAFSS), southern willow scrub habitat, and areas considered "jurisdictional waters" by the federal and/or State governments. Within the study area, significant amounts of the RAFSS support the federally endangered San Bernardino kangaroo rat (SBKR) while some of the southern willow scrub supports or can be used by the federally-listed least Bell's vireo (LBV). In addition, both of these species can utilize areas on the project site that are considered federal and/or State jurisdictional waters. Based on those project-related impacts, although the environmental analysis indicated that all biological resource impacts could be mitigated to a less-than-significant level, the objective of the variations of this alternative examined herein is to avoid or further reduce potential project-related impacts affecting on-site biological resources.

In recognition of the presence of multiple biological resource impacts, under this alternative, three distinct "habitat avoidance" scenarios have been considered. Each alternative is directed towards minimizing the direct disturbance of sensitive habitats and the correspondingly sensitive species that occupy those habitats. The first habitat avoidance scenario ("avoidance of SBKR/LBV-occupied habitat" alternative) would avoid development in areas occupied by SBKR and LBV. The second habitat avoidance scenario ("avoidance of RAFSS areas" alternative) would locate all development behind the FEMA 100-year floodplain line and minimize development in areas identified as RAFSS. The third habitat avoidance scenario ("avoidance of jurisdictional waters" alternative) would minimize impacts to jurisdictional waters, defined as those waters under the jurisdiction of the ACOE (pursuant to the CWA) or the CDFG (pursuant to the CF&GC). Each of these habitat avoidance alternatives are separately discussed below.

Under these "habitat avoidance" alternatives, the type, mix, and density of uses generally remain the same as the proposed project but are adjusted (reduced) to reflect the smaller footprint of development in each alternative; however, the option of development of the alternative at the same number of dwelling units as the proposed project is also examined as some of the impacts (e.g., impacts to mineral resources) is not necessarily impacted by the number of dwelling units. Analysis of the same development assumptions is both consistent with CEQA requirements and is reasonable since it serve to focus on the significant impact

[14]/ This alternative has been formulated in response to the Lead Agency's identification of a number of potentially significant biological resource impacts. Those impacts include, but may not be limited to, project-related impacts on: (1) sensitive wildlife species (Impacts 5-1 and 5-7); (2) sensitive plant species (Impacts 5-1 and 5-10); and (3) jurisdictional waters (Impact 5-4). Although the EIR indicates that each of those potentially significant impacts can be mitigated to a less-than-significant level through the implementation of specified mitigation measures. Prior to consideration of this EIR and those mitigation measures by the Lead Agency's decision-making body, the Department has sought to explore whether there may also exist project alternative that might also reduce those impacts to below a level of significance.

which the alternative seeks to mitigate and not merely an alternative based on an assumption that an incremental decrease in overall environmental effects would result from corresponding reduction in the number of dwelling units and the square footage of non-residential uses.

- **Habitat Avoidance Alternative No. 1 (Avoidance of SBKR/LBV-Occupied Habitat)**. The objective of this alternative is to avoid or substantially reduce significant project-related impacts affecting on-site biological resources prior to mitigation, specifically potential impacts upon listed wildlife species including, but not limited to, the San Bernardino kangaroo rat (SBKR) and the least Bell's vireo (LBV). Both the SBKR and LBV are federally-listed species under the FESA and have been observed in the LCRSP study area.

  This alternative is depicted in Figure 7-2 (Conceptual "Avoidance of SBKR-LBV-Occupied Habitat" Alternative) and its associated development assumptions are outlined in Table 7-4) ("Avoidance of SBKR-LBV-Occupied Habitat" Alternative – Land Use and Development Assumptions). For those areas not avoided, this alternative assumes development in accordance with the proposed LCRSP.

Table 7-4
"AVOIDANCE OF SBKR/LBV-OCCUPIED HABITAT" ALTERNATIVE LAND USE AND DEVELOPMENT ASSUMPTIONS[1]

Notation	Designation	Acreage	Density Assumptions	Dwelling Units	Square Footage
SFR-1	Single-Family Residential 1	259.9	3.6 DU/acre	936	-
SFR-2	Single-Family Residential 2	245.9	6.3 DU/acre	1,549	-
SFR-3	Single-Family Residential 3	221.9	10.9 DU/acre	2,419	-
MFR	Multi-Family Residential	73.0	17.2 DU/acre	1,256	-
VC	Village Center Commercial	137.0	Varies	1,325	820,540
ES	Elementary School	10.0			
ES/MS	Elementary/Middle School	14.0			
OS	Open Space	5.0	-	-	-
OS/R	Open Space/Recreation	296.4	-	-	-
OS/JU	Open Space/Joint Use	17.1	-	-	-
	Preserved Listed Species Habitat	596.6	-	-	-
	Preserved Non-Listed Species Habitat	330.3	-	-	-
	Listed Species Habitat (within 100 feet of Levee)	44.4	-	-	-
	Non-Listed Species Habitat (within 100 feet of Levee)	84.6	-	-	-
	Roads	111.2	-	-	-
Total		2,447.3		7,484	820,540

Notes:
1. Based on the same density and development assumptions presented in Table 2-1 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan Summary).

Source: KTGY Group, Inc.

◊ **Alternative description**. The objective of this alternative is to minimize impacts to sensitive wildlife species. The manner in which that objective is effectuated in each neighborhood is described below.

In Neighborhood I, the main species of concern is the LBV which utilizes the riparian habitat area adjacent to the I-15 Freeway. It is assumed that the remainder of Neighborhood I would be developed in accordance with those land uses and at the corresponding densities as presented in the proposed LCRSP. Under this alternative, direct impacts to the riparian areas have been avoided.

In Neighborhood II, a portion of the proposed development area, specifically the area where the levee is proposed, provides habitat for listed species, including the SBKR. Although this area currently provided habitat for the SBKR, the biological assessment concluded that long-term viability of this area to serve as SBKR habitat is, at best, problematic (i.e., even if the area surrounding this habitat area were not developed, this area lacks long-term viability as suitable SBKR habitat); therefore, this alternative contemplates impacts to this small area of listed species habitat for the levee. There is a pocket of riparian habitat in the northwest area of Neighborhood II which is considered jurisdictional waters, but because the area does not provide nesting habitat for either the LBV or the southwestern willow flycatcher, under this alternative, development within this area was not avoided because the focus of this alternative is the avoidance of areas which are occupied by listed species.

In Neighborhood III, the footprint of the levee was moved further south as compared to the proposed project; however, a small area of currently-occupied SBKR habitat is impacted. Impacts to this area could not be avoided taking into consideration the alignment of the levee. The biological resource analysis concludes that this area will not remain as suitable habitat for the SBKR in the long-term (even in the absence of development) because the vegetation will re-establish itself and it is anticipated to succeed into a dense, mature chaparral/shrub cover unsuitable for occupation by the species.

In Neighborhood IV, the alignment of the levee was altered to minimize impacts to listed species and the area proposed for development reduced. A small area of listed species habitat would still be affected by levee placement.

This alternative further serves to promote the preservation of the largest concentration of Plummer's mariposa lily and Parry's spineflower. The largest concentrations of these two plant species are found in the preserved species habitat areas. Although neither of these plant species are State or federally-listed, both are identified by the CNPS as either sensitive species or species to be more closely monitored.

Under this alternative, a total of 7,484 dwelling units and 820,540 square feet of commercial, office, and light industrial uses would be developed on the project site. Based on an employment factor of one job for every 250 square feet of commercial, office, and/or industrial use, a total of 3,282 new primary jobs would be created, resulting in a jobs-housing ratio of 0.44. As noted above, however, development of the same number of dwelling units and square footage of non-

residential development as the proposed project (i.e., 8,407 dwelling units and 849,420 square feet of non-residential use) is also discussed.

◊ **Alternative environmental impact analysis**. Presented below is a qualitative, comparative analysis of this alternative's potential ability to eliminate or substantially reduce those significant project-related impacts identified herein.

- **Biological resources**.[15] Although this alternative substantially minimizes impacts to listed species and to occupied habitat, it would not entirely avoid those impacts altogether. Implementation of the "avoidance of SBKR-LBV-occupied habitat" alternative would continue to predicate the need for alternative-based mitigation in order to address biological resources impacts.

- **Air quality**. Under this alternative, the number of dwelling units and total square footage of non-residential land uses (7,484 dwelling units and 820,540 square feet) remain generally the same levels as associated with the proposed LCRSP (8,407 dwelling units and 849,420 square feet). As a result, under this alternative, construction-term and operational air quality impacts would be similar to but incrementally less than those associated with the proposed project. It would, however, be anticipated that short-term and long-term air quality impacts would remain at levels in exceedance of the SCAQMD's recommended threshold standards and would be similar to the proposed project.

- **Noise**. Under this alternative, the number of residential uses and total square footage of non-residential land uses (7,484 dwelling units and 820,540 square feet) remain generally the same levels as associated with the proposed LCRSP (8,407 dwelling units and 849,420 square feet). As a result, under this alternative, as they relate to Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Adler Avenue and Locust Avenue), mobile source noise impacts would be similar to but incrementally less than those associated with the proposed project. It would, however, be anticipated that operational noise impacts along Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Adler Avenue and Locust Avenue) would remain significant and would be similar to the proposed project.

- **Growth inducement**. Under this alternative, the number of dwelling units (7,484 dwelling units) is substantially greater than would otherwise be developed on the project site under the "existing zoning designations" alternative (2,215 dwelling units). However, under this alternative, the total square footage of non-residential land uses (820,540 square feet) is less than would otherwise be developed on the project site under the "existing zoning designations" alternative (1,097,418 square feet). Although there would be an estimated 1,108 job reduction in primary on-

[15]/ Although determined not to be significant, after mitigation, based on the project's environmental analysis, biological resource impacts are considered herein because this alternative has been formulated, as an alternative to mitigation, for the purpose of avoiding or substantially lessening the project's potentially significant biological resource impacts.

site employment, the introduction of an additional 5,269 dwelling units would result in a substantial increase in residential population.

For those areas which are not avoided, this alternative assumes development in accordance with the proposed LCRSP. Similar to the LCRSP, the proposed land-use policy changes will induce substantial population growth. As a result, this alternative's growth-inducing impact is deemed to be significant.

◊ **Additional impacts**. No additional significant environmental impacts would be predicted to occur under this alternative. As with the other "habitat avoidance" alternatives, although each alternative may result in a substantial reduction to those biological resource impacts specifically addressed by the stated alternative, implementation would not result in that impact's avoidance. Additionally, selection of this alternative would not, in and of itself, reduce any of the proposed project's significant or potentially significant unmitigated impacts to a less-than-significant level.

Although this alternative assumes a pro rata reduction in dwelling units and non-residential square footage, as compared to the proposed project, this analysis also examines the option of developing the same number of dwelling units and square footage of development as proposed by the project on this smaller footprint. Those environmental impacts which are a consequence of the number of dwelling units and/or square footage of development, such as vehicle trips (traffic), mobile source air emissions, impacts to schools, utilities, and recreation, would be the same as the proposed project.

Implementing the option of building the proposed project on a smaller footprint would require changes in the land-use plan in order to increase the intensity of development in some areas and may change the mix of residential uses currently assumed for this alternative. These changes could result in areas of higher density housing being placed adjacent to existing single-family neighborhoods. Higher density residential development would likely mean more single-family attached dwelling units or multi-family residential development in place of lower-density single-family detached units and could potentially result in additional land-use and aesthetic impacts if building heights were to be increased to accommodate increased density.

◊ **Ability to meet stated objectives**. Although this alternative makes physical changes to the areas proposed for development, it nonetheless contemplates development for generally the same uses and density (i.e., similar number of dwelling units per acre are assumed under this alternative) as that associated with the proposed project. By reducing the development footprint, the overall number of dwelling units and non-residential square footage would, however, be reduced. As a result, this alternative partially meets both the Lead Agency's and the Applicant's stated project objectives.

Given the smaller footprint of development contemplated under this alternative and the related reduction in dwelling units and square footage, it may be more difficult for the reduced development to feasibly finance the infrastructure

facilities proposed by the project, including levee work (as the costs of providing the same degree of infrastructure would be imposed on fewer residences and non-residential development. A variation of this alternative would thus allow for the same number of dwelling units and the same square footages to be developed on the smaller footprint.

- **Habitat Avoidance Alternative No. 2 (Avoidance of RAFSS Areas)**. RAFSS is considered a sensitive natural community and a high priority for inventory in the CNDDB. The objective of this alternative is to avoid or substantially reduce significant project-related impacts affecting RAFSS areas located on the project site. In order to accommodate that objective, this alternative, unlike the other alternatives examined herein, does not include extension of the proposed levee to the existing Cemex USA levee. The location of the levee in Neighborhood IV will not affect the hydrology needed to sustain RAFSS on the site.

  This alternative is depicted in Figure 7-3 (Conceptual "Avoidance of RAFSS Areas" Alternative) and its associated development assumptions are outlined in Table 7-5 ("Avoidance of RAFSS Areas" Alternative – Land Use and Development Assumptions). For those areas not avoided, this alternative assumes development in accordance with the proposed LCRSP.

Table 7-5
"AVOIDANCE OF RAFSS AREAS" ALTERNATIVE LAND USE AND DEVELOPMENT ASSUMPTIONS[1]

Notation	Designation	Acreage	Density Assumptions	Dwelling Units	Square Footage
SFR-1	Single-Family Residential 1	192.5	3.6 DU/acre	693	-
SFR-2	Single-Family Residential 2	129.1	6.3 DU/acre	813	-
SFR-3	Single-Family Residential 3	179.4	10.9 DU/acre	1,955	-
MFR	Multi-Family Residential	33.5	17.2 DU/acre	576	-
VC	Village Center Commercial	95.7	Varies	835	602,827
ES	Elementary School	10.0			
OS/R	Open Space/ Recreation	61.4	-	-	-
OS/JU	Open Space/Joint Use	5.1	-	-	-
	Preserved Listed Species Habitat	1,105.7	-	-	-
	Preserved Non-Listed Species Habitat	399.8	-	-	-
	Listed Species Habitat (within 100 feet of Levee)	25.6	-	-	-
	Non-Listed Species Habitat (within 100 feet of Levee)	90.1	-	-	-
	Preserved Sensitive Riparian Community	19.5			
	Roads	99.9	-	-	-
Total		2,447.3		4,873	602,827

Notes:
1. Based on the same density and development assumptions presented in Table 2-1 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan Summary).

Source: KTGY Group, Inc.

◊ **Alternative description**. The major concentration of RAFSS on the project site lies within the Lytle Creek Wash area. The areas designated "Preserved RAFSS Community" include both RAFSS as well as RAFSS-dominated vegetation. Under this alternative, the areas proposed for development may contain some components of RAFSS vegetation but those areas are not considered RAFSS-dominated communities and, therefore, the developed areas would not be considered habitat.

Although not a RAFSS community, riparian habitat is also considered a sensitive habitat. This alternative also provides protection for riparian habitat in areas of Neighborhood I and a small area within Neighborhood II.

Under this alternative, a total of 4,873 dwelling units and 602,827 square feet of commercial, office, and light industrial uses could be developed on the project site. Assuming one new primary job for every 250 square feet on non-residential use, a total of 2,411 jobs would be created, producing a jobs-housing ratio of about 0.50

◊ **Alternative environmental impact analysis**. Presented below is a qualitative, comparative analysis of this alternative's potential ability to eliminate or substantially reduce those significant project-related impacts identified herein.

- **Biological resources**.[16] Although this alternative substantially minimizes impacts to RAFSS, it would not entirely avoid those impacts altogether. Implementation of the "avoidance of RAFSS areas" alternative would continue to predicate the need for alternative-based mitigation in order to address biological resources impacts.

- **Air quality**. Under this alternative, the number of dwelling units and total square footage of non-residential land uses (4,873 dwelling units and 602,827 square feet) would be substantially less than those associated with the proposed project (8,407 dwelling units and 849,420 square feet). As a result, under this alternative, construction-term and operational air quality impacts would be incrementally less than those associated with the proposed project and some of the other alternatives that propose greater numbers of dwelling units and/or non-residential square footages than this alternative. Given the level of development proposed under this alternative, it would still be anticipated that short-term (construction) and long-term (operational) air quality impacts would remain at levels in exceedance of the SCAQMD's recommended threshold standards and short-term and long-term impacts would remain significant under this alternative.

- **Noise**. Under this alternative, the number of dwelling units and total square footage of non-residential land uses (4,873 dwelling units and 602,827 square feet) would be substantially less than those associated

[16]/ Although determined not to be significant, after mitigation, based on the project's environmental analysis, biological resource impacts are considered herein because this alternative has been formulated, as an alternative to mitigation, for the purpose of avoiding or substantially lessening the project's potentially significant biological resource impacts.

with the proposed project (8,407 dwelling units and 849,420 square feet) or other habitat avoidance alternatives. As a result, under this alternative, as they relate to Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Adler Avenue and Locust Avenue), mobile source noise impacts would be incrementally less than those associated with both the proposed project and the "avoidance of SBKR-LBV-occupied habitat" alternative. It would, however, be anticipated that operational noise impacts along Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Adler Avenue and Locust Avenue) would remain significant in that the number of vehicle trips under this alternative would still produce a significant increase in mobile source noise and because there exists no feasible mitigation measures to reduce noise impacts to existing residential areas.

- **Growth inducement**. Under this alternative, the number of dwelling units (4,873 dwelling) is substantially greater than would otherwise be developed on the project site under the "existing zoning designations" alternative (2,215 dwelling units). However, under this alternative, the total square footage of non-residential land uses (602,827 square feet) is less than would otherwise be developed on the project site under the "existing zoning designations" alternative (1,097,418 square feet). Although there would be an estimated 1,978 job reduction in primary on-site employment, the introduction of an additional 2,658 dwelling units would result in a substantial increase in residential population.

  For those areas which are not avoided, this alternative assumes development in accordance with the proposed LCRSP. Similar to the LCRSP, the proposed land-use policy changes will induce substantial population growth. As a result, this alternative's growth-inducing impact is deemed to be significant.

◊ **Additional impacts**. No additional significant environmental impacts would be predicted to occur under this alternative. As with the other "habitat avoidance" alternatives, although each alternative may result in a substantial reduction to those biological resource impacts specifically addressed by the stated alternative, implementation would not result in that impact's avoidance. Additionally, selection of this alternative would not, in and of itself, reduce any of the proposed project's significant or potentially significant unmitigated impacts to a less-than-significant level.

Unlike the proposed project, this alternative would eliminate the existing El Rancho Verde Royal Vista Golf Course and would remove an existing recreational facility. Under the proposed project, the existing residential community abuts the golf course. This alternative proposes to place residential development, with densities of 8-14 dwelling units per acre, adjacent to the existing single-family community, resulting in additional noise, light, and traffic impacts on established residential areas that would not otherwise occur under the proposed project if the golf course were to remain. In addition, because of the smaller footprint of development, this alternative would not predictably provide the school sites, community and neighborhood parks, and recreational

centers that would be provided under the proposed project or under an alternative with a larger footprint of development. This alternative eliminates the proposed active adult community and would not offer the same variety of housing types as contemplated under the proposed project.

Although this alternative assumes a pro rata reduction in dwelling units and non-residential square footage, as compared to the proposed project, this analysis also examines the option of developing the same number of dwelling units and square footage of development as proposed by the project on this smaller footprint (with the exception of the golf course that the project proposes in Neighborhood I which is eliminated under this alternative). The dwelling units associated with the active adult community also proposed in Neighborhood II can be placed elsewhere in the project area and those units may or may not be similarly age-restricted. Those environmental impacts which are a consequence of the number of dwelling units and/or square footage of development, such as vehicle trips (traffic), mobile source air emissions, impacts to schools, utilities, and recreation, would be the same as the proposed project. Impacts to recreation, however, would be greater than the proposed project due to the elimination of the golf course which is a major recreational amenity.

Implementing the option of building the proposed project on a smaller footprint would require changes in the land-use plan in order to increase the intensity of development in some areas and may change the mix of residential uses currently assumed for this alternative. These changes could result in areas of higher density housing being placed adjacent to existing single-family neighborhoods. Higher density residential development would likely mean more single-family attached dwelling units or multi-family residential development in place of lower-density single-family detached units and could potentially result in additional land-use and aesthetic impacts if building heights were to be increased to accommodate increased density.

◊ **Ability to meet stated objectives**. Although this alternative makes physical changes to the areas proposed for development, it nonetheless contemplates development for a mix of residential and non-residential uses. This alternative, however, would not meet a number of project objectives. For example, this alternative would not provide the same degree or potential variety of housing types as the proposed project and would not provide the same range of housing opportunities to the degree provided by the project. Moreover, because it would result in the removal of the existing El Rancho Verde Royal Vista Golf Course and would not provide a neighborhood park and recreational center, this alternative would not provide the same amount of recreational amenities as the proposed project. This alternative would not meet the objective of responding to the need for active adult communities in the area and would not provide the City with a redesigned and enhanced golf course facility.

Given the smaller footprint of development contemplated under this alternative and the related reduction in dwelling units and square footage, it may be more difficult for the reduced development to feasibly finance the infrastructure facilities proposed by the project, including levee work (as the costs of providing the same degree of infrastructure would be imposed on fewer residences and

non-residential development. A variation of this alternative would thus allow for the same number of dwelling units and the same square footages to be developed on the smaller footprint.

- **Habitat Avoidance Alternative No. 3 (Avoidance of Jurisdictional Waters)**. The objective of this alternative is to avoid or substantially reduce significant project-related impacts affecting on-site waters of the United States (WoUS) under the jurisdiction of the ACOE and waters of the State (WoS) under the jurisdiction of the CDFG.

This alternative is depicted in Figure 7-4 (Conceptual "Avoidance of Jurisdictional Waters" Alternative) and its associated development assumptions are outlined in Table 7-6 ("Avoidance of Jurisdictional Waters" Alternative – Land Use and Development Assumptions). For those areas not avoided, this alternative assumes development in accordance with the proposed LCRSP.

Table 7-6
"AVOIDANCE OF JURISDICTIONAL WATERS" ALTERNATIVE LAND USE AND DEVELOPMENT ASSUMPTIONS[1]

Notation	Designation	Acreage	Density Assumptions	Dwelling Units	Square Footage
SFR-1	Single-Family Residential 1	147.2	3.6 DU/acre	530	-
SFR-2	Single-Family Residential 2	236.7	6.3 DU/acre	1,491	-
SFR-3	Single-Family Residential 3	178.7	10.9 DU/acre	1,948	-
MFR	Multi-Family Residential	32.1	17.2 DU/acre	552	-
VC	Village Center Commercial	127.2	Varies	1,325	730,893
ES	Elementary School	10.0	-	-	-
ES/MS	Elementary/Middle School	14.0	-	-	-
OS	Open Space	5.0	-	-	-
OS/R	Open Space/Recreation	287.0	-	-	-
OS/JU	Open Space/Joint Use	17.1	-	-	-
	Non-WoUS and WoS within 100 feet of levee	97.9	-	-	-
	Preserved Areas	380.7	-	-	-
	Preserved Areas that may contain WoUS/WoS not delineated	678.8	-	-	-
	WoUS/WoS within 100 feet of levee	0.4	-	-	-
	Preserved WoUS/WoS	125.5	-	-	-
	Roads	109.0	-	-	-
Total		2,447.3		5,846	730,893

Notes:
1. Based on the same density and development assumptions presented in Table 2-1 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan Summary).

Source: KTGY Group, Inc.

◊ **Alternative description**. The objective of this alternative is to minimize impacts to jurisdictional waters. The manner in which that objective is effectuated in each neighborhood is described below.

Due to the topography in Neighborhood I, much of this area contains jurisdictional waters (many of which are ephemeral). Because it would be impossible to develop those areas and avoid disturbance, much of Neighborhood I has been identified as a "preserved area." In that section of Neighborhood I located to the west of the I-15 Freeway, this alternative would reroute a portion of Sycamore Creek to its historical alignment. As a result of that proposed re-alignment, the area immediately adjacent to the I-15 Freeway has been identified as a "developable area." With respect to the area located further to the east, although the jurisdictional waters in that area are avoided, the quality of the habitat surrounding those drainages is not high. Although impacts to those drainages would be avoided, the resulting habitat benefit is not substantial.

The only areas in which jurisdictional waters are present in Neighborhood II are near portions of the proposed levee and along the northwest section of the site. In the northwest section, waters subject to regulation by the CDFG are present. Impacts to WoS are avoided in Neighborhood II, and even though there are pockets of land that do not exhibit jurisdictional characteristics in the northwest corner, development is considered infeasible due to the inability to access it given the adjacent jurisdictional area. The accompanying exhibit also depicts a small amount of WoUS and WoS (within 100 feet of the project's propose levee) that would be impacted by levee construction and impacts to off-site jurisdictional areas (caused by constructing a connection to the Cemex USA levee).

In Neighborhood III, with the exception of a small area impacted by levee construction, the jurisdictional waters are for the most part avoided through the realignment of this alternative's levee placement. Due to the alignment of the existing levee, this alternative's proposed levee line in this area cannot be sited in a manner to both completely avoid impacts to jurisdictional waters and connect to the existing facilities. Similarly, in Neighborhood IV, with the exception of a small area impacted by levee construction, the jurisdictional waters are for the most part avoided. Due to the alignment of the existing levee, this alternative's proposed levee line cannot be sited in such a way to both avoid impacts and connect to the existing facilities and structures.

Under this alternative, a total of 5,846 new dwelling units and 730,893 square feet of non-residential use could be developed on the project site. Assuming one new primary job for every 250 square feet on non-residential use, a total of 2,924 jobs would be created, producing a jobs-housing ratio of about 0.50

◊ **Alternative environmental impact analysis**. Presented below is a qualitative, comparative analysis of this alternative's potential ability to eliminate or substantially reduce those significant project-related impacts identified herein.

- **Biological resources**.[17] Although this alternative substantially minimizes impacts to jurisdictional waters, it would not entirely avoid those impacts altogether. Implementation of the "avoidance of jurisdictional waters"

[17]/ Although determined not to be significant, after mitigation, based on the project's environmental analysis, biological resource impacts are considered herein because this alternative has been formulated, as an alternative to mitigation, for the purpose of avoiding or substantially lessening the project's potentially significant biological resource impacts.

alternative would continue to predicate the need for alternative-based mitigation in order to address biological resources impacts.

- **Air quality**. Under this alternative, the number of dwelling units and total square footage of non-residential land uses (5,846 dwelling units and 730,893 square feet) would be incrementally less than those associated with the "avoidance of SBKR-LBV-occupied habitat" alternative (7,484 dwelling units and 820,540 square feet) and those associated with the proposed LCRSP (8,407 dwelling units and 849,420 square feet). Conversely, this alternative would be incrementally greater than those associated with the "avoidance of RAFSS areas" alternative (4,873 dwelling units and 602,827 square feet). As a result, under this alternative, construction-term and operational air quality impacts would be incrementally less than those associated with both the proposed project and the "avoidance of SBKR-LBV-occupied habitat" alternative but incrementally greater than those associated with the "avoidance of RAFSS areas" alternative. It would, however, be anticipated that short-term and long-term air quality impacts would remain at levels in exceedance of the SCAQMD's recommended threshold standards and would be similar to the proposed project.

- **Noise**. Under this alternative, the number of dwelling units and total square footage of non-residential land uses (5,846 dwelling units and 730,893 square feet) would be incrementally less than those associated with the "avoidance of SBKR-LBV-occupied habitat" alternative (7,484 dwelling units and 820,540 square feet) and those associated with the proposed LCRSP (8,407 dwelling units and 849,420 square feet). Conversely, this alternative would be incrementally greater than those associated with the "avoidance of RAFSS areas" alternative (4,873 dwelling units and 602,827 square feet). As a result, under this alternative, as they relate to Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Adler Avenue and Locust Avenue), mobile source noise impacts would be incrementally less than those associated with the proposed project and the "avoidance of SBKR-LBV-occupied habitat" alternative. Due to the amount of traffic that would be generated by this alternative, it is anticipated that operational noise impacts along Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Adler Avenue and Locust Avenue) would remain significant and would be similar to the proposed project.

- **Growth inducement**. Under this alternative, the number of dwelling units (5,846 dwelling) is substantially greater than would otherwise be developed on the project site under the "existing zoning designations" alternative (2,215 dwelling units). However, under this alternative, the total square footage of non-residential land uses (730,893 square feet) is less than would otherwise be developed on the project site under the "existing zoning designations" alternative (1,097,418 square feet). Although there would be an estimated 1,466 job reduction in primary on-site employment, the introduction of an additional 3,613 dwelling units would result in a substantial increase in residential population.

For those areas which are not avoided, this alternative assumes development in accordance with the proposed LCRSP. Similar to the LCRSP, the proposed land-use policy changes will induce substantial population growth. As a result, this alternative's growth-inducing impact is deemed to be significant.

◊ **Additional impacts**. No additional significant environmental impacts would be predicted to occur under this alternative. As with the other "habitat avoidance" alternatives, although each alternative may result in a substantial reduction to those biological resource impacts specifically addressed by the stated alternative, implementation would not result in that impact's avoidance. Additionally, selection of this alternative would not, in and of itself, reduce any of the proposed project's significant or potentially significant unmitigated impacts to a less-than-significant level.

Although this alternative assumes a pro rata reduction in dwelling units and non-residential square footage, as compared to the proposed project, this analysis also examines the option of developing the same number of dwelling units and square footage of development as proposed by the project on this smaller footprint. Those environmental impacts which are a consequence of the number of dwelling units and/or square footage of development, such as vehicle trips (traffic), mobile source air emissions, impacts to schools, utilities, and recreation, would be the same as the proposed project.

Implementing the option of building the proposed project on a smaller footprint would require changes in the land-use plan in order to increase the intensity of development in some areas and may change the mix of residential uses currently assumed for this alternative. These changes could result in areas of higher density housing being placed adjacent to existing single-family neighborhoods. Higher density residential development would likely mean more single-family attached dwelling units or multi-family residential development in place of lower-density single-family detached units and could potentially result in additional land-use and aesthetic impacts if building heights were to be increased to accommodate increased density.

◊ **Ability to meet stated objectives**. Although this alternative makes physical changes to the areas proposed for development, it nonetheless contemplates development for a same mix of residential and non-residential uses and intensities (but with a reduction in the number of dwelling units) as that associated with the proposed project. Because of the extent of jurisdictional waters in the area of Neighborhood I, however, the development proposed herein would consist of a small non-residential area and an even smaller residential area and would, therefore, not likely allow for the attainment of the Lead Agency's objective of designing a new northern gateway to the City. From a land-use planning and design perspective, and objective of the project is the development of a community that promotes walking and alternative modes of transportation to reduce vehicle trips and promote sustainability. In order to accommodate the level of development under this alternative while also providing adequate levee protection, this alternative would result in the loss of the greenbelt/paseo included in the proposed project and would place residential

development immediately adjacent to the main arterial and levee in Neighborhood III. Pedestrian and bicycle opportunities would be reduced. Loss of the paseo would also eliminate the environmentally-preferred water quality treatment feature of the bioswale in Neighborhood III.

Because this alternative assumes a pro rata reduction in dwelling units and non-residential square footage, as compared to the proposed project, it does not comparably respond to the Lead Agency's and Applicant's objectives of providing additional housing opportunities to address regional population growth.

Given the smaller footprint of development contemplated under this alternative and the related reduction in dwelling units and square footage, it may be more difficult for the reduced development to feasibly finance the infrastructure facilities proposed by the project, including levee work (as the costs of providing the same degree of infrastructure would be imposed on fewer residences and non-residential development. A variation of this alternative would thus allow for the same number of dwelling units and the same square footages to be developed on the smaller footprint.

7.5.4 "Reduced Residential/Increased Commercial" Alternative[18]

Although the possible regional benefits of this alternative may not be perceptible based on a project-level analysis, the objective of this alternative is to promote a reduction in the number of vehicle trips, vehicle miles traveled (VMT), and traffic congestion through the promotion of additional employment opportunities within the City. By promoting a jobs-housing balance, this alternative seeks to avoid or substantially reduce significant or potentially significant impacts associated with a regional or subregional jobs-housing imbalance, including those potential traffic and air quality impacts associated therewith.

This alternative is depicted in Figure 7-5 (Conceptual "Reduced Residential/Increased Commercial" Alternative) and its associated development assumptions are outlined in Table 7-7 ("Reduced Residential/Increased Commercial" Alternative). Except where new industrial uses are proposed, this alternative assumes development in accordance with the proposed LCRSP.

- **Alternative description**. SCAG's Compass Blueprint states that balancing the location of jobs and housing is an important strategy in meeting regional goals or relieving congestion, reducing commute times and vehicle trips, encouraging alternative modes of transportation, and improving air quality. Similarly, the 1996 RCPG states that it is SCAG's policy to "encourage employment development in job-poor localities" (1996 RCPG, Policy, 3-26). In addition, it is the City's policy to "improve the balance between jobs and housing in order to create a more efficient urban form and/or reduce the vehicle miles traveled" (Conservation Element, Goal 5.2) and "Improve the jobs-housing balance

[18]/ This alternative has been formulated in response to the Lead Agency's identification of a number of significant and potentially significant transportation, traffic, and air quality impacts. Those impacts include, but may not be limited to, project-related impacts on: (1) transportation and traffic (Impacts 6-3 and 6-4); and (2) air quality (Impacts 7-4 and 7-10). With regards to transportation and traffic impacts, the EIR indicates that each of those potentially significant impacts can be mitigated to a less-than-significant level through the implementation of specified mitigation measures. Prior to consideration of this EIR and those mitigation measures by the Lead Agency's decision-making body, the Department has sought to explore whether there may also exist project alternative that might also reduce those impacts to below a level of significance.

through new development and redevelopment project review and actions" (Conservation Element, Policy 5.2.6). The County Housing Element states that the County seeks to "[f]acilitate a job/housing balance with the objective of a ratio of 1.2 jobs to 1 dwelling unit."[19]

Table 7-7
"REDUCED RESIDENTIAL / INCREASED COMMERCIAL" ALTERNATIVE LAND USE AND DEVELOPMENT ASSUMPTIONS[1]

Notation	Designation	Acreage	Density Assumptions	Dwelling Units	Square Footage
SFR-1	Single-Family Residential 1	132.2	3.6 DU/acre	476	-
SFR-2	Single-Family Residential 2	277.1	6.3 DU/acre	1,746	-
SFR-3	Single-Family Residential 3	167.5	10.9 DU/acre	1,826	-
MFR	Multi-Family Residential	41.7	17.2 DU/acre	717	-
VC	Village-Center Commercial	141.0	Varies	1,325	849,420
I	Light Industrial[2]	284.1	-	-	6,187,698
ES	Elementary School	10.0	-	-	-
ES/MS	Elementary/Middle School	14.0	-	-	-
OS	Open Space	908.0	-	-	-
OS/R	Open Space/Recreation	320.2	-	-	-
OS/JU	Open Space/Joint Use	17.0	-	-	-
	Roads	134.5	-	-	-
Total		2,447.3		6,090	7,037,118

Notes:
1. Based on the same density and development assumptions presented in Table 2-1 (Lytle Creek Ranch Specific Plan – Conceptual Land-Use Plan Summary).
2. Light industrial assumes a 0.5 FAR.

Source: KTGY Group, Inc.

As indicated in Table 3-5 (Population, Household, and Employment Forecasts for the City of Rialto – 2008 Regional Transportation Plan), between 2010 and 2030, based on SCAG's growth projections, the LCRSP project will consume 83.1 percent of all the housing growth but only 24.2 percent of the employment growth over that time period. Although the City is projected to remain "balanced" during that time period, the proposed project does not, in and of itself, promote the attainment of those goals. During that same time period, unincorporated County areas, which are not categorized as "jobs poor," will continue to move further away from a jobs-housing balance.

This alternative serves to increase the on-site acreage allocated to those land uses that would accommodate jobs creation, decrease the acreage of land uses that would allow new residential development and, in so doing, shift the balance between those two variables in favor of jobs over housing.

Under this alternative, a total of 6,090 dwelling units and 7,037,118 square feet of commercial and light industrial uses could be developed on the project site. Assuming one new primary job for every 250 square feet on commercial use and one new primary job for every 500 square feet of light industrial use, a total of 15,773 jobs would be

[19]/ *Op. Cit*., County of San Bernardino Housing Element, Housing Program 13-d, p. 171.

created, producing a jobs-housing ratio of about 2.59. Because that figure may over-estimate the actual number of new jobs that would likely be created under this alternative, a more precise estimate can be derived based on recent SCAG data and the land-use assumptions presented herein.

Based on the employee per square foot generation rates presented in Table 4.2-19 (Derivation of Square Feet per Employee based on Average Employees per Acre and Average Floor-Area-Ratio for San Bernardino County) and the alternative-based land-use assumptions presented in Table 7-7 ("Reduced Residential/Increased Commercial" Alternative), a more precise estimation of new permanent jobs can be produced for this alternative. Assuming that the "Village Center Commercial (VC)" district were to be equally divided between low-rise offices and other retail services and that "light manufacturing" is synonymous with "light industrial," as indicated in Table 7-8 (Estimated Number of New Primary Job Opportunities Associated with the "Reduced Residential/Increased Commercial" Alternative), a total of between 3,598 and 12,811 new primary jobs would be generated under this alternative. Applying the lower of the two job estimates, a jobs-housing ratio of 0.91 can be calculated. Applying the higher of the two job estimates, a jobs-housing ratio of 2.10 can be calculated.

Table 7-8
ESTIMATED NUMBER OF NEW PRIMARY JOB OPPORTUNITIES ASSOCIATED WITH THE "REDUCED RESIDENTIAL / INCREASED COMMERCIAL" ALTERNATIVE

Land-Use Category	Jobs per Acre			Jobs per Square Feet		
	Acres	Employees/ Acre[1]	Jobs	Square Feet	Square Feet/ Employee[1]	Jobs
Light Industrial Assumption						
Other Retail/Service	70.5	9.98	704	424,710	124	3,425
Low-Rise Office	70.5	16.80	1,184	424,710	697	609
Light Manufacturing	284.1	6.92	1,966	6,187,698	705	8,777
Total	425.1		3,854	7,037,118		12,811
General Warehousing Assumption						
Other Retail/Service	70.5	9.98	704	424,710	124	3,425
Low-Rise Office	70.5	16.80	1,184	424,710	697	609
Warehousing	284.1	6.02	1,710	6,187,698	1,195	5,178
Total	425.1		3,598	7,037,118		9,212

Notes:
1. Factors derived from The Natelson Company's "Employment Density Study Summary Report" (October 31, 2001) (Table 8A, p. 21).

Source: Environmental Impact Sciences

If general warehousing and distribution center facilities were to be developed on the project site as the primary non-residential land uses, those facilities would be developed in general accordance with the Western Riverside Council of Governments' "Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities." Those guidelines include the following goals: (1) Minimize exposure to diesel emissions to neighbors that are situated in close proximity to the warehouse/distribution center; (2) Eliminate diesel trucks from unnecessarily traversing through residential neighborhoods; (3) Eliminate trucks from using residential areas and repairing vehicles on the streets; (4) Reduce and/or eliminate diesel idling within the warehouse/distribution center; (5)

Establish a diesel minimization plan for on- and off-street diesel mobile sources to be implemented with new projects; (6) Establish an education program to inform truck drivers of the health effects of diesel particulate and the importance of reducing their idling time; and (7) Establish a public outreach program and conduct periodic community meetings to address issues from neighbors.[20]

- **Alternative Environmental Impact Analysis**. Presented below is a qualitative, comparative analysis of this alternative's potential ability to eliminate or substantially reduce those significant project-related impacts identified herein.

  - ◊ **Transportation and Traffic**.[21] Under this alternative, 6,090 dwelling units and 7,037,118 square feet of non-residential uses would be developed on the project site. Decreasing the number of residential units and increased on-site employment opportunities could result in a reduction in the number of daily vehicle trips, VMT, and traffic congestion in the general project area. Although this alternative would reduce the number of trips and VMT, it would not, in and of itself, result in the avoidance of identified significant and potentially significant impacts. Implementation of the "reduced residential/increased commercial" alternative would continue to predicate the need for alternative-based mitigation in order to address transportation and traffic impacts.

  - ◊ **Air Quality**. Based on the size of the development area, the nature of the proposed improvements, and the number of vehicle trips associated with those uses, construction-term and operational air quality impacts associated with this alternative would continue to occur at levels about the SCAQMD's recommended threshold of significance criteria. In addition, based on increased truck traffic, under this alternative, diesel PM emissions would be expected to increase over project-related levels and the extent of toxic air contaminants from diesel emissions would be greater than the proposed project.

    Because this alternative would further local and regional policies promoting the attainment of a jobs-housing balance, when compared with the proposed project, this development option would likely better promote the attainment of the 2007 AQMP.

  - ◊ **Noise**. Under this alternative, a substantial increase in traffic volumes along Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Adler Avenue and Locust Avenue) would be anticipated as a result of the introduction of new residential and non-residential uses located along and tributary to those street segments. As a result, as they relate to Country Club Drive (north of Riverside Avenue) and Riverside Avenue (between Adler Avenue and Locust Avenue), mobile source noise impacts associated with this alternative would likely remain significant. Moreover, because some of the commercial and industrial uses may operate on a 24-hour and 7-day basis, there is the potential

[20]/ Western Riverside Council of Governments, Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities, Final, September 12, 2005.

[21]/ Although determined not to be significant, after mitigation, based on the project's environmental analysis, transportation and traffic impacts are considered herein because this alternative has been formulated, as an alternative to mitigation, for the purpose of substantially lessening the project's total vehicle miles traveled and the corresponding significant air quality impacts attributable to project-generated mobile source emissions.

for increased noise impacts during evening and weekend hours that would not be generated by the proposed project or an alternative with a greater residential component.

◊ **Growth Inducement**. Under this alternative, the number of dwelling units and total square footage of non-residential uses (6,090 dwelling and 7,037,118 square feet) is substantially greater than would otherwise be developed on the project site under the "existing zoning designations" alternative (2,215 dwelling units and 1,097,418 square feet). The introduction of an additional 3,875 dwelling units and 5,939,700 square feet of non-residential use would result in a substantial increase in residential population and on-site employment. As a result, this alternative's growth-inducing impact is deemed to be significant.

- **Additional Impacts**. The introduction of 6,187,698 square feet of light industrial uses would result in the increased transport, storage, use, consumption, and disposal of hazardous materials and wastes in proximity to existing and proposed residential areas. Although existing laws and protocols govern the use, storage, transport, and disposal of those materials, based on the substantial increase in the industrial square footage and the presence of sensitive receptors, hazardous material impacts would likely be elevated to a level of significance.

  The additional industrial development may also result in increased emissions of GHGs and this alternative may be less able to meet the objectives of AB 32 as compared to the proposed project. This alternative would site industrial uses adjacent to a residential community. In addition, this alternative would include the placement of industrial uses in Neighborhood III which could result in land-use compatibility concerns as well as increased noise and air quality impacts that may affect the proposed on-site residential uses. The light industrial uses would introduce additional parking, requiring additional night lighting due to extended hours of operation; therefore, greater impacts would be anticipated with regards to aesthetics. Because light industrial uses would generally require increased impermeable areas as compared to the proposed project, the volume of storm water runoff would be expected to increase.

- **Ability to Meet Stated Objectives**. This alternative would change the balance between residential and commercial uses and add additional light industrial uses which are not consistent with the objectives of enhancing residential neighborhoods and responding to the need for new housing opportunities to address anticipated regional growth. An objective of the Applicant is to provide a residentially-focused community with attractive amenities that is compatible with open space and habitat protection. Increased industrial development would, therefore, be inconsistent with achieving that objective. This alternative would also include industrial uses in Neighborhood I and, as such, would not provide the amenities contemplated by the proposed project for the development of a new northern gateway to the City. This alternative would also not meet the objective of establishing a mix of uses that meet the City General Plan objective regarding community character and pedestrian-friendly design to the same degree that would be met by the proposed project. While this alternative does meet some of the Lead Agency's and the Applicant's stated objectives, the increased industrial uses would be inconsistent with attainment of the objective of protecting and enhancing residential neighborhoods and would not comparably respond to the need for additional housing.

7.6 Environmentally Superior Alternative

The goal of this alternatives analysis has been to identify and examine a range of reasonable alternatives that would potentially avoid or substantially lessen one or more of the significant environmental effects associated with the approval, construction, and operation of the proposed project. In formulating the alternatives examined herein, it has been the Lead Agency's intent to assess whether alternatives to the proposed project could result in the avoidance or substantial reduction of one or more of the significant effects of the proposed project and to evaluate the comparative merits of the alternatives.

For the purpose of this analysis, all significant or potentially significant project-related environmental effects are given equal weight and balance, such that no single impact is assumed to be more or less environmentally important that another significant effect. As a result, for the purpose of comparison, taking into consideration that some of the examined alternatives could potentially result in additional or increase the severity of other impacts, the alternatives analysis has considered whether any of the alternatives could avoid or substantially reduce the significant or potentially significant impacts of the proposed project.

The Lead Agency's assessment of each alternative's comparative ability to reduce or substantially avoid those unavoidable, adverse, significant or potentially significant environmental impacts, are included in Table 7-1 (Comparative Evaluation of Project Alternatives – Environmental Considerations). As indicated therein, the "environmentally superior" alternative is the "no project/no development" alternative.

Pursuant to the State CEQA Guidelines (14 CCR 15126.6[e][2]) if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. As indicated in Table 7-1 (Comparative Evaluation of Project Alternatives – Environmental Considerations), excluding the "no project/no development" alternative, the "existing zoning designations" alternative results in the next fewest significant or potentially significant environmental effects. Implementation of the "no project/existing zoning designations" alternative would not, however, result in the elimination of all significant or potentially significant impacts and would continue to necessitate the incorporation of mitigation measures similar to those associated with the proposed project.

Although deemed "environmentally superior" to the proposed project, the "no project/existing zoning designations" alternative fails to allow for the attainment of certain stated Lead Agency and Applicant objectives upon which the proposed project is derived.

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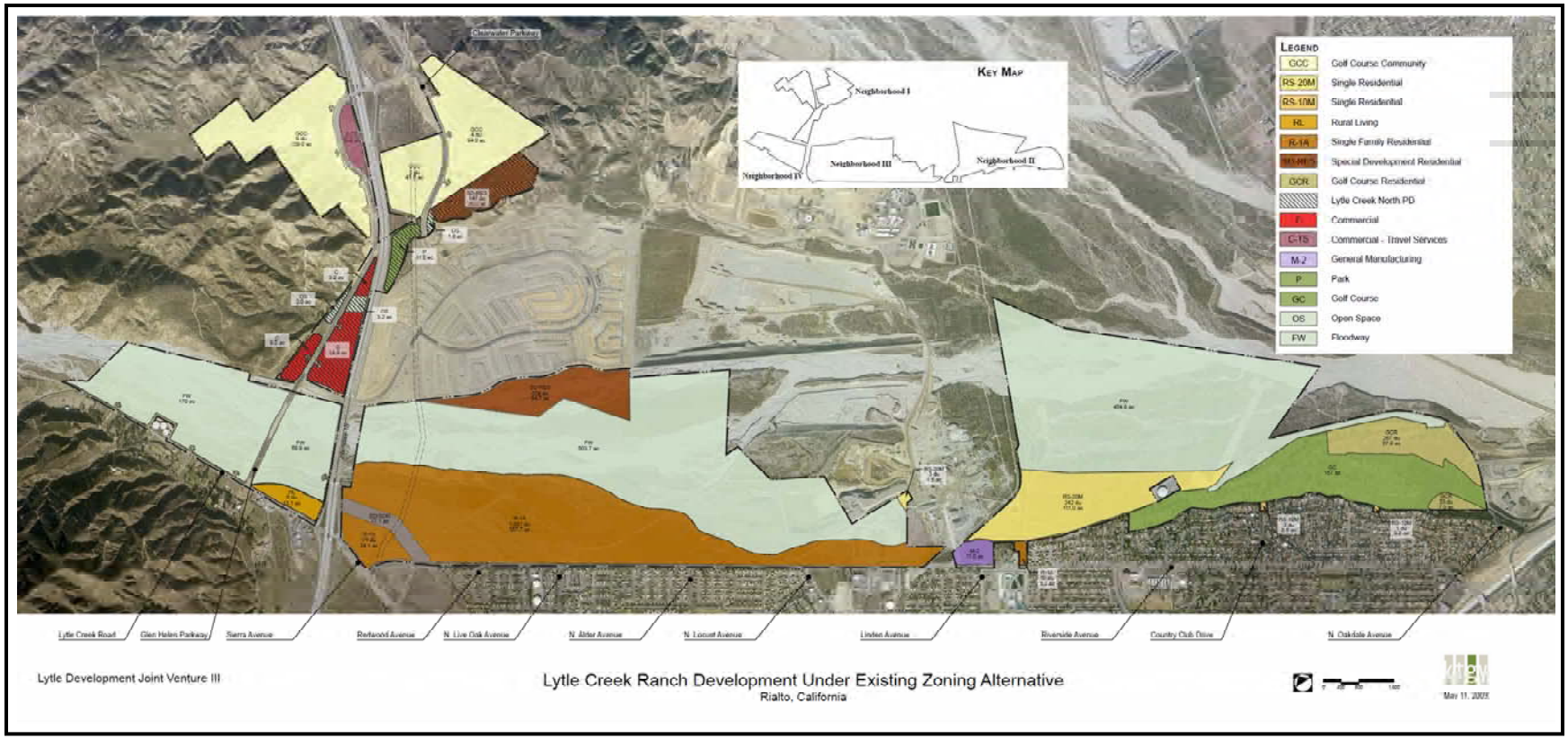

Figure 7-1
CONCEPTUAL "NO PROJECT/EXISTING ZONING DESIGNATIONS" ALTERNATIVE
Source: Lytle Development Joint Venture III

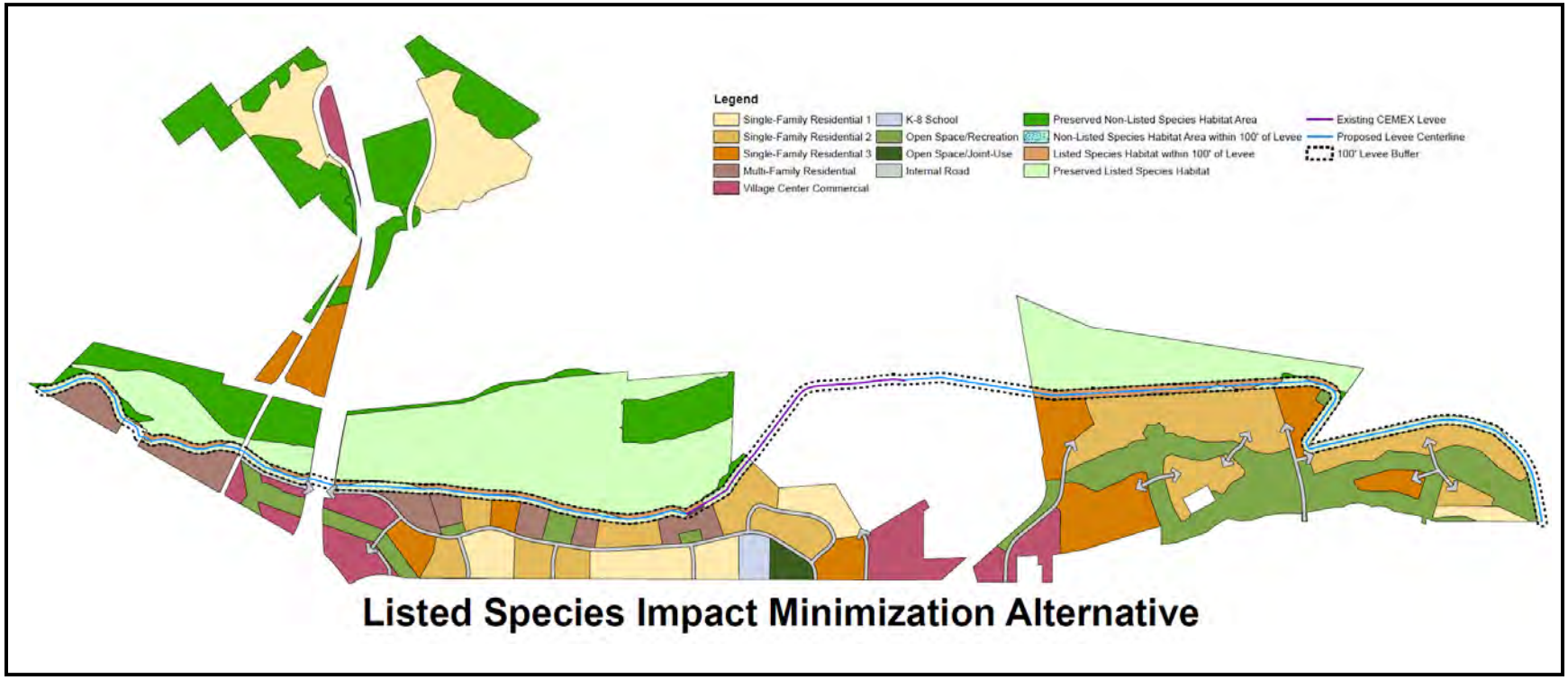

Figure 7-2
CONCEPTUAL "AVOIDANCE OF SBKR/LBV-OCCUPIED HABITAT" ALTERNATIVE
Source: Lytle Development Joint Venture III

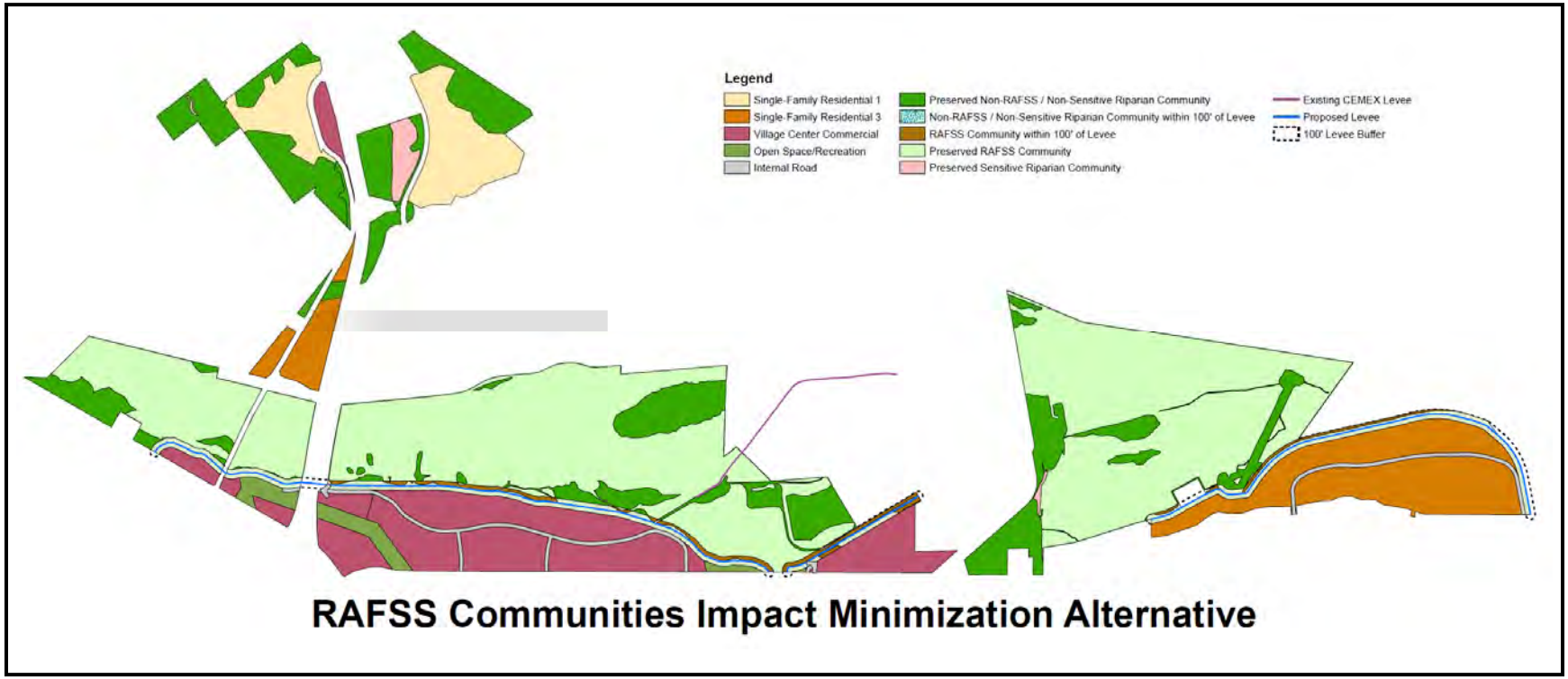

Figure 7-3
CONCEPTUAL "AVOIDANCE OF RAFSS AREAS" ALTERNATIVE
Source: Lytle Development Joint Venture III

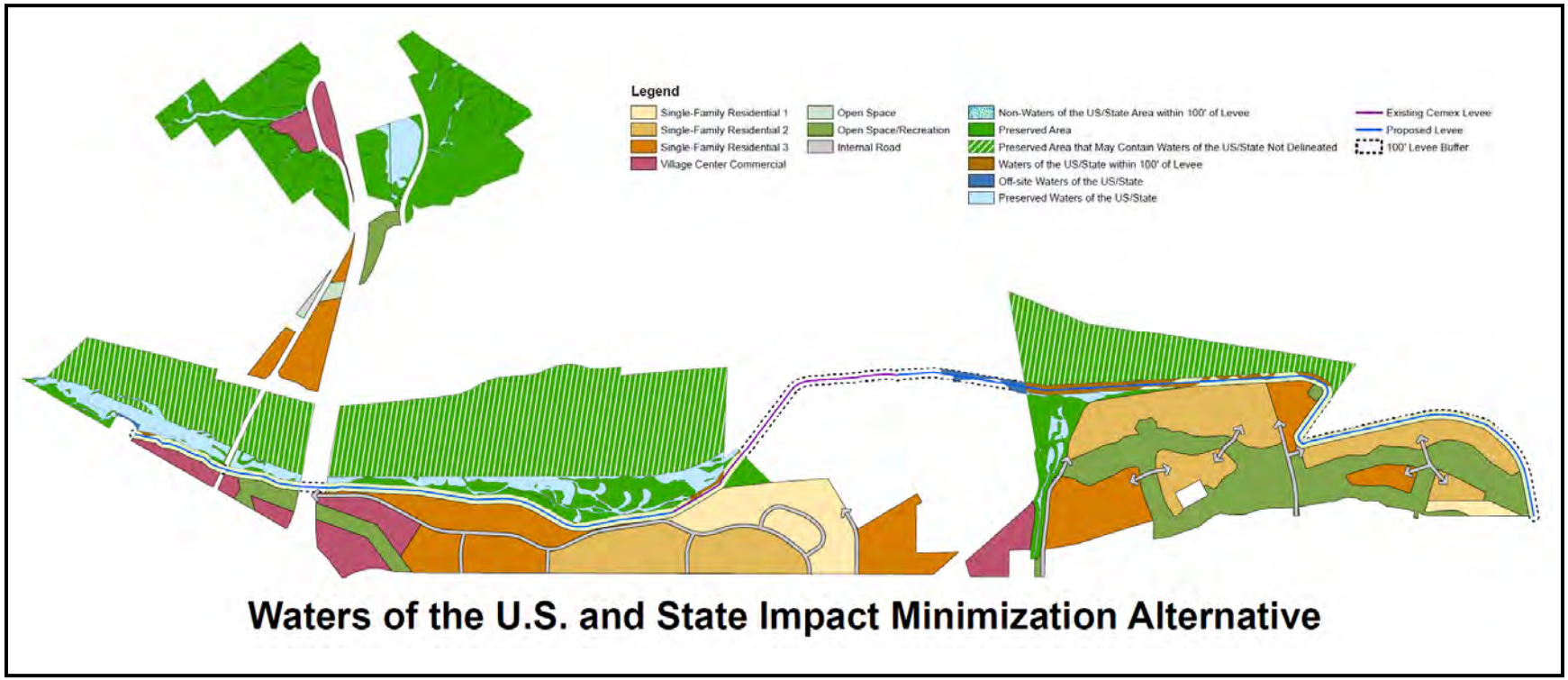

Figure 7-4
CONCEPTUAL "AVOIDANCE OF JURISDICTIONAL WATERS" ALTERNATIVE
Source: Lytle Development Joint Venture III

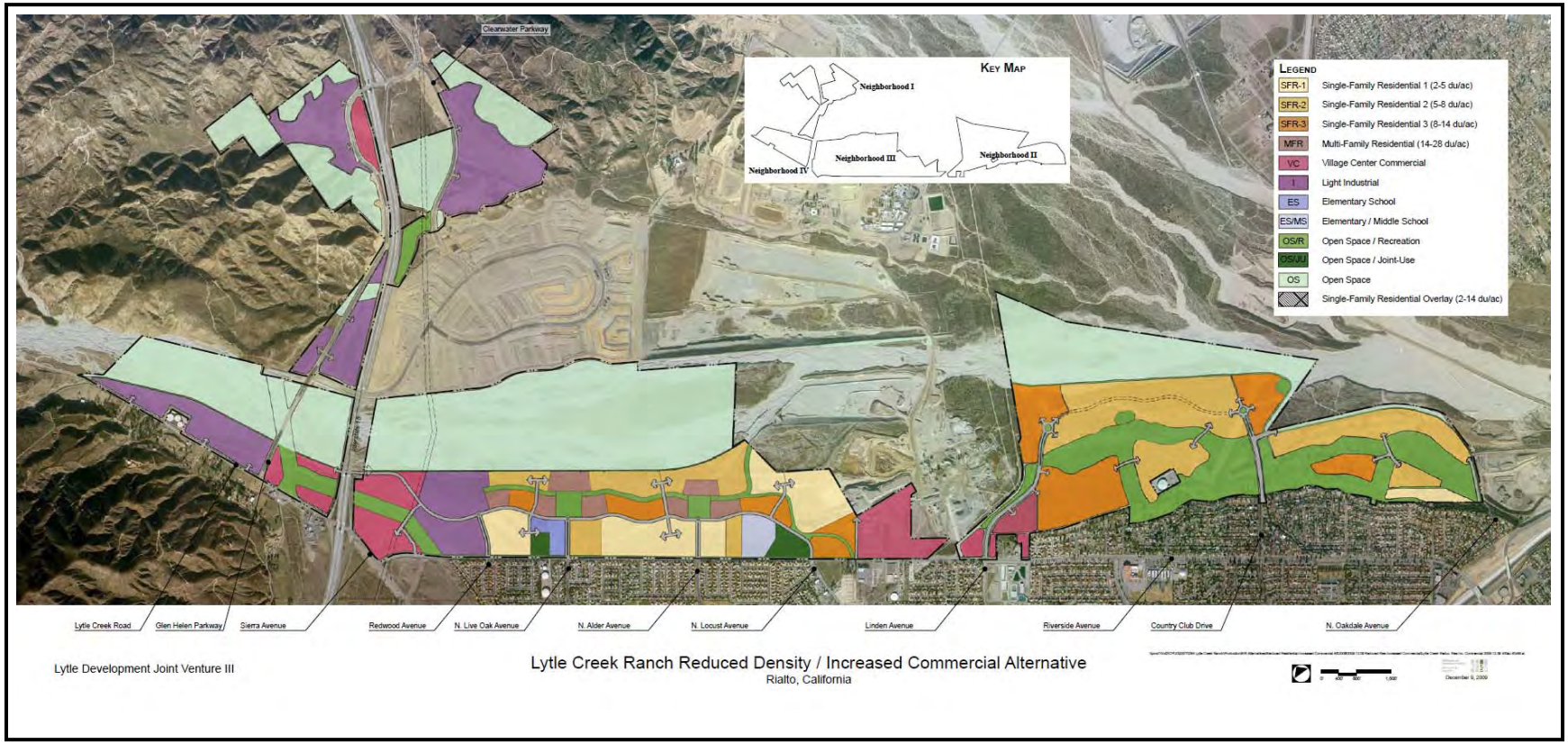

Figure 7-5
CONCEPTUAL "REDUCED RESIDENTIAL / INCREASED COMMERCIAL" ALTERNATIVE
Source: Lytle Development Joint Venture III

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8.0 LIST OF PREPARERS

Presented in Table 8-1 (Project Participants) is a listing of those parties, firms, and organizations associated with the Lead Agency and the Applicant that have submitted material for the Lead Agency's consideration or participated, either directly or indirectly, in the preparation of environmental or other documentation associated with the proposed project. Not individually listed herein are the representatives of the various City divisions and departments and the various divisions and departments of those Responsible Agencies that contributed to the preparation of this EIR.

Table 8-1
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Source: Environmental Impact Sciences

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10.0 Acronyms and Abbreviations

A

A	Applicant
AAA	Area Agency on Aging
AASHTO	American Association of State Highway and Transportation Officials
AAQS	ambient air quality standards
AB	Assembly Bill
ACTMs	airborne toxic control measures
ALUCP	Airport Land Use Compatibility Plan
ADA	Americans with Disabilities Act of 1990
ADA Standards	ADA Standards for Accessible Design
ADC	average daily cover
ADDWF	average daily dry-weather flow
ADT	average daily trips
AES	Advanced Engineering Software, Inc.
AF	acre-feet
AFSS	alluvial fan sage scrub
AFY	acre-feet per year
AG	Agriculture
AHMs	acutely hazardous materials
AIA	American Institute of Architects
ALUC	San Bernardino County Airport Land Use Commission
ALUCP	airport land-use compatibility plan
AMSL	above mean sea level
ANSI	American National Standards Institute
AoA	Federal Administration on Aging
APCDs	air pollution control districts
APEFZA	Alquist-Priolo Earthquake Fault Zoning Act
Applicant	Lytle Development Joint Venture III
APS	alternative planning strategy or auxiliary power system
AQMDs	air quality management districts
ARAs	aggregate resource areas
ASHRAE	American Society of Heating Refrigerating & Air Conditioning Engineers
Association	Southern California Association of Governments or Upper Santa Ana Water Resources Association
ASTM	American Society for Testing and Materials
ASTM F1487	Standard Specification for Playground Equipment for Public Use
ASTM F1951	Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment
AVR	average vehicle ridership

B

BA	biological assessment
BAEBD	Building America Research Benchmark Definition
Basin	South Coast Air Basin
BAU	business as usual
BFEs	base flood elevations
bg	background
BLM	United States Department of the Interior - Bureau of Land Management
BMES	Building Material Emissions Study
BMPs	Best Management Practices
Board	San Bernardino County Board of Supervisors
BRA	biological resource assessment
bgs	below ground surface

C

C	Commercial
CAAQS	California Ambient Air Quality Standards
CAFÉ	corporate average fuel economy
CAG	California Attorney General
CAGN	coastal California gnatcatcher
CalEPA	California Environmental Protection Agency
CALFIRE	California Department of Forestry and Fire Protection
Calnev	Calnev Pipe Line, LLC
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association
CAT	Climate Action Team
CBIA	California Building Industry Association
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCAP	Climate Change Action Plan
CCAR	California Climate Action Registry
CCH	chamise chaparral
CCH/NNG	chamise chaparral/non-native grassland
CCH/R	chamise chaparral/ruderal
CCR	California Code of Regulations
CCSP	United States Climate Change Science Program
CCTP	Climate Change Technology Program
CDBG	Community Development Block Grant
CDA	California Department of Aging
CDC	California Department of Conservation or Centers for Disease Control and Prevention
CDE	California Department of Education
CDF	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CDE	California Department of Education
CDPH	California Department of Public Health
CEC	California Education Code or California Energy Commission
Cemex USA	Cemex USA Construction Materials, Inc.
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act
CESA	California Endangered Species Act
CEUS	Commercial End-Use Survey
CFAI	Commission on Fire Accreditation International
CFD	community facilities district
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
C-G	General Commercial
CGA	Common Ground Alliance
CGB	California Green Builder Program
CGC	California Government Code
CGS	California Geological Survey
CH_4	methane

CHD	critical habitat designation
CHP	California Highway Patrol or combined heat and power
CHRIS-SBAIC	California Historical Resources Information System San Bernardino Archaeological Information Center
CI	combustion-ignition engine
CIPC	California Invasive Plants Council
City	City of Rialto
City General Plan	City of Rialto General Plan
City General Plan MEIR	Final Master Environmental Impact Report - City of Rialto General Plan Update
City Municipal Code	City of Rialto Municipal Code
CIWMB	California Integrated Waste Management Board
CLC	California Labor Code
CLOMA	conditional letter of map amendment
CMP	comprehensive management plan
CMRS	County Maintained Road System
CnD	Cieneba sandy loam, 9-15 percent slopes
CNEL	Community Noise Equivalency Level
CNG	compressed natural gas
CNRA	California Natural Resources Agency
CNU	Congress for the New Urbanism
CO	carbon monoxide
COG	council of governments
CO_2	carbon dioxide
CO2e	carbon dioxide equivalents
Commission	City of Rialto Planning Commission or California Public Utilities Commission
Council	City of Rialto City Council
County	County of San Bernardino
County CMP	San Bernardino County Congestion Management Program, 2005 Update
County Development Code	County of San Bernardino 2007 Development Code
County 2007 General Plan	County of San Bernardino 2007 General Plan
County General Plan FPEIR	Final Program Environmental Impact Report - San Bernardino County 2007 General Plan Program
County HMP	San Bernardino County Operational Area Multi-Jurisdictional Hazard Mitigation Plan
County Housing Element	County of San Bernardino Housing Element
CPC	California Penal Code
CPSC	United States Consumer Product Safety Commission
CPTED	crime prevention through environmental design
CPUC	California Public Utilities Commission
Cr	Cieneba – rock outcrop, complex
CRA	Colorado River Aqueduct
Cr+6	hexavalent chromium
CSA	County Service Area
CSAC	California State Association of Counties
CSBC	California Building Standards Code
CSC	California Building Standards Commission or California species of special concern
CSD	Community Service Districts
CSDP	comprehensive storm drain plans
CSDP 7	Comprehensive Storm Drain Plan 7
CSHP	California Statewide Housing Plan
CSP	corrugated steel pipe
CTP	San Bernardino/Riverside Comprehensive Transportation Planning

CTR	California Toxics Rule
CTS	Commercial/Travel Services
CUP	conditional use permit
CUPA	Certified Unified Program Agencies
CVC	California Vehicle Code
CWA	Federal Clean Water Act
CWC	California Water Code
CWPPs	community wildfire protection plans

D

D	disturbed
DAI	Developed Area Interface
dBA	decibels, A-weighted decibel scale
DDT	dichlorodiphenyltrichloroethane
DEIR	Draft Environmental Impact Report – Lytle Creek Ranch Specific Plan
De Minimus Permit	De Minimus Permit, NPDES CAG998001, Order No. R8-2003-0061
Department	City of Rialto Development Services Department – Planning Division
Development Code	County of San Bernardino 2007 Development Code
DGS	California Department of General Services
DHS	California Department of Health Services
DHW	domestic hot water
diesel PM	particulate matter from diesel-fueled engines
Director	City of Rialto Development Services Director
D/I-RAFSS	disturbed/intermediate Riversidian alluvial fan sage scrub
District	San Bernardino County Flood Control District
DMG	California Department of Conservation, Division of Mines and Geology
DOE	California Department of Education or United States Department of Energy
DOF	California Department of Finance
Draft 2005/2006 RCP	2006/2007 Regional Comprehensive Plan
DTSC	California Department of Toxic Substances Control
DU	dwelling units
DUEs	dwelling unit equivalents
DWR	California Department of Water Resources

E

EA	environmental assessment
EAP	Energy Action Plan
EAP II	Energy Action Plan II
EDD	California Economic Development Department
EE	energy efficiency
EGPR	Environmental Goals and Policy Report
EIA	United States Department of Energy - Energy Information Administration
EIR	environmental impact report
EIS	environmental impact statement
EISA	Energy Independence and Security Act of 2007
EMA	emergency medical assistance
EMFs	electromagnetic fields
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
ERVSP	El Rancho Verde Specific Plan
ERVSP FEIR	Final Environmental Impact Report - El Rancho Verde Specific Plan
EVTM	East Valley Travel Forecast Model

F

F	Fahrenheit

FAA	Federal Aviation Administration
FAR	floor-area-ratio
FBI	Federal Bureau of Investigation
FC	federal candidate species
FCC	Federal Communications Commission
FEIR	Final Environmental Impact Report – Lytle Creek Ranch Specific Plan
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FESA	Federal Endangered Species Act of 1973
FFPD	Fontana Fire Protection District
fg	foreground
FHSZs	Fire Hazard Severity Zones
FIND	SCAQMD Facility Information database
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
Forest Plan	**"**Land Management Plan, Part 1 Southern California National Forests Visions: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-075" (United States Department of Agriculture, Forest Service, September 2005); "Land Management Plan, Part 2, San Bernardino National Forest Strategy, R5-MB-079" (United States Department of Agriculture, Forest Service, September 2005); "Land Management Plan – Part 3 Design Criteria for Southern California National Forests: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernardino National Forest, R5-MB-080" (United States Department of Agriculture, Forest Service, September 2005); and "Record of Decision – San Bernardino Forest Land Management Plan, R5-MB-084" (United States Department of Agriculture, Forest Service, September 2005)
Forest Service	United States Forest Service
FPD	federally proposed for delisting
FPE	federally proposed for listing as endangered
FP1	Flood Plain 1
FPPA	Farmland Policy Protection Act
fps	feet per second
FPT	federally proposed for listing as threatened
FR	Federal Register
FRA	Federal Railroad Administration <u>or</u> Federal Responsibility Areas
FSC	federal Species of Concern
FSRS	Fire Suppression Rating Schedule
FS3	Fire Safety Area 3
FT	federally listed as threatened
FTA	Federal Transit Administration
FTE	full-time equivalent
FUSD	Fontana Unified School District
FW	Floodway
FHWA	Federal Highway Administration
FUSD	Fontana Unified School District
FWC	Fontana Water Company
FY	Fiscal Year

<u>G</u>

g	gravity
g/bhp-hr	gram per brake horsepower-hour
GCASP	General Construction Activity Storm Water Permit, Order No. 99-08-DWQ, NPDES No. CAS000002

GCC	Golf Course Community
General Construction Permit	General Construction Activity Storm Water Permit, Order No. 99-08-DWQ, NPDES No. CAS000002
GH	Geologic Hazards
GHG	greenhouse gases
GHRP	Glen Helen Regional Park
GHSP	Glen Helen Specific Plan
GHSP FEIR	Final Environmental Impact Report – Glen Helen Specific Plan
GIS	geographic information system
GMC	Growth Management Chapter
GO	General Order
GP	City of Rialto General Plan
GPA	general plan amendment
GPM or gpm	gallons per minute
GRP	General Reporting Protocol
GVW	gross vehicle weight
GW Overlay	General Warehousing Overlay
GWh	gigawatt-hours
GWP	global warming potential

H

HA	Hydrologic Area
ha	hectare
HABS	Historic American Building Survey
HaC	Hanford – course, sandy loam, 2-9 percent slopes
HALS	Historic American Landscape Survey
HAPs	hazardous air pollutants
H&SC	Health and Safety Code
HC	hydrocarbons
HCD	California Department of Housing and Community Development
HCMA	Cajon Creek Habitat Conservation Management Area
HCOC	Hydrologic Condition of Concern
HCP	habitat conservation plan
HDAs	heavy-duty automobiles
HDR	High Density Residential (25-35 du/ac)
HDR Overlay	High Density Residential Overlay
HDTs	heavy-duty trucks
HEA	habitat equivalency analysis
HEMP	habitat enhancement and management plan
HFCs	hydrofluorocarbons
HFRA	Healthy Forests Restoration Act of 2003
HHW	household hazardous waste
HHWE	household hazardous waste element
HI	health index
HMMP	habitat mitigation and monitoring plan
HOA	master homeowners' association
HRA	health risk assessment
HRs	hydrologic regions
HRS	Hazard Ranking System
HSRT	high-speed regional transport (Maglev)
H_2S	hydrogen sulfide
HUC	Hydrologic Unit Codes
HUD	United States Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
HWCL	California Hazardous Waste Control Law

I

I	interstate
IAQ	indoor air quality
ICBO	International Conference of Building Officials
ICC	International Code Council
ICMA	International City/County Managers Association
ICS	Incident Command System
IEC	International Electrotechnical Commission
IEUA	Inland Empire Utilities Agency
IMP	integrity management program
IPCC	United Nations Intergovernmental Panel on Climate Change
IPCC Guidelines	2006 IPCC Guidelines for National Greenhouse Gas Inventories
I-RAFSS	intermediate Riversidean alluvial fan sage scrub
IRC	International Residential Code
ISCST3	Industrial Source Complex Short Term model
ISO	Insurance Service Offices or California Independent System Operator
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Intelligent transportation systems or Institute of Transportation Engineers

J

JD	jurisdictional delineation
JPA	joint powers authority

K

km	kilometers
KMEP	Kinder Morgan Energy Partners
KMP	Kinder Morgan Pipeline Company
KSF	thousand square feet
kV	kilovolt
KWh	kilowatt hours
K-9	Canine Unit

L

LA	Lead Agency
LBV	least Bell's vireo
LCNPD	Lytle Creek North Planned Development Project
LADWP	Los Angeles Department of Water and Power
LAFCO	Local Agency Formation Commission
LAX	Los Angeles International Airport
LCA	life-cycle assessment
LCFS	Low Carbon Fuel Standard
LCNWRP	Lytle Creek North Wastewater Recycling Plant
LCRSP	Lytle Creek Ranch Specific Plan
LCWCA	Lytle Creek Water Conservation Association
LDAs	light-duty automobiles
LDC	Lytle Development Company
Ldn	day-night average sound level
LDTs	light-duty trucks
LEA	local educational agency
Lead Agency	City of Rialto
LEED	Leadership in Energy and Environmental Design
LEED-ND	LEED-Neighborhood Development
LEPC	Local Emergency Planning Committee
L_{eq}	equivalent noise level
List 1A	presumed extinct in California

List 1B	rare or endangered in California and elsewhere
List 2	rare or endangered in California, more common elsewhere
List 3	plants about which we need more information before rarity can be determined – review list
List 4	plants of limited distribution in California but whose existence does not appear to be susceptible to threat – watch list
L_{max}	maximum noise level
LIM	Land Inventory and Monitoring Project
LMZ	Lytle Management Zone
LNG	liquefied natural gas
Local Option Disclosure	Local Option Real Estate Transfer Disclosure Statement
LOMA	letter of map amendment
LAPM	Los Angeles pocket mouse
LQG	large-quantity generators
LRAs	Local Responsibility Areas
LST	Localized Significance Mass Emission Threshold
LULUCF	Land-Use, Land-Use Change, and Forestry
LUSCAT	Land Use Subgroup of the California Climate Action Team
Lytle Creek North	Lytle Creek North Planned Development Project
Lytle Creek North FEIR	Final Environmental Impact Report – Lytle Creek North Planned Development Project

M

M	magnitude
MAFY	million acre-feet per year
MBTA	Federal Migratory Bird Treaty Act of 1918
MBtu	million British thermal units
MCL	Maximum Contaminant Levels
MDAQMD	Mohave Desert Air Quality Management District
MELs	miscellaneous energy loads
MEP	maximum extent practicable
MERV	minimum efficiency reporting value
Metrolink	Southern California Regional Rail Authority/Metrolink
Metropolitan	Metropolitan Water District of Southern California
MFR	Multi-Family Residential (14-28 du/ac)
mg or MG	middleground or million gallons
mgd or MGD	million gallons per day
MICR	maximum individual cancer risk
MLD	Most Likely Descendant
mm	millimeters
MMTCO2e	million metric tones of carbon dioxide equivalent
Model WQMP	San Bernardino Water Quality Management Plan Guidance for New Development and Redevelopment Projects
MP	milepost
MPD	master plans of drainage
MPDA	maximum population density average
MPOs	metropolitan planning organizations
MR	Mineral Resources
M-RAFSS	mature Riversidean alluvial fan sage scrub
M-RAFSS/CCH	mature Riversidean alluvial fan sage scrub/chamise chaparral
MRMP	mitigation reporting and monitoring program
MRZ	mineral resource zone
M_S	surface wave magnitude
MSA	Riverside-San Bernardino-Ontario Metropolitan Statistical Area
MSDSs	material safety data sheets

MS4	municipal separate storm sewer system
MSHCP	San Bernardino Valley Multi-Species Habitat Conservation Plan
MSW	municipal solid waste
Mt	million metric tons
Municipal Code	City of Rialto Municipal Code
MVSL	Mid-Valley Sanitary Landfill
MW	megawatts
MW-hr	megawatt-hour
MWD	Metropolitan Water District of Southern California
MWMA	Medical Waste Management Act of 1990

N

NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASF	National Association of State Foresters
National Forest	San Bernardino National Forest
NCCP	California Natural Community Conservation Planning Act or natural community conservation plan
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NDFE	non-disposal facility element
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NFMA	National Forest Management Act of 1976
NFPA	National Fire Protection Association
NFIP	National Flood Insurance Program
NFS	National Forest System
NHDS	Natural Hazard Disclosure Statement
NHPA	National Historic Preservation Act of 1966
NHTSA	National Highway Traffic Safety Administration
NISC	National Invasive Species Council
NMFS	National Marine Fisheries Service
NNG	non-native grassland
NNG/CCH	non-native grassland/chamise chaparral
NNG/I-RAFSS	non-native grassland/intermediate Riversidean alluvial fan sage scrub
NNG/RSS	non-native grassland/Riversidean sage scrub
NOAA	National Oceanic and Atmospheric Administration
NOC	Notice of Completion
NOI	Notice of Intent
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
N_2O	nitrous oxide
NPL	National Priorities List
NPDES	National Pollution Discharge Elimination System
NPDES Permit	National Pollution Discharge Elimination System Permit, Order No. R8-2002-0012, NPDES Permit No. CAS618036
NPIAS	National Plan of Integrated Airport Systems
NPMS	National Pipeline Mapping System
NPPA	California Native Plant Protection Act
NPS	nonpoint source
NPS Program Plan	Plan for California's Nonpoint Source Pollution Control Program
NRC	National Response Center
NRCS	Natural Resources Conservation Service
NRDC	National Resources Defense Council

NREL	National Renewable Energy Laboratory
NRHP	National Register of Historic Places
NSR	New Source Review
NTR	National Toxic Rule
NTSB	National Transportation Safety Board
NWP	nationwide permit

O

OEHHA	California Office of Environmental Health Hazard Assessment
OES	California Office of Emergency Services
OHP	California State Office of Historic Preservation
OHV	off-highway vehicles
OHWM	ordinary high water mark
OMR	California Department of Conservation - Office of Mine Reclamation
ONT	Ontario International Airport
OPR	Governor's Office of Planning and Research
OPR Advisory	CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act Review
OPS	United States Department of Transportation Office of Pipeline Safety
OS	Open Space
OSHA	United States Department of Labor Occupational Safety and Health Administration or Occupational Safety and Health Act
OSHHA	Office of Environmental Health Hazard Assessment
O_3	ozone

P

p	probability
PA	planning area
PACE	Pacific Advance Civil Engineering
PAHs	polycyclic aromatic hydrocarbons
PAL	provisional action level
Pavilion	Hyundai Pavilion at Glen Helen
Pb	lead
P-C	Production-Consumption
PCC	portland concrete cement
PCEs	primary constituent elements
PD	Planned Development
perc	perchloroethylene
PFCs	perfluorocarbons
Pga or PGA	peak ground acceleration
PHAS	Proceedings of the National Academy of Sciences
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIER	Public Interest Energy Research
PIPES Act	Pipeline Inspection Protection, Enforcement and Safety Act
PM	particulate matter
PMD	Palmdale Regional Airport
PML	Plummer's Mariposa lily
PMSA	Riverside-San Bernardino Primary Metropolitan Statistical Area
$PM_{2.5}$	particulate matter less than 2.5 microns
PM_{10}	particulate matter less than 10 microns
POM	polycyclis organic matter
Porter-Cologne	Porter-Cologne Water Quality Control Act
PPC™	Public Protection Classification
ppb	parts per billion
ppm	parts per million

PPE	personal protective equipment
P-RAFSS	pioneer Riversidean alluvial fan sage scrub
PRC	Public Resources Code
Ps	Psamments and fluvents, frequently flooded
PSA	planning and service area
PSD	Prevention of Significant Deterioration
Psig or p.s.i.g.	pounds per square inch gage
PSP	Palm Springs International Airport
PUC	Public Utilities Code
P-UC	Public Utility Corridor
PUD	planned unit development

R

R	ruderal or reservoir
RACM	reasonably available control measures
RAFSS	Riversidean alluvial fan sage scrub
RASP	Rialto Ammunition Back-Up Storage Point
RBF	Robert Bein, William Frost & Associates
RC	Resource Conservation
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resource Conservation and Recovery Act
RDTMP	Regional Transportation Development Mitigation Plan of the County of San Bernardino
R-E	Residential Estate
REL	reference exposure level
RFD	Rialto Fire Department
RFS	renewable fuel standards
RGL	Regulatory Guidance Letters
RHA	Rivers and Harbors Act
RHNA	regional housing needs assessment
Rialto WTP	City of Rialto Wastewater Treatment Plant
RI/FS	Remedial Investigation/Feasibility Study
RL	Rural Living
RLUIPA	Religious Land Use and Institutionalized Persons Act of 2000
R-M	Medium Density Residential
RME	Regional Mobility Element
RMPP	risk management and prevention program
RMU	Regional Mixed Use
RMZ	Rialto Management Zone
ROD	Record of Decision
ROG	reactive organic gas
ROS	Recreation Opportunity Spectrum
ROW	right-of-way
ROWD	San Bernardino County Report of Waste Discharge or report of waste discharge
RPA	reasonable and prudent alternatives or Forest and Rangeland Renewable Resources Planning Act of 1974
RPD	Rialto Police Department
RPS	Renewable Portfolio Standard
RPWs	relatively permanent waters
RPZ	Runway Protection Zone
RQ	reportable quantity
RRA	City of Rialto Redevelopment Agency
RS	Single Residential
RSA	SCAG Regional Statistical Areas

RSA 29	East Valley Sub-Region
RSS	Riversidian sage scrub
RTDMP	Regional Transportation Development Mitigation Plan of the County of San Bernardino
RTP	regional transportation plan
RTPAs	regional transportation planning agencies
RUA	Rialto Utility Authority
RUSD	Rialto Unified School District
RWQCBs	Regional Water Quality Control Boards
R-1-A	Single-Family Zone
R-3	Multi Family Residential

S

Sa	spectral acceleration
SAA	streambed alteration agreement
SAB	State Allocation Board
SABRC	State Agency Buy Recycled Campaign
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
S&HC	California Streets and Highways Code
SANBAG	San Bernardino Associated Governments
SAR	Santa Ana River or species area relationship
SARA	Superfund Amendments and Reauthorization Act of 1986
SARWQCB	California Regional Water Quality Control Board, Santa Ana Region
SAWPA	Santa Ana Watershed Project Authority
SB	Senate Bill
SBBA	San Bernardino Basin Area
SBD	San Bernardino International Airport
SBCFCD	San Bernardino County Flood Control District
SBCFD	San Bernardino County Consolidated Fire District
SBCGB	San Bernardino Green Building Program
SBCPL	San Bernardino County Public Library
SBCSD	San Bernardino County Sheriff's Department
SBCSDD	San Bernardino County Special Districts Department
SBCVCP	San Bernardino County Vector Control Program
SBKR	San Bernardino kangaroo rat
SBNF	San Bernardino National Forest
SBCUSD	San Bernardino City Unified School District
SBKR	San Bernardino kangaroo rat
SBVMWD	San Bernardino Valley Municipal Water District
SBVWCD	San Bernardino Valley Water Conservation District
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAT	Street Crime Attack Team
SCE	Southern California Edison or State candidate for listing as endangered
SCG	Southern California Gas Company
SCH	State Clearinghouse
SCHR	South Coast Hydrologic Region
SCPEA	Standard City Planning Enabling Act of 1928
SCS	sustainable communities strategy
SCT	State candidate for listing as threatened
SCW	South Coast Wildlands
SD	Special Development
SDC	seismic design category

SD-RES	Special Development - Residential
SE	State listed as endangered
SEAOC	Structural Engineers Association of California
Secretary Standards	Secretary of Interior's Standards for the Treatment of Historic Properties
SEMA	Standardized Emergency Management System
SERC	State Emergency Response Commission
SF or sf	square feet
SFHAs	Special Flood Hazard Areas
SFIP	Standard Flood Insurance Policy
SFM	Office of the State Fire Marshal
SFPD	School Facilities and Planning Division
SFR-1	Single Family Residential 1 (2-5 du/ac)
SFR-2	Single Family Residential 2 (5-8 du/ac)
SFR-3	Single-Family Residential 3 (8-14 du/ac)
SFR Overlay	Single-Family Residential Overlay
SFM	Office of the State Fire Marshal
SFP	State fully protected
SFPD	School Facilities Planning Division
SF_6	sulfur hexafluoride
SGF	student generation factor
SHMA	Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officer
SIOs	scenic integrity objectives
SIP	State Implementation Plan
SJFZ	San Jacinto fault zone
SMA	Subdivision Map Act
SMARA	Surface Mining and Reclamation Act of 1975
SMGB	State Mining and Geology Board
SMS	scenery management system
SNA	significant natural areas
SNAP	Significant Natural Areas Program
SOF	State Board of Forestry and Fire Protection
SOI	sphere of influence
SO_2	sulfur dioxide
SO_4	sulfates
SO_X	sulfur oxides
SOV	single-occupancy vehicles
SP	Specific Plan
SPA	specific plan amendment
Special Publication 117	Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication No. 117 (State Mining and Geology Board, March 13, 1997)
SpC	Soboba – stoney loamy sand, 2-9 percent slopes
SR	State listed as rare
SRA	Source Receptor Area
SRI	solar reflectance index
SRO	School Resource Officer
SPW	State Project Water
SPZ	Specific Plan Zone
SQG	small-quantity generator
SRAs	State Responsibility Areas
SRRE	source reduction and recycling element
SSC	California Seismic Safety Commission
ST	State listed as threatened
State	State of California
State CEQA Guidelines	Guidelines for Implementing the California Environmental Quality Act
SUVs	sports utility vehicles

SWAT	Special Weapons and Tactics
SWC	State Water Project Contractor
SWIS	Solid Waste Information System
SWMD	County of San Bernardino Department of Public Works, Solid Waste Management Division
SWP	State Water Project
SWPPP	stormwater pollution prevention plan
SWQMP	stormwater quality management plan
SWRCB	State Water Resources Control Board
SZEA	Standard Zoning Enabling Act of 1926

T

TACs	toxic air contaminants
TAZs	traffic analysis zones
T-BACT	Best Available Control Technology
Tc	time of concentration
TCM	transportation control measures
TDS	total dissolved solids
TDM	transportation demand management
TDV	total daily valuation
TEA-21	Transportation Equity Act for the 21st Century
TeNS	Technical Noise Supplement
TIN	total inorganic nitrogen
Title 24	California Noise Insulation Standard or Energy Efficiency Standards for Residential and Nonresidential Buildings
TMDL	Total Maximum Daily Load
TND	traditional neighborhood design
TNWS	traditional navigable waters
TOD	transit-oriented development
TRUs	transport refrigeration units
TvC	Tujunga – gravelly, loamy sand, 0-9 percent slopes
TWW	treated wood waste

U

UBC	Uniform Building Code or California Building Code
UFC	Uniform Fire Code or California Fire Code
ULI	Urban Land Institute
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
US or U.S.	United States
USACE	United States Army Corps of Engineers
USC or U.S.C.	United States Code
USDOE	United States Department of Energy
USDOJ	United States Department of Justice
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGBC	United States Green Building Council
USGS	United States Geologic Survey
UTPS	Urban Transportation Planning Software
UWI	urban-wildland interface
UWIC	International Urban-Wildland Interface Code
UWMP	urban water management plan

V

VBDS	California Department of Health Services Vector-Borne Disease Section
VC	Village Center Commercial
VC Overlay	Village Center Commercial Overlay
VCP	vitrified clay pipe
VegCAMP	Vegetation Classification and Mapping Program
VHD	vehicle hours of delay
VHFHSZs	very high fire hazard severity zones
Villages Specific Plan	The Villages at Lytle Creek Specific Plan
Villages Specific Plan DEIR	Draft Environmental Impact Report - The Villages at Lytle Creek Specific Plan/Sunwest Reclamation Plan Amendment
VMT	vehicle miles traveled
VOC	volatile organic compound
VTs	vehicle trips

W

Wasterwater Master Plan	Wastewater Collection System Master Plan Update
WCI	Western Climate Initiative
WDR	waste discharge report
WDRs	waste discharge requirements
WGS	Western Governors' Association
WMAs	watershed management areas
WMI	watershed management initiative
WMO	World Meteorological Organization
WNV	West Nile virus
WoS	waters of the State
WoUS	waters of the United States
WQOs	water quality objectives
WSAs	water supply assessments
WTP	water treatment plant
WUIs	wildland urban interfaces
WVWD	West Valley Water District

Y

YBP	years before present

Z

ZC	zone change
ZNE	zero net energy

Other Acronyms and Abbreviations

§	section
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
µm	microns (micrometres)
3-C	continuing, cooperative, and comprehensive
1996 RCPG	Regional Comprehensive Plan and Guide
2001 RTP	2001 Regional Transportation Plan – Destination 2030
2004 Compass	Southern California Compass – Growth Vision Report
2004 RTP	2004 Regional Transportation Plan
2008 Energy-Efficiency Standards	California Energy Commission, 2008 Building Efficiency Standards for Residential and Nonresidential Buildings – Regulations/Standards, CEC-400-2008-001-CMF, December 2008
2008 RTP	2008 Regional Transportation Plan

Appendix I-A

NOTICE OF PREPARATION AND PRE-CIRCULATION COMMENTS

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Appendix I-A-A

Notice of Preparation

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NOTICE OF PREPARATION
LYTLE CREEK RANCH SPECIFIC PLAN

To:	From: Gina M. Gibson, Senior Planner
NOP	**City of Rialto**
Distribution	**Development Services Department**
List	150 South Palm Avenue
	Rialto, California 92376

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

The City of Rialto (City) will be the Lead Agency and will prepare a combined programmatic and project-level environmental impact report (EIR) for the proposed "Lytle Creek Ranch Specific Plan" (LCRSP), encompassing: (1) approximately 2,447.3 "on-site" acres located, in part, within the City (approximately 694.2 acres) and, in part, within the County of San Bernardino but within the City's adopted Sphere of Influence (approximately 1,753.1 acres) which would be subject to the provision of the proposed LCRSP; and (2) approximately 19.9 additional "off-site" acres within the City or within the County of San Bernardino (County) which are associated with facilities and improvements that will be undertaken by the project applicant or by others which are related, either directly or indirectly, with the approval, construction, occupancy, use, and/or habitation of the proposed project. If adopted and those lands located within the City's Sphere of Influence annexed to the City, the LCRSP would serve as a regulatory document providing an overall framework to guide development of the specific plan area for a variety of public works activities and residential, non-residential, institutional, recreational, and open space uses.

Based on the size and location of the proposed project and the environmental setting in which the project is proposed, the City has made a preliminary determination that the approval and implementation of the proposed specific plan, if so approved and implemented, has the potential to result in one or more significant environmental impacts. As authorized under Sections 15060(d) and 15063(a) in Title 14 of the California Code of Regulations, the City has elected to forgo the preparation of an initial study and commence preparation of an EIR.

With regards to those areas germane to your agency's statutory responsibilities in connection with the proposed project, the City needs to know the views of your agency as to the scope and content of the environmental information that should be addressed in the EIR and the range of alternatives, mitigation measures, and/or other actions that the Lead Agency should consider as part of its assessment under the provisions of the California Environmental Quality Act (CEQA) and its implementing guidelines. Your agency will need to use the EIR prepared by the City when considering any discretionary permits and other entitlements that may be required from your agency for the approval and implementation of the proposed project.

Due to the time limits mandated by State law, your response must be sent to the City at the earliest possible date but not later than thirty (30) days after receipt of this notice. Please send your response to Gina M. Gibson, Senior Planner at the address shown above. The City will need the name for the contact person(s) in your agency.

Scheduled Scoping Meeting:

A scoping meeting for the "Lytle Creek Ranch Specific Plan" EIR will be held on July 28, 2009 at 2:00 PM in the City of Rialto Council Chambers, located at 150 South Palm Avenue, Rialto, California 92376.

Lead Agency: City of Rialto
Attn: Development Services Department
150 South Palm Avenue
Rialto, California 92376
(909) 421-7246

Project Title: Lytle Creek Ranch Specific Plan (Specific Plan No. 12)
General Plan Amendment No. 29
Development Agreement
Vesting Tentative Tract Map No. 18767
Annexation No. 170
Environmental Assessment Review (EAR) No. 90-19

Project Location: As illustrated in Exhibit 1 (Lytle Creek Ranch Specific Plan - Regional Vicinity Map), the proposed project is located, in part, in the City of Rialto and, in part, in unincorporated County of San Bernardino within the City's adopted Sphere of Influence. The project site can be generally described as being located to the southwest of the unincorporated community of Devore, to the west of the City of San Bernardino, to the south of the San Bernardino National Forest (SBNF), to the east of the City of Fontana, and to the north of confluence of Cajon and Lytle Creeks. The northeastern corner of the project site borders the County-administered Glen Helen Regional Park) and portions of the project site abut the federally-administered SBNF. The project site includes certain acreage that was previously entitled by the County as part of the "Lytle Creek North Planned Development Project" and the "Glen Helen Specific Plan." The project site also includes certain lands that were previously entitled by the City as part of the "El Rancho Verde Specific Plan."

Project Description: Adoption and subsequent implementation of a specific plan and associated entitlements for a mixed-use project authorizing the construction, use, occupancy, and habitation of up to 8,407 single-family and multi-family units, 849,420 gross leaseable square feet of retail commercial, office professional, and light industrial uses; open space and conservation areas; public and private recreational facilities; school sites; and associated public improvements and infrastructure facilities. In addition, the proposed project includes the construction of a revetment levee along the southern bank of Lytle Creek, spanning a distance of approximately seven miles. In addition to the on-site levee, the project will also construct approximately 2,000 linear feet of levee improvements to an existing levee located on adjoining property.

The specific plan establishes overlay zoning which would allow mixed-use development (higher-density residential, commercial, office professional, and light industrial uses) in certain planning areas in accordance with the provisions of the specific plan's development standards. The proposed LCRSP will set forth the distribution, location, extent, and intensity of the uses of land, including open space, and establish design guidelines to govern future development.

The proposed 2,447.3-acre conceptual land-use plan is presented in Exhibit 2 (Lytle Creek Ranch Specific Plan - Conceptual Land-Use Plan). As illustrated in Exhibit 3 (Additional "Off-Site" Areas to be Included in Environmental Impact Report), additional "off-site" areas, totaling about 19.9 acres, will be included in the EIR but are not within the boundaries of the proposed LCRSP. Infrastructure improvements, associated directly or indirectly with the project's implementation, are anticipated at a number of additional areas located beyond the boundaries of the proposed LCRSP. These improvements constitute master planned facilities (e.g., water and wastewater facilities, street improvements) that have been identified by the City and/or by other governmental entities, will be implemented by those entities or others and are not expressly initiated by the project applicant or predicated solely by the proposed project, and for which the project applicant bears only a fee payment or fair-share obligation.

Discretionary actions required from the City include, but may not be limited to: (1) amendments to the "City of Rialto General Plan," "El Rancho Verde Specific Plan," "City of Rialto Municipal Code," and "Official Zoning Map"; (2) adoption of the proposed LCRSP; (3) approval of one or more vesting and/or non-vesting tentative subdivision maps, including an "A" level map for financing purposes only; (4) approval of a pre-annexation statutory development agreement with the project applicant that will become a development agreement upon annexation; (5) changes of organization and reorganization, including annexation of those portions of the project site currently in unincorporated County to the City; (6) approval, funding, construction, and acceptance of infrastructure improvements, public works projects; and other public facilities; (7) associated real property conveyances and acceptances; (8) such other permits, approval, actions, and entitlements as may be reasonably associated with the approval and implementation of the proposed project.

Environmental Factors Potentially Affected: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise Public Services and Recreation, Transportation and Traffic, and Utilities and Service Systems.

Project Applicant: Lytle Development Joint Venture III
2050 Main Street, Suite 252, Irvine, California 92614

Distribution List: Exhibit 4 (NOP Distribution List).

Attachments:
Exhibit 1 (Regional Vicinity Map)
Exhibit 2 (Lytle Creek Ranch Specific Plan - Conceptual Land-Use Plan)
Exhibit 3 (Additional "Off-Site" Areas to be Included in EIR)
Exhibit 4 (NOP Distribution List)

Date: June 26, 2009

Contact: Gina M. Gibson
Title: Senior Planner

Reference: California Code of Regulations, Title 14 (State CEQA Guidelines), Section 15082(a), 15103, and 15375.

Exhibit 1
LYTLE CREEK RANCH SPECIFIC PLAN
REGIONAL VICINITY MAP

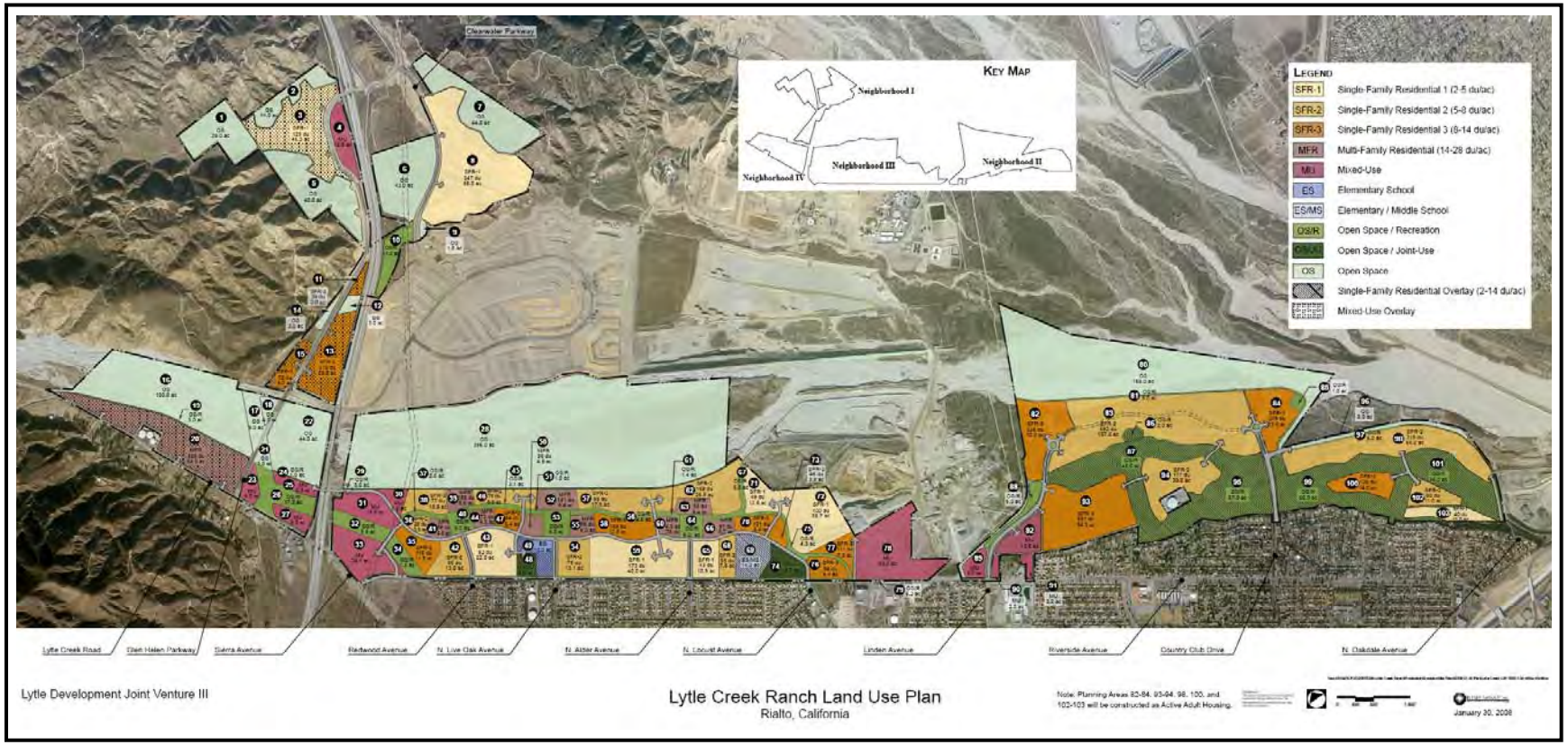

Exhibit 2
LYTLE CREEK RANCH SPECIFIC PLAN
CONCEPTUAL LAND-USE PLAN

Exhibit 3
ADDITIONAL "OFF-SITE" AREAS
TO BE INCLUDED IN ENVIRONMENTAL IMPACT REPORT

Exhibit 4
NOTICE OF PREPARATION
DISTRIBUTION LIST

Association	Contact
Lead Agency Contact	City of Rialto Development Services Department Attn: Gina M. Gibson, Senior Planner 150 South Palm Avenue Rialto, California 92376 (909) 421-7246
State Clearinghouse	Governor's Office of Planning and Research - State Clearinghouse Attn: Terry Roberts, State Clearinghouse Director 1400 Tenth Street, Room 222 (P.O. Box 3044) Sacramento, California 95814 (916) 445-0613
Applicant	Lytle Development Joint Venture III Attn: Kevin Lynch 2050 Main Street, Suite 252 Irvine, California 92614 (949) 313-5800
Potential Responsible Agencies	Local Agency Formation Commission, San Bernardino County Attn: Kathleen Rollings-McDonald, Executive Officer 175 West Fifth Street, Second Floor San Bernardino, California 92415-0490 (909) 387-5866
	California Department of Transportation Local Development-Intergovernmental Review Attn: Terri Pencovic, LD-IGR Program Manager 1120 N Street, MS-32 (PO Box 942874, MS-32) Sacramento, California 95814 (916) 653-1067
	California Department of Transportation, District 8 Office of LD-IGR/CEQA Review Attn: Dan Kopulsky, Chief 464 West Fourth Street, Sixth Floor, MS 722 San Bernardino, California 92401-1400 (909) 383-4557
	California Department of Fish and Game, Region 6 Attn: Regional Manager 3602 Inland Empire Boulevard, Suite C-220 Ontario, California 91764 (909) 987-7764
	State Water Resources Control Board Attn: Dorothy Rice, Executive Director 1001 I Street Sacramento, California 95814 (916) 341-5250
	California Regional Water Quality Control Board, Santa Ana Region (8) Attn: Gerald J. Thibeault, Executive Officer 3737 Main Street, Suite 500 Riverside, California 92501-3339 (951) 782-4130

Exhibit 4 (Continued)
NOTICE OF PREPARATION DISTRIBUTION LIST

Association	Contact
Potential Responsible Agencies (Continued)	California Department of Conservation Attn: Bridgett Luther, Director 801 K Street, MS 24-01 Sacramento, California 95814 (916) 322-1080
	California Department of Parks and Recreation - Office of Historic Preservation Attn: Milford Wayne Donaldson, State Historic Preservation Officer 1416 9th Street, Room 1442 Sacramento, California 95814 (916) 653-6624
	California Public Utilities Commission Attn: Steve Larson, Executive Director 505 Van Ness Avenue San Francisco, California 94102 (415) 703-2782
	South Coast Air Quality Management District Attn: Barry R. Wallerstein, Executive Officer 21865 Copley Drive Diamond Bar, California 91765 (909) 396-2000
	County of San Bernardino - Land Use Services Department Attn: Julie Rynerson Rock, Director 385 N. Arrowhead Avenue, Third Floor San Bernardino, California 92415-0182 (909) 387-3223
	County of San Bernardino – Department of Public Works Attn: Mazin Kasey, Deputy Director 825 E. Third Street San Bernardino, California 92415 (909) 387-7916
	West Valley Water District Attn: Anthony W. Araiza, General Manager 855 W. Baseline Rialto, California 92377 (909) 875-1804
	Rialto Unified School District Attn: Edna D. Herring, Superintendent 182 East Walnut Avenue Rialto, California 92376-3598 (909) 820-7700
	San Bernardino City Unified School District Attn: Dr. Arturo Delgado, Superintendent 777 North F. Street San Bernardino, California 92410 (909) 381-1240
	Fontana Unified School District Attn: Jane D. Smith, Superintendent of Schools 9680 Citrus Avenue Fontana, California 92335 (909) 357-5000

Exhibit 4 (Continued)
NOTICE OF PREPARATION DISTRIBUTION LIST

Association	Contact
Potential Federal Agencies	United States Army Corps of Engineers, Los Angeles District Office Attn: Col. Alex C. Dornstauder, District Commander P.O. Box 532711 Los Angeles, California 90053-2325 (213) 452-3908
	United States Fish and Wildlife Service, Carlsbad Field Office Attn: Nancy Furgeson 2730 Loker Avenue West Carlsbad, California 92008 (760) 431-9440
	United States Department of Agriculture – United States Forest Service San Bernardino National Forest - Supervisor's Office Attn: Jeanne Wade Evans, Forest Supervisor 602 South Tippecanoe Avenue San Bernardino, California 92408 (909) 382-2600
	Federal Emergency Management Agency Office of the Director Attn: Nancy Ward, Acting Administrator 500 C Street S.W. Washington, D.C. 20472 (202) 646-2500
Transportation Planning Organizations	Southern California Association of Governments (Main Office) Attn: Intergovernmental Review Section 818 W. Seventh Street, 12th Floor Los Angeles, California 90017 (213) 236-1800
	Southern California Association of Governments (Inland Office) Attn: Intergovernmental Review Section 3600 Lime Street, Suite 216 Riverside, California 92501 (951) 784-1513
	San Bernardino Associated Governments Attn: Deborah Robinson Barmack, Executive Director 1170 W. 3rd Street, 2nd Floor San Bernardino, California 92410-1715 (909) 884-8276
	Omnitrans Attn: Durand L. Rall, CEO/General Manager 1700 West Fifth Street San Bernardino, California 92411 (909) 379-7100
Potential Trustee Agency	California Department of Fish and Game Attn: Donald Koch, Director 1416 Ninth Street Sacramento, California 95814 (916) 653-7667
	California State Lands Commission Attn: Paul D. Thayer, Executive Officer 100 Howe Avenue, Suite 100 South Sacramento, California 95825-8202 (916) 574-1800

Exhibit 4 (Continued)
NOTICE OF PREPARATION DISTRIBUTION LIST

Association	Contact
Notification Requirements	State Mining and Geology Board Attn: Stephen M. Testa, Executive Officer 801 K Street, Suite 2015 Sacramento, California 95814 (916) 322-1082
	Native American Heritage Commission Attn: Larry Myers, Executive Secretary 915 Capitol Mall, Room 364 Sacramento, California 95814 (916) 653-4082
Tribal Organizations	San Manuel Band of Mission Indians Attn: Henry Duro, Chairperson 26569 Community Center Drive Highland, California 92346 (909) 864-8933
	San Manuel Band of Mission Indians Attn: Ann Brierty, Environmental Department 101 Pure Water Lane Highland, California 92346 (909) 863-5899
	Morongo Band of Mission Indians Attn: Britt W. Wilson, Cultural Resource Coordinator 11581 Potrero Road Banning, California 92220 (951) 849-8807
	Chemehuevi Reservation Attn: Charles Wood, Chairperson P.O. Box 1976 Chemehuevi Valley, California 92363 (760) 858-4301
	Fort Mojave Indian Tribe Attn: Nora McDowell, Chairperson 500 Merriman Avenue Needles, California 92363 (760) 629-4591
	Fort Mojave Indian Tribe Attn: Esadora Evanston, Environmental Coordinator 500 Merriman Avenue Needles, California 92363 (760) 326-1112
	San Fernando Band of Mission Indians Attn: John Valenzuela, Chairperson P.O. Box 221838 Newhall, California 91322 (661) 753-9833
	Serrano Band of Indians Attn: Goldie Walker 6588 Valeria Drive Highland, California 92346 (909) 862-9883

Exhibit 4 (Continued)
NOTICE OF PREPARATION DISTRIBUTION LIST

Association	Contact
"Off-Site" Property Owners	California Department of Transportation, District 8 Attn: Raymond W. Wolfe, District Director 464 W. 4th Street San Bernardino, California 92402 (909) 383-4055
	County of San Bernardino - Division of Public Works/Flood Control Attn: Vana Olson, Director 825 E. 3rd Street San Bernardino, California 92415 (909) 387-7906
	Sunbelt Acquisitions Attn: General Manager P.O. Box 4120 Ontario, California 91761
	Storkson Family Trust Attn: Trustee 2828 Lytle Creek Road Fontana, California 92335
	BBC Properties, LLC Attn: General Manager 3075 Cranbrook Court La Jolla, California 92037
Additional Adjoining Local Governments	City of Fontana Community Development Department Attn: Don Williams, Director 8353 Sierra Avenue Fontana, California 92335 (909) 350-7640
	City of San Bernardino Development Services Department Attn: Valerie C. Ross, Director 300 N. "D" Street, Third Floor San Bernardino, California 92418 (909) 384-5057
	City of Colton Community Development Department Attn: David R. Zamora, Director 650 N. La Cadena Colton, California 92324 (909) 370-5079

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NOTICE OF PREPARATION
STATE CLEARINGHOUSE NUMBER 2009061113
CERTIFIED MAIL AND FEDERAL EXPRESS TRACKING LOG

NOP Comment Period: June 29, 2009 to July 28, 2009

Agency/Address	U.S. Postal Service Tracking Number	Date Mailed	Date Received
Governor's Office of Planning and Research State Clearinghouse Attn: Terry Roberts, State Clearinghouse Director 1400 Tenth Street, Room 222 Sacramento, California 95814 (1 Copy)	U.S. Postal Service 7008 3230 0002 1136 0017	06/26/09	06/29/09[1]
Governor's Office of Planning and Research State Clearinghouse Attn: Terry Roberts, State Clearinghouse Director 1400 Tenth Street, Room 222 Sacramento, California 95814 (15 Copies)	Federal Express 8115 8960 6859	06/26/09	06/29/09 (C. Rodriquez)
Local Agency Formation Commission San Bernardino County Attn: Kathleen Rollings-McDonald, Executive Officer 175 West Fifth Street, Second Floor San Bernardino, California 92415-0490	U.S. Postal Service 7008 3230 0002 1136 0024	06/26/09	06/30/09 (R. Escarzoga, Jr.)
California Department of Transportation Local Development-Intergovernmental Review Attn: Terri Pencovic, LD-IGR Program Manager 1120 N Street, MS-32 Sacramento, California 95814	U.S. Postal Service 7008 3230 0002 1136 0031	06/26/09	06/29/09 (S. R. Yee)
California Department of Transportation, District 8 Office of LD-IGR/CEQA Review Attn: Dan Kopulsky, Chief 464 West Fourth Street, Sixth Floor, MS 722 San Bernardino, California 92401-1400	U.S. Postal Service 7008 3230 0002 1136 0048	06/26/09	06/29/09 (C.E. Elicei)
California Department of Fish and Game, Region 6 Attn: Regional Manager 3602 Inland Empire Boulevard, Suite C-220 Ontario, California 91764	U.S. Postal Service 7008 3230 0002 1136 0055	06/26/09	Undated[2] (G. Gatchel)
State Water Resources Control Board Attn: Dorothy Rice, Executive Director 1001 I Street Sacramento, California 95814	U.S. Postal Service 7008 3230 0002 1136 0062	06/26/09	06/29/09[1]
California Regional Water Quality Control Board Santa Ana Region (8) Attn: Gerald J. Thibeault, Executive Officer 3737 Main Street, Suite 500 Riverside, California 92501-3339	U.S. Postal Service 7008 3230 0002 1136 0079	06/26/09	06/29/09 (M. Edwards)
California Department of Conservation Attn: Bridgett Luther, Director 801 K Street, MS 24-01 Sacramento, California 95814	U.S. Postal Service 7008 3230 0002 1136 0758	06/26/09	06/29/09 (B. Johnson)
California Department of Parks and Recreation Office of Historic Preservation Attn: Milford Wayne Donaldson, HPO 1416 9th Street, Room 1442 Sacramento, California 95814	U.S. Postal Service 7008 3230 0002 1136 0765	06/26/09	06/29/09 (S. Basquez)

NOTICE OF PREPARATION
CERTIFIED MAIL AND FEDERAL EXPRESS TRACKING LOG
(Continued)

Agency/Address	U.S. Postal Service Tracking Number	Date Mailed	Date Received
California Public Utilities Commission Attn: Steve Larson, Executive Director 505 Van Ness Avenue San Francisco, California 94102	U.S. Postal Service 7008 3230 0002 1136 0772	06/26/09	06/29/09[1]
South Coast Air Quality Management District Attn: Barry R. Wallerstein, Executive Officer 21865 Copley Drive Diamond Bar, California 91765	U.S. Postal Service 7008 3230 0002 1136 0789	06/26/09	Undated[1]
County of San Bernardino Land Use Services Department Attn: Julie Rynerson Rock, Director 385 N. Arrowhead Avenue, Third Floor San Bernardino, California 92415-0182	U.S. Postal Service 7008 3230 0002 1136 0796	06/26/09	06/30/09 (R. Escarzoga, Jr.)
County of San Bernardino Department of Public Works Attn: Mazin Kasey, Deputy Director 825 E. Third Street San Bernardino, California 92415	U.S. Postal Service 7008 3230 0002 1136 0802	06/26/09	06/30/09 (R. Escarzoga, Jr.)
West Valley Water District Attn: Anthony W. Araiza, General Manager 855 W. Baseline Rialto, California 92377	U.S. Postal Service 7008 3230 0002 1136 0819	06/26/09	06/29/09 (H. Harper)
Rialto Unified School District Attn: Edna D. Herring, Superintendent 182 East Walnut Avenue Rialto, California 92376-3598	U.S. Postal Service 7008 3230 0002 1136 0826	06/26/09	Undated[2] (E. Martinez)
San Bernardino City Unified School District Attn: Dr. Arturo Delgado, Superintendent 777 North F. Street San Bernardino, California 92410	U.S. Postal Service 7008 3230 0002 1136 0833	06/26/09	6/30/09 (G. G. Ortega)
Fontana Unified School District Attn: Jane D. Smith, Superintendent of Schools 9680 Citrus Avenue Fontana, California 92335	U.S. Postal Service 7008 3230 0002 1136 0840	06/26/09	06/29/09 (K. Kneezle)
United States Army Corps of Engineers Los Angeles District Office Attn: Col. Alex C. Dornstauder, District Commander P.O. Box 532711 Los Angeles, California 90053-2325	U.S. Postal Service 7008 3230 0002 1136 0857	06/26/09	06/29/09 (Paul Chattleo)
United States Fish and Wildlife Service Carlsbad Field Office Attn: Nancy Furgeson 2730 Loker Avenue West Carlsbad, California 92008	U.S. Postal Service 7008 3230 0002 1136 0864	06/27/09	06/30/09[3]
United States Fish and Wildlife Service Carlsbad Fish & Wildlife Office Attn: Jim Bartel, Field Supervisor 6010 Hidden Valley Road, Suite 101 Carlsbad, California 92011	U.S. Postal Service 7008 1830 0001 2418 8029	06/30/09	07/01/09[1]

NOTICE OF PREPARATION
CERTIFIED MAIL AND FEDERAL EXPRESS TRACKING LOG
(Continued)

Agency/Address	U.S. Postal Service Tracking Number	Date Mailed	Date Received
United States Forest Service San Bernardino National Forest - Supervisor's Office Attn: Jeanne Wade Evans, Forest Supervisor 602 South Tippecanoe Avenue San Bernardino, California 92408	U.S. Postal Service 7008 3230 0002 1136 0871	06/26/09	06/29/09 (B. DuRuisseau)
Federal Emergency Management Agency Office of the Director Attn: Nancy Ward, Acting Administrator 500 C Street S.W. Washington, D.C. 20472	U.S. Postal Service 7008 3230 0002 1136 0888	06/26/09	07/01/09 (J. Ransom)
Southern California Association of Governments Attn: IGR Office 818 W. Seventh Street, 12th Floor Los Angeles, California 90017	U.S. Postal Service 7008 3230 0002 1136 0895	06/26/09	Undated[4,5]
Southern California Association of Governments Attn: IGR Office 3600 Lime Street, Suite 216 Riverside, California 92501	U.S. Postal Service 7008 3230 0002 1136 0901	06/26/09	Undated[2] (Not Legible)
San Bernardino Associated Governments Attn: Deborah Robinson Barmack, Executive Director 1170 W. 3rd Street, 2nd Floor San Bernardino, California 92410-1715	U.S. Postal Service 7008 3230 0002 1136 0918	06/26/09	06/29/09 (S. Jenkins)
California Department of Fish and Game Attn: Donald Koch, Director 1416 Ninth Street Sacramento, California 95814	U.S. Postal Service 7008 3230 0002 1136 0925	06/26/09	06/29/09 (S. Basquez)
California State Lands Commission Attn: Paul D. Thayer, Executive Officer 100 Howe Avenue, Suite 100 South Sacramento, California 95825-8202	U.S. Postal Service 7008 3230 0002 1136 0932	06/26/09	Undated[5] (Not Legible)
State Mining and Geology Board Attn: Stephen M. Testa, Executive Officer 801 K Street, Suite 2015 Sacramento, California 95814	U.S. Postal Service 7008 3230 0002 1136 0949	06/26/09	06/29/09 (B. Johnson)
Native American Heritage Commission Attn: Larry Myers, Executive Secretary 915 Capitol Mall, Room 364 Sacramento, California 95814	U.S. Postal Service 7008 3230 0002 1136 0956	06/26/09	06/30/09 (Not Legible)
San Manuel Band of Mission Indians Attn: Henry Duro, Chairperson 26569 Community Center Drive Highland, California 92346	U.S. Postal Service 7008 1830 0001 2418 8586	06/26/09	06/09/09 (D. Delgado)
San Manuel Band of Mission Indians Attn: Ann Brierty, Environmental Department 101 Pure Water Lane Highland, California 92346	U.S. Postal Service 7008 1830 0001 2418 8593	06/26/09	07/07/09 (S. Long)

NOTICE OF PREPARATION
CERTIFIED MAIL AND FEDERAL EXPRESS TRACKING LOG
(Continued)

Agency/Address	U.S. Postal Service Tracking Number	Date Mailed	Date Received
Morongo Band of Mission Indians Attn: Britt W. Wilson, Cultural Resource Coordinator 11581 Potrero Road Banning, California 92220	U.S. Postal Service 7008 1830 0001 2418 8609	06/26/09	Undated[6] (R. Ross)
Chemehuevi Reservation Attn: Charles Wood, Chairperson P.O. Box 1976 Chemehuevi Valley, California 92363	U.S. Postal Service 7008 1830 0001 2418 8616	06/26/09	06/29/09 (L. Parra)
Fort Mojave Indian Tribe Attn: Nora McDowell, Chairperson 500 Merriman Avenue Needles, California 92363	U.S. Postal Service 7008 1830 0001 2418 8623	06/26/09	06/29/09 (C. Evanston)
Fort Mojave Indian Tribe Attn: Esadora Evanston, Environmental Coordinator 500 Merriman Avenue Needles, California 92363	U.S. Postal Service 7008 1830 0001 2418 8630	06/26/09	06/29/09 (C. Evanston)
San Fernando Band of Mission Indians Attn: John Valenzuela, Chairperson P.O. Box 221838 Newhall, California 91322	U.S. Postal Service 7008 1830 0001 2418 8647	06/26/09	07/06/09 (M. Mia)
Serrano Band of Indians Attn: Goldie Walker 6588 Valeria Drive Highland, California 92346	U.S. Postal Service 7008 1830 0001 2418 8654	06/26/09	06/27/09 (Not Legible)
California Department of Transportation, District 8 Attn: Raymond W. Wolfe, District Director 464 W. 4th Street San Bernardino, California 92402	U.S. Postal Service 7008 1830 0001 2418 8661	06/26/09	06/29/09 (C.E. Elicei)
County of San Bernardino Division of Public Works/Flood Control Attn: Vana Olson, Director 825 E. 3rd Street San Bernardino, California 92415	U.S. Postal Service 7008 1830 0001 2418 8678	06/26/09	06/30/09 (R. Escarzoga, Jr.)
Sunbelt Acquisitions Attn: General Manager P.O. Box 4120 Ontario, California 91761	U.S. Postal Service 7008 1830 0001 2418 8685	06/26/09	07/01/09 (Eva Rlig)
Storkson Family Trust Attn: Trustee 2828 Lytle Creek Road Fontana, California 92335	U.S. Postal Service 7008 1830 0001 2418 8692	06/26/09	07/08/09 (D. Storkson)
BBC Properties, LLC Attn: General Manager 3075 Cranbrook Court La Jolla, California 92037	U.S. Postal Service 7008 1830 0001 2418 8708	06/26/09	06/27/09 (Jeff Cohen)

NOTICE OF PREPARATION
CERTIFIED MAIL AND FEDERAL EXPRESS TRACKING LOG
(Continued)

Agency/Address	U.S. Postal Service Tracking Number	Date Mailed	Date Received
City of Fontana Community Development Department Attn: Don Williams, Director 8353 Sierra Avenue Fontana, California 92335	U.S. Postal Service 7008 1830 0001 2418 7978	06/26/09	Not Returned[7]
City of San Bernardino Development Services Department Attn: Valerie C. Ross, Director 300 N. "D" Street, Third Floor San Bernardino, California 92418	U.S. Postal Service 7008 1830 0001 2418 7985	06/26/09	06/29/09 (F. Hicke)
City of Colton Community Development Department Attn: David R. Zamora, Director 650 N. La Cadena Colton, California 92324	U.S. Postal Service 7008 1830 0001 2418 7992	06/26/09	06/29/09 (S. Espinozi)
Omnitrans Attn: Durand L. Rall, CEO/General Manager 1700 West Fifth Street San Bernardino, California 92411	U.S. Postal Service 7008 1830 0001 2418 8005	06/26/09	Undated[5] (L. G. Brown)

Notes:
1. Acknowledgement of receipt stamped by recipient but not signed.
2. Return receipt undated. Proof of delivery received by EIS on June 30, 2009.
3. On the date indicated, returned to EIS as "Not Deliverable as Addressed – Unable to Forward" by the U.S. Postal Service.
4. Return receipt unsigned.
5. Return receipt undated. Proof of delivery received by EIS on July 1, 2009.
6. Dated but date of receipt not legible.
7. City of Fontana Community Development Department has acknowledged receipt (personal communication with Gina Gibson)

Source: Environmental Impact Sciences

ADDITIONAL PARTIES REQUESTING RECEIPT OF FUTURE CEQA NOTICES[1]

Agency/Address	U.S. Postal Service Tracking Number	Date Mailed	Date Received
Additional Parties Requesting Inclusion			
United States Forest Service Attn: Front Country Lands Officer 1209 Lytle Creek Road Lytle Creek, California 92358			
Vulcan Materials Company Attn: Douglas W. Sprague 3200 San Fernando Road Los Angeles, California 90065			
United Strategies, Inc. Attn: Bruce Cash P.O. Box 11328 San Bernardino, California 92423			
Dan Silver, Executive Director Endangered Habitats League 8424 Santa Monica Boulevard, Suite A 592 Los Angeles, California 90069-4267			
Additional Parties Identified by Lead Agency			
Calnev Pipeline Company Attn: Mark Jensen 1100 Town and Country Road Orange, California 92868			
Southern California Gas Company Attn: Richard Moeder, Geographic Services Manager 555 W. 5th Street, GT10G2 Los Angeles, California 90013			
Southern California Edison Company Attn: Regulatory Affairs 2244 Walnut Grove Avenue Rosemead, California 91770			

Notes:
1. Requests for notification received either on the last day of the NOP comment period or subsequent to the end of that period.

Source: Environmental Impact Sciences

Appendix I-A-B

Pre-Circulation Comments

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STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

June 29, 2009

To: Reviewing Agencies

Re: Lytle Creek Ranch Specific Plan
SCH# 2009061113

Attached for your review and comment is the Notice of Preparation (NOP) for the Lytle Creek Ranch Specific Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Gina M. Gibson
City of Rialto
150 South Palm Avenue
Rialto, CA 92376

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Assistant Deputy Director & Senior Planner, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2009061113
Project Title Lytle Creek Ranch Specific Plan
Lead Agency Rialto, City of

Type NOP Notice of Preparation

Description Adoption and subsequent implementation of a specific plan and associated entitlements for a mixed-use project authorizing the construction, use, occupancy, and habitation of up to 8,407 single-family and multi-family units, 849,420 gross leasable sf of retail commercial, office professional, and light industrial uses; open space and conservation areas; public and private recreational facilities; school sites; and associated public improvements and infrastructure facilities. In addition, the proposed project includes the construction of a revetment levee along the southern bank of Lytle Creek, spanning a distance of approximately seven miles. In addition to the on-site levee, the project will also construct approximately 2,000 linear feet of levee improvements to an existing levee located on adjoining property.

Lead Agency Contact

Name Gina M. Gibson
Agency City of Rialto
Phone 909-421-7246 **Fax**
email
Address 150 South Palm Avenue
City Rialto **State** CA **Zip** 92376

Project Location

County San Bernardino
City Rialto
Region
Cross Streets
Lat / Long
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use Mixed use development (higher-density residential, commercial, office professional, and light industrial uses)

Project Issues Aesthetic/Visual; Air Quality; Biological Resources; Archaeologic-Historic; Geologic/Seismic; Toxic/Hazardous; Water Quality; Landuse; Noise; Public Services; Traffic/Circulation; Other Issues

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Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 6; Native American Heritage Commission; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 8; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 8

Date Received 06/29/2009 **Start of Review** 06/29/2009 **End of Review** 07/28/2009

Note: Blanks in data fields result from insufficient information provided by lead agency.

OP Distribution List

NAG

County: San Bernardino

SCH# [illegible]

ources Agency

- Resources Agency
  Nadell Gayou
- Dept. of Boating & Waterways
  Mike Sotelo
- California Coastal Commission
  Elizabeth A. Fuchs
- Colorado River Board
  Gerald R. Zimmerman
- Dept. of Conservation
  Rebecca Salazar
- California Energy Commission
  Dale Edwards
- Cal Fire
  Allen Robertson
- Office of Historic Preservation
  Wayne Donaldson
- Dept of Parks & Recreation
  Environmental Stewardship Section
- Central Valley Flood Protection Board
  Jon Yego
- S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- Dept. of Water Resources
  Resources Agency
  Nadell Gayou
- _____
  Conservancy

ish and Game

- Depart. of Fish & Game
  Scott Flint
  Environmental Services Division
- Fish & Game Region 1
  Donald Koch
- Fish & Game Region 1E
  Laurie Harnsberger
- Fish & Game Region 2
  Jeff Drongesen
- Fish & Game Region 3
  Robert Floerke
- Fish & Game Region 4
  Julie Vance
- Fish & Game Region 5
  Don Chadwick
  Habitat Conservation Program
- Fish & Game Region 6
  Gabrina Gatchel
  Habitat Conservation Program
- Fish & Game Region 6 I/M
  Gabrina Getchel
  Inyo/Mono, Habitat Conservation Program
- Dept. of Fish & Game M
  George Isaac
  Marine Region

Other Departments

- Food & Agriculture
  Steve Shaffer
  Dept. of Food and Agriculture
- Depart. of General Services
  Public School Construction
- Dept. of General Services
  Anna Garbeff
  Environmental Services Section
- Dept. of Public Health
  Bridgette Binning
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- Delta Protection Commission
  Linda Flack
- Office of Emergency Services
  Dennis Castrillo
- Governor's Office of Planning & Research
  State Clearinghouse
- Native American Heritage Comm.
  Debbie Treadway
- Public Utilities Commission
  Leo Wong
- Santa Monica Bay Restoration
  Guangyu Wang
- State Lands Commission
  Marina Brand
- Tahoe Regional Planning Agency (TRPA)
  Cherry Jacques

Business, Trans & Housing

- Caltrans - Division of Aeronautics
  Sandy Hesnard
- Caltrans - Planning
  Terri Pencovic
- California Highway Patrol
  Scott Loetscher
  Office of Special Projects
- Housing & Community Development
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- Caltrans, District 1
  Rex Jackman
- Caltrans, District 2
  Marcelino Gonzalez
- Caltrans, District 3
  Bruce de Terra
- Caltrans, District 4
  Lisa Carboni
- Caltrans, District 5
  David Murray
- Caltrans, District 6
  Michael Navarro
- Caltrans, District 7
  Elmer Alvarez
- Caltrans, District 8
  Dan Kopulsky
- Caltrans, District 9
  Gayle Rosander
- Caltrans, District 10
  Tom Dumas
- Caltrans, District 11
  Jacob Armstrong
- Caltrans, District 12
  Chris Herre

Cal EPA

Air Resources Board

- Airport Projects
  Jim Lerner
  - Transportation Projects
    Douglas Ito
  - Industrial Projects
    Mike Tollstrup
- California Integrated Waste Management Board
  Sue O'Leary
- State Water Resources Control Board
  Regional Programs Unit
  Division of Financial Assistance
- State Water Resources Control Board
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- State Water Resouces Control Board
  Steven Herrera
  Division of Water Rights
- Dept. of Toxic Substances Control
  CEQA Tracking Center
- Department of Pesticide Regulation
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- RWQCB 1
  Cathleen Hudson
  North Coast Region (1)
- RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- RWQCB 3
  Central Coast Region (3)
- RWQCB 4
  Teresa Rodgers
  Los Angeles Region (4)
- RWQCB 5S
  Central Valley Region (5)
  - RWQCB 5F
    Central Valley Region (5)
    Fresno Branch Office
  - RWQCB 5R
    Central Valley Region (5)
    Redding Branch Office
- RWQCB 6
  Lahontan Region (6)
  - RWQCB 6V
    Lahontan Region (6)
    Victorville Branch Office
- RWQCB 7
  Colorado River Basin Region (7)
- RWQCB 8
  Santa Ana Region (8)
- RWQCB 9
  San Diego Region (9)

- Other _____

Last Updated on 03/24/2009

SOUTHERN CALIFORNIA

ASSOCIATION of GOVERNMENTS

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818 West Seventh Street

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Los Angeles, California

90017-3435

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www.scag.ca.gov

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Carl Morehouse, Ventura

Energy & Environment
Keith Hanks, Azusa

Transportation
Mike Ten, South Pasadena

July 20, 2009

Ms. Gina M. Gibson
Senior Planner
City of Rialto
Development Services Department
150 South Palm Avenue
Rialto, California 92376
ggibson@rialtoca.gov

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Lytle Creek Ranch Specific Plan [SCAG No. I20090427]

Dear Ms. Gibson,

Thank you for submitting the **Notice of Preparation of a Draft Environmental Impact Report for the Lytle Creek Ranch Specific Plan [SCAG No. I20090427]** to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372 (replacing A-95 Review). Additionally, pursuant to Public Resources Code Section 21083(d) SCAG reviews Environmental Impact Reports of projects of regional significance for consistency with regional plans per the California Environmental Quality Act Guidelines, Sections 15125(d) and 15206(a)(1). SCAG is also the designated Regional Transportation Planning Agency and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080 and 65082.

SCAG staff has reviewed this project and determined that the proposed project is regionally significant per California Environmental Quality Act (CEQA) Guidelines, Sections 15125 and/or 15206. The proposed project is the adoption and implementation of a specific plan allowing up to 8,407 single-family and multi-family units and 849,420 gross leasable square feet of retail, office, and light industrial uses, along with open space, recreational facilities, school sites, and associated public improvements and infrastructure.

Policies of SCAG's Regional Transportation Plan (RTP) and Compass Growth Visioning (CGV) that may be applicable to your project are outlined in the attachment. The RTP, CGV, and table of policies can be found on the SCAG web site at: http://scag.ca.gov/igr. For ease of review, we would encourage you to use a side-by-side comparison of all SCAG policies with a discussion of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format (example attached).

The attached policies are meant to provide guidance for considering the proposed project within the context of our regional goals and policies. We also encourage the use of the SCAG List of Mitigation Measures extracted from the RTP to aid with demonstrating consistency with regional plans and policies. **Please provide a minimum of 45 days for SCAG to review the Draft EIR and associated plans when these documents are available.** If you have any questions regarding the attached comments, please contact Bernard Lee at (213) 236-1800 or leeb@scag.ca.gov. Thank you.

Sincerely,

Jacob Lieb, Manager
Assessment, Housing & EIR

DOCS# 152830

COMMENTS ON THE NOTICE OF PREPARTION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LYTLE CREEK RANCH SPECIFIC PLAN – SCAG NO. I20090427

PROJECT LOCATION

The proposed project is located, in part, in the City of Rialto and, in part, in unincorporated County of San Bernardino within the City's adopted Sphere of Influence. The project site can be generally described as being located to the southwest of the unincorporated community of Devore, to the west of the City of San Bernardino, to the south of the San Bernardino National Forest (SBNF), to the east of the City of Fontana, and to the north of the confluence of Cajon and Lytle Creeks. The northeastern corner of the project site borders the County-administered Glen Helen Regional Park and portions of the project site abut the federally-administered SBNF. The project site includes certain acreage that was previously entitled by the County as part of the "Lytle Creek North Planned Development Project" and the "Glen Helen Specific Plan." The project site also includes certain lands that were previously entitled by the City as part of the "El Rancho Verde Specific Plan."

PROJECT DESCRIPTION

Adoption and subsequent implementation of a specific plan and associated entitlements for a mixed-use project authorizing the construction, use, occupancy, and habitation of up to 8,407 single-family and multi-family units, 849,420 gross leasable square feet of retail, commercial, office professional, and light industrial uses; open space and conservation areas; public and private recreational facilities; school sites; and associated public improvements and infrastructure facilities. In addition, the proposed project includes the construction of a revetment levee along the southern bank of Lytle creek, spanning a distance of approximately seven miles. In addition to the on-site levee, the project will also construct approximately 2,000 linear feet of levee improvements to an existing levee located on adjoining property. The proposed plan consists of 2,447 acres, of which 694 acres are within the City of Rialto and 1,753 are within the County of San Bernardino but within the City's Sphere of Influence.

The specific plan establishes overlay zoning which would allow mixed-use development (higher-density residential, commercial, office professional, and light industrial uses) in certain planning areas in accordance with the provisions of the specific plan's development standards. The proposed LCRSP will set forth the distribution, location, extent, and intensity of the uses of land, including open space, and establish design guidelines to govern future development.

Infrastructure improvements, associated directly or indirectly with the project's implementation, are anticipated at a number of additional areas located beyond the boundaries of the proposed LCRSP. These improvements constitute master planned facilities (e.g., water and wastewater facilities, street improvements) that have been identified by the City and/or by other governmental entities, will be implemented by those entities or others and are not expressly initiated by the project applicant or predicated solely by the proposed project, and for which the project applicant bears only a fee payment or fair-share obligation.

CONSISTENCY WITH REGIONAL TRANSPORTATION PLAN

Regional Growth Forecasts

The DEIR should reflect the most current SCAG forecasts, which are the 2008 RTP (May 2008) Population, Household and Employment forecasts. The forecasts for your region, subregion, and city are as follows:

Adopted SCAG Regionwide Forecasts[1]

	2010	2015	2020	2025	2030	2035
Population	19,418,344	20,465,830	21,468,948	22,395,121	23,255,377	24,057,286
Households	6,086,986	6,474,074	6,840,328	7,156,645	7,449,484	7,710,722
Employment	8,349,453	8,811,406	9,183,029	9,546,773	9,913,376	10,287,125

Adopted SANBAG Subregion Forecasts[1]

	2010	2015	2020	2025	2030	2035
Population	2,182,049	2,385,761	2,582,773	2,773,938	2,957,754	3,133,797
Households	637,252	718,601	787,138	852,994	914,575	972,565
Employment	810,232	897,493	965,781	1,045,471	1,134,964	1,254,752

Adopted City of Rialto Forecasts[1]

	2010	2015	2020	2025	2030	2035
Population	107,849	115,846	123,079	130,098	136,846	143,310
Households	27,519	30,550	33,029	35,411	37,638	39,735
Employment	26,492	30,295	33,237	36,676	40,555	46,580

1. The 2008 RTP growth forecast at the regional, subregional, and city level was adopted by the Regional Council in May 2008. City totals are the sum of small area data and should be used for advisory purposes only.

The **2008 Regional Transportation Plan (RTP)** also has goals and policies that are pertinent to this proposed project. This RTP links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. The RTP continues to support all applicable federal and state laws in implementing the proposed project. Among the relevant goals and policies of the RTP are the following:

Regional Transportation Plan Goals:

RTP G1 *Maximize mobility and accessibility for all people and goods in the region.*
RTP G2 *Ensure travel safety and reliability for all people and goods in the region.*
RTP G3 *Preserve and ensure a sustainable regional transportation system.*
RTP G4 *Maximize the productivity of our transportation system.*
RTP G5 *Protect the environment, improve air quality and promote energy efficiency.*
RTP G6 *Encourage land use and growth patterns that complement our transportation investments.*
RTP G7 *Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.*

GROWTH VISIONING

The fundamental goal of the **Compass Growth Visioning** effort is to make the SCAG region a better place to live, work and play for all residents regardless of race, ethnicity or income class. Thus, decisions regarding growth, transportation, land use, and economic development should be made to promote and sustain for future generations the region's mobility, livability and prosperity. The following "Regional Growth Principles" are proposed to provide a framework for local and regional decision making that improves the quality of life for all SCAG residents. Each principle is followed by a specific set of strategies intended to achieve this goal.

Principle 1: Improve mobility for all residents.

GV P1.1 *Encourage transportation investments and land use decisions that are mutually supportive.*
GV P1.2 *Locate new housing near existing jobs and new jobs near existing housing.*
GV P1.3 *Encourage transit-oriented development.*
GV P1.4 *Promote a variety of travel choices*

Principle 2: Foster livability in all communities.

GV P2.1 *Promote infill development and redevelopment to revitalize existing communities.*
GV P2.2 *Promote developments, which provide a mix of uses.*
GV P2.3 *Promote "people scaled," walkable communities.*
GV P2.4 *Support the preservation of stable, single-family neighborhoods.*

Principle 3: Enable prosperity for all people.

GV P3.1 *Provide, in each community, a variety of housing types to meet the housing needs of all income levels.*
GV P3.2 *Support educational opportunities that promote balanced growth.*
GV P3.3 *Ensure environmental justice regardless of race, ethnicity or income class.*
GV P3.4 *Support local and state fiscal policies that encourage balanced growth*
GV P3.5 *Encourage civic engagement.*

Principle 4: Promote sustainability for future generations.

GV P4.1 *Preserve rural, agricultural, recreational, and environmentally sensitive areas*
GV P4.2 *Focus development in urban centers and existing cities.*
GV P4.3 *Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.*
GV P4.4 *Utilize "green" development techniques*

CONCLUSION

As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA. We recommend that you review the SCAG List of Mitigation Measures for additional guidance, and encourage you to follow them, where applicable to your project. The SCAG List of Mitigation Measures may be found here: http://www.scag.ca.gov/igr/documents/SCAG_IGRMMRP_2008.pdf

SUGGESTED SIDE BY SIDE FORMAT - COMPARISON TABLE OF SCAG POLICIES

For ease of review, we would encourage the use of a side-by-side comparison of all SCAG policies with a discussion of the consistency, non-consistency or not applicable of the policy and supportive analysis in a table format. All policies and goals must be evaluated as to impacts. Suggested format is as follows:

The complete table can be found at: http://www.scag.ca.gov/igr/

- Click on ***"Demonstrating Your Project's Consistency With SCAG Policies"***
- Scroll down to ***"Table of SCAG Policies for IGR"***

SCAG Regional Transportation Plan Goals and Compass Growth Visioning Principles		
Regional Transportation Plan Goals		
Goal/ Principle Number	**Policy Text**	**Statement of Consistency, Non-Consistency, or Not Applicable**
RTP G1	Maximize mobility and accessibility for all people and goods in the region.	***Consistent:*** *Statement as to why* ***Not-Consistent:*** *Statement as to why* *or* ***Not Applicable:*** *Statement as to why*
RTP G2	Ensure travel safety and reliability for all people and goods in the region.	***Consistent:*** *Statement as to why* ***Not-Consistent:*** *Statement as to why* *or* ***Not Applicable:*** *Statement as to why*
RTP G3	Preserve and ensure a sustainable regional transportation system.	***Consistent:*** *Statement as to why* ***Not-Consistent:*** *Statement as to why* *or* ***Not Applicable:*** *Statement as to why*
Etc.	Etc.	Etc.

DEPARTMENT OF PUBLIC WORKS

FLOOD CONTROL • SOLID WASTE MGMT • SURVEYOR • TRANSPORTATION

COUNTY OF SAN BERNARDINO
PUBLIC AND SUPPORT
SERVICES GROUP

825 East Third Street • San Bernardino, CA 92415-0835 • (909) 387-8104
Fax (909) 387-8130

GRANVILLE M. "BOW" BOWMAN, P.E., P.L.S.
Director of Public Works

July 20, 2009

RECEIVED
By

File #10(ENV)-4.01

Ms. Gina M. Gibson, Senior Planner
City of Rialto
Development Services Department
150 South Palm Avenue
Rialto, CA 92376

RE: NOTICE OF PREPARATION OF DRAFT EIR FOR THE LYTLE CREEK SPECIFIC PLAN

Dear Ms. Gibson,

Thank you for giving the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. The EIR document was circulated to the other Divisions within the Department and the following are those comments received.

Water Resources Division, Mary Lou Mermilliod, Public Works Engineer II, 909-387-8213.

The proposed development is adjacent to two major drainage courses: Lytle Creek and Sycamore Canyon Creek. Both drainage courses are within a single Flood Control District held easement encompassing a major portion of the proposed development.

1. Lytle Creek is a Flood Control District facility that has highly debris laden flows originating in the mountains to the north. During the historic floods of January and February 1969, this drainage course experienced severe erosion and overflowed its banks.

2. Sycamore Canyon Creek is not maintained by the Flood Control District. The flows from Sycamore Canyon Creek traverse a portion of the site in a well defined natural drainage course and poorly defined vagrant flow paths. This drainage course also overflowed its banks in the 1969 storms.

According to the most recent FEMA Flood Insurance Rate Maps, panels 7910H, 7920H and 7040H, dated August 28, 2008, portions of the site lie within Zones X, shaded and unshaded, and Zone A.

The comments made below are preliminary in nature and subject to change upon submittal of more formal, finalized plans:

3. In our opinion, portions of the development are subject to infrequent flood hazards due to overflow, erosion and debris deposition in the event of a major storm until such time as adequate channel and debris retention facilities are constructed for both facilities. The site, in general, is also subject to sheet overflow from valley thunderstorms.
4. It is noted that a new 7-mile ± long levee is planned for the west side of Lytle Creek adjacent to the site. The levee shall be designed and constructed to meet FEMA criteria as stated in 44 CFR 65.10.
5. Lots adjacent to drainage coursed may be subject to additional FCD or County building setbacks.

6. A flood Hazard Review by Water Resources Division is required for any development adjacent to Flood Control District right-of-way. Section 16.0212(g) of the County Code sets the fee for the District's review and analysis at $520.00. This fee, together with site and drainage plans, is to be submitted to the address below with an indication that it is for Flood Hazard Review ID 57004, File 209.0813:

   San Bernardino County Flood Control District
   Water Resources Division
   825 E. 3rd Street, Room 142
   San Bernardino, CA 92415-0835

   There will be no further review, or permits issued until this fee has been processed.
7. It is noted that a hydrologic/hydraulic analysis has been prepared as part of an application for a FEMA Conditional Letter of Map Revision.
8. We recommend that the most current FEMA regulations, for construction within established floodplains, be included in the plans and enforced by the local jurisdictions.
9. Prior to any activity on Flood Control District right-of-way, a permit shall be obtained from the District's Flood Control Operations Division, Permit Section. Other off-site or on-site improvements may be required which cannot be determined at this time.
10. We also recommend that the appropriate local, state and federal agencies be include on the list of required approvals and permits.

Flood Control Planning Division, Omar Gonzalez, Public Works Engineer III, 909-387-8120.

The Lytle Creek Specific Plan is located partially within the limits of Lytle Creek and, therefore, affects the Lytle Creek Levee, Riverside Groins 1-5, and Island Levee, all of which are within the jurisdiction of the U.S. Army Corps of Engineers.

Traffic Division, Ed, Petre, Public Works Engineer III, 909-387-8239.

The Traffic Division would like to receive a copy of the Traffic Impact Analysis (TIA) for this project for review and possible further comments.

Sincerely,

Frank Molina

FRANK MOLINA, Supervising Planner
Environmental Management Division

FM:nh/CEQA Comments_Rialto_Lytle Creek Ranch SP

cc: Naresh P. Varma
GMB/ARI Reading File

U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

July 21, 2009

Gina M. Gibson, Senior Planner
City of Rialto
Development Services Department
150 South Palm Avenue
Rialto, California 92376

Dear Ms. Gibson:

This is in response to your request for comments on the Notice of Preparation for Lytle Creek Ranch Specific Plan located in the City of Rialto, San Bernardino County, California.

Please review the current effective countywide Flood Insurance Rate Maps (FIRMs) for the City of Rialto (Community Number 060280), Maps revised August 28, 2008. Please note that the City of Rialto, San Bernardino County, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.

- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The City of Rialto floodplain manager can be reached by calling Gene R. Klaft, Project Engineer, at (909) 820-2525.

If you have any questions or concerns, please do not hesitate to call Cynthia McKenzie of the Mitigation staff at (510) 627-7190.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Gene R. Klaft, Project Engineer, City of Rialto
Vana R. Olson, P. E., Director, San Bernardino County Flood Control District
Garret Tam Sing/Salomon Miranda, State of California, Department of Water Resources, Southern District
Cynthia McKenzie, Senior Floodplanner, CFM, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 · www.aqmd.gov

June 30, 2009

Ms. Gina M. Gibson, Senior Planner
City of Rialto
Development Services Department
150 South Palm Avenue
Rialto, CA 92376

Dear Ms. Gibson:

Notice of Preparation of a Draft Environmental Impact Report (Draft EIR) for the Lytle Creek Ranch Specific Plan

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The SCAQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft environmental impact report (EIR). Please send the SCAQMD a copy of the Draft EIR upon its completion. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality analysis and electronic versions of all air quality modeling and health risk assessment files. Electronic files include spreadsheets, database files, input files, output files, etc., and does not mean Adobe PDF files. Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. Alternatively, the lead agency may wish to consider using the California Air Resources Board (CARB) approved URBEMIS 2007 Model. This model is available on the SCAQMD Website at: www.urbemis.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has developed a methodology for calculating PM2.5 emissions from construction and operational activities and processes. In connection with developing PM2.5 calculation methodologies, the SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD requests that the lead agency quantify PM2.5 emissions and compare the results to the recommended PM2.5 significance thresholds. Guidance for calculating PM2.5 emissions and PM2.5 significance thresholds can be found at the following internet address: http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html.

In addition to analyzing regional air quality impacts the SCAQMD recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized significance analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

It is recommended that lead agencies for projects generating or attracting vehicular trips, especially heavy-duty diesel-fueled vehicles, perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis") can be found on the SCAQMD's CEQA web pages at the following internet address: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additional mitigation measures can be found on the SCAQMD's CEQA web pages at the following internet address: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html Additionally, SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html. In addition, guidance on sitting incompatible land uses can be found in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Perspective, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's World Wide Web Homepage (http://www.aqmd.gov).

The SCAQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Daniel Garcia, Air Quality Specialist, CEQA Section, at (909) 396-3304 if you have any questions regarding this letter.

Sincerely,

Steve Smith

Steve Smith, Ph.D.
Program Supervisor, CEQA Section
Planning, Rule Development and Area Sources

SS:DG:AK
SBC090630-10AK
Control Number

California Regional Water Quality Control Board
Santa Ana Region

3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (951) 782-4130 • FAX (951) 781-6288
www.waterboards.ca.gov/santaana

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

July 7, 2009

Gina Gibson
City of Rialto
Development Services Department
150 South Palm Avenue
Rialto, CA 92376

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED LYTLE CREEK RANCH SPECIFIC PLAN

Dear Ms. Gibson:

Regional Board staff is in receipt of a Notice of Preparation of a Draft Environmental Impact Report ("DEIR") for the proposed Lytle Creek Ranch Specific Plan. Regional Board staff requests that the following issues be addressed in the DEIR:

Waters of the State and Waters of the U.S.

The locations of all waters of the State should be provided in an appropriate exhibit in the DEIR. "Waters of the State" are defined much more broadly than "waters of the U.S." Waters of the U.S. are a subset of waters of the State, in part due to several recent Supreme Court decisions (*SWANCC* and *Rapanos*). A delineation of waters of the U.S. is insufficient to disclose the impacts of discharges of fill on the beneficial uses of waters of the State. Surface waters of the State are delineated generally using U.S. Army Corps of Engineers methods, as exercised prior to *SWANCC* and *Rapanos*.

Hydrology/Hydraulics

If the project involves development that impinges on Lytle Creek's current 100-year flood plain, please address potential impacts on channel stability, including channel degradation and sediment transport, and subsequent impacts on habitat for endangered species and buried utility crossings in the vicinity of the project.

Please address potential habitat modification from the introduction of dry-weather runoff into Lytle Creek. Dry-weather runoff has the potential to cause habitat type changes that are adverse to native plant and animal species such as the San Bernardino Kangaroo Rat. Regional Board staff recommends the use best management practices ("BMPs") such as xeric landscaping, minimal use of turf grass, and infiltration to mitigate this impact.

Groundwater Recharge

Please address how impacts to the underlying groundwater management zone will be mitigated by this project or other programs, such as implementation of Low-Impact Development ("LID") BMPs. Impacts analyzed should include loss of groundwater recharge capacity due to an increase of impervious surfaces, and the effect that the proposed project, including its mitigation

measures, will have on underlying groundwater quality. Please contact the local water district for details regarding programs to mitigate the loss of groundwater recharge capacity.

Endangered Species

The Regional Board has a responsibility to protect the physical, chemical, and biological integrity of wildlife habitat within waters of the State. However, that responsibility does not extend to the protection of wildlife populations themselves, which may be threatened by impacts that are unrelated to discharges of waste (i.e. predation, fragmentation, wildfires, light, noise, disease, refugia loss, etc.).

Because of these indirect impacts, although habitat may be preserved in the remaining waters of the State within the project site, this should not be construed as being protective of the remaining population of endangered species. Therefore, it may be necessary to evaluate the indirect and cumulative impacts of reduced habitat and edge effects through population modeling.

Anti-degradation of Sycamore Creek Mitigation Site and Lytle Creek

Please conduct an assessment of the Sycamore Creek mitigation site and Lytle Creek, using the California Rapid Assessment Method ("CRAM"), to evaluate the potential impacts of development adjacent to these waters of the State, and report the findings in the Initial Study. Regional Board staff requests that degradation or potential impacts to these area be mitigated, in part with an appropriate open space buffer. Such buffers should be designed to be managed for low-impact and passive uses, such as trials or paths. Certain structural treatment control BMPs may also serve as buffers.

Pollutants in Storm Water Runoff

Pollutants in storm water runoff must be removed to the maximum extent practicable pursuant to the requirements of Regional Board Order No. R8-2002-0012, NPDES Permit No. CAS618036 and subsequent renewals. This Order provides wide latitude to the City of Rialto to determine the measures the City will take to comply. Therefore, merely referencing the Order as evidence that water quality impacts from storm water runoff will be properly managed is insufficient to demonstrate compliance with the Order and comply with the requirements of the California Environmental Quality Act ("CEQA").

Regional Board staff recommends that a master Water Quality Management Plan ("WQMP") be developed as a guide for the development of regional and sub-regional structural treatment control BMPs, with greater detail to be provided in WQMPs for subsequent projects within the planning area. The master WQMP should describe the general location and type of structural treatment control BMPs, how the facilities will be constructed in a timely manner, and how their maintenance will be funded. A corresponding summary discussion should be in the DEIR.

Recreational Beneficial Uses of Lytle Creek

The Water Quality Control Plan for the Santa Ana River Basin, 1995, and subsequent amendments, identifies passive and water contact recreation as existing, intermittent beneficial

uses of the reach of Lytle Creek adjacent to the proposed project. The IS and subsequent CEQA documents should identify measures that will be taken to preserve and enhance these beneficial uses

Particular attention should be provided to the Non-contact Water Recreation (REC-2) beneficial use. This beneficial use includes such recreational activities as hiking, bird-watching, and aesthetic enjoyment. The quality of these recreational experiences is affected by several of the impacts discussed above. In addition, persons engaging in these recreational activities will also impact other beneficial uses such as Wildlife Habitat (WILD) and Rare, Threatened, and Endangered Species (RARE) through many of the indirect impacts also described above. The Regional Board seeks to balance these beneficial uses.

Regional Board staff recommends that the City first acknowledge that the proposed project will increase the recreational uses of Lytle Creek, with subsequent environmental impacts. Irrespective of the intentions of the project proponent, people will seek out recreational opportunities where they can find them, whether or not those activities are formally sanctioned by any agency. Therefore, Regional Board staff recommends that mitigation measures include accommodating those recreational activities by providing formal facilities such as trails, educational signage, trash receptacles, etc., in an effort to promote stewardship of the environmental resources in Lytle Creek.

All of the issues discussed above are interrelated in more than one way. While we have presented them in a topical format, Regional Board staff requests that they be considered as a whole, rather than in isolation.

If you have any questions, please contact Adam Fischer at afischer@waterboards.ca.gov or at (951) 320-6363.

Sincerely,

Mark G. Adelson
Senior Environmental Scientist
Chief, Regional Basin Planning Section

cc (via e-mail):
U.S. Fish and Wildlife Service – Nancy Ferguson
State Water Resources Control Board, DWQ – Water Quality Certification Unit
Department of Fish and Game – Anna Milloy and Michael Flores
U.S. Army Corps of Engineers – Mark Durham

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maziar Movassaghi
Acting Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

July 23, 2009

RECEIVED
JUL 27 2009
By

Ms. Gina M. Gibson, Senior Planner
City of Rialto
150 South Palm Avenue
Rialto, California 92376

NOTICE OF PREPARATION FOR A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LYTLE CREEK RANCH SPECIFIC PLAN (SPECIFIC PLAN NO. 12) PROJECT (SCH# 2009061113), CITY OF RIALTO, SAN BERNARDINO COUNTY

Dear Ms. Gibson:

The Department of Toxic Substances Control (DTSC) has received your submitted Initial Study and Notice of Preparation (NOP) for a subsequent draft Environmental Impact Report (EIR) No. 507 for the above-mentioned Project. The following project description is stated in your document: "The proposed 2,447.3-acre Lytle Creek Ranch Specific Plan (LCRSP) establishes overlay zoning which would allow mixed-use development (higher-density residential, commercial, office professional, and light industrial uses) in certain planning areas in accordance with the provisions of the specific plan's development standards. In addition, the proposed project includes the construction of a revetment levee along the southern bank of Lytle Creek, spanning a distance of approximately seven miles. The proposed project is located, in part, in the City of Rialto and, in part, in unincorporated County of San Bernardino within the City's adopted Sphere of Influence. The project site can be generally described as being located to the southwest of the unincorporated community of Devore, to the west of the City of San Bernardino, to the south of the San Bernardino National Forest (SBNF), to the east of the City of Fontana, and to the north of confluence of Cajon and Lytle Creeks." DTSC has the following comments:

1) The EIR should identify the current or historic uses at the project site that may have resulted in a release of hazardous wastes/substances, and any known or potentially contaminated sites within the proposed Project area. For all identified sites, the EIR should evaluate whether conditions at the site may pose a threat to human health or the environment. Following are the databases of some of the pertinent regulatory agencies:

- National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).

- Envirostor: A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).

- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.

- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.

- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.

- Leaking Underground Storage Tanks (LUST) / Spills, Leaks, Investigations and Cleanups (SLIC): A list that is maintained by Regional Water Quality Control Boards.

- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.

- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

2) The EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents. Please see comment No. 11 below for more information.

3) All environmental investigations, sampling and/or remediation for the site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the document. All sampling results in which hazardous substances were found should be clearly summarized in a table.

4) Proper investigation, sampling and remedial actions overseen by the respective regulatory agencies, if necessary, should be conducted at the site prior to the new development or any construction. All closure, certification or remediation approval reports by these agencies should be included in the EIR.

5) If buildings or other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should be conducted for the presence of other related hazardous chemicals, lead-based paints or products, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.

6) Project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination.

7) Human health and the environment of sensitive receptors should be protected during the construction or demolition activities. If it is found necessary, a study of the site and a health risk assessment overseen and approved by the appropriate government agency and a qualified health risk assessor should be conducted to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment.

8) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA.

9) If during construction/demolition of the project, the soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented.

10) If the site was used for agricultural, livestock or related activities, onsite soils and groundwater might contain pesticides, agricultural chemical, organic waste or other related residue. Proper investigation, and remedial actions, if necessary, should be conducted under the oversight of and approved by a government agency at the site prior to construction of the project.

11) DTSC can provide guidance for cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see www.dtsc.ca.gov/ SiteCleanup/Brownfields, or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489.

12) Also, in future CEQA documents, please provide your e-mail address, so DTSC can send you comments both electronically and by mail.

If you have any questions regarding this letter, please contact Mr. Rafiq Ahmed, Project Manager, at rahmed@dtsc.ca.gov or by phone at (714) 484-5491.

Sincerely,

Greg Holmes, Unit Chief
Brownfields and Environmental Restoration Program

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
state.clearinghouse@opr.ca.gov

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
1001 I Street, 22nd Floor, M.S. 22-2
Sacramento, California 95814
nritter@dtsc.ca.gov

CEQA# 2640

City of Fontana

CALIFORNIA

July 28, 2009

RECEIVED
JUL 28 2009
BY

Gina Gibson, Senior Planner
City of Rialto
150 South Palm Avenue
Rialto, CA 92376

Re: Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Lytle Creek Ranch Specific Plan.

Dear Ms. Gibson,

Thank you for the opportunity to review and comment on the above-referenced project located in the northern portion of the City of Rialto and in part within the County of San Bernardino. The projects easterly boundary is contiguous to the City of Fontana.

The City of Fontana recognizes that this project has the potential to benefit both of our cities; however, with the limited information provided we have concerns and questions regarding the proposed Land Use Designations, and potential impacts to the City of Fontana.

The follow concerns/issues should be analyzed in the DEIR:

Land Use/Planning
The conceptual Land Use Plan identifies the proposed land uses contiguous with the City of Fontana's boundary as mixed use. The NOP further states that this mixed use designation would allow for higher-density residential, commercial, office professional and light industrial uses. Evaluate the compatibility of light industrial uses as it relates to the City of Fontana's existing General Plan Land Use Designations and Zoning Districts. Further, the City of Fontana's General Plan Land Use Element does not support any warehousing, distribution and trucking oriented uses in this area or in any light industrial land use designation.

Air Quality
Any proposed land use that generates a significant amount of traffic (passenger and/or truck traffic) through the City of Fontana should be evaluated with a Health Risk Assessment in addition to any other technical studies to determine the possible health impacts to Rialto and Fontana residents along Sierra Avenue and Lytle Creek Road corridors.

Transportation/Circulation and Traffic
The DEIR should evaluate the need for improvements at the I-15 freeway/Sierra Avenue interchange (signalization, ramp reconfiguration, additional lanes, etc.), the realignment of Riverside and Sierra Avenues and associated impacts. A thorough analysis of the traffic impacts to the City of Fontana should be included in the DEIR. The minimum acceptable Level Of Service (LOS), street widths and classifications for the City of Rialto in some instance are different from the City of Fontana. The DEIR should consider these differences when evaluating impacts to the circulation within the City of Fontana. We would be happy to provide you with this information.

Stormwater/Drainage and water quality
The DEIR should address all downstream hydrology impacts as a result of project related drainage improvements (i.e. levee improvements, channelization of Lytle Creek, storm drain construction, etc.) on Sierra Avenue, Lytle Creek Road, and all other potentially impacted areas within the City of Fontana. The DEIR should evaluate the impacts to the City of Fontana's Master Drainage Plan to ensure that adequate capacity is provided if project flows are directed into the City of Fontana.

Cumulative Impacts
Evaluate the cumulative impacts of proposed and approved projects within the City of Fontana (i.e. Westgate Specific Plan update, Monarch Hills Specific Plan, Arboretum Specific Plan, Summit at Rosena, etc.), Rialto and the County of San Bernardino. We would be happy to provide you with a list of current, approved and proposed projects.

In addition, the mitigation measures identified in the EIR for the adjacent and partially developed Lytle Development (Rosena Ranch) should be evaluated to determine if all measures have been completed as required. If there are outstanding mitigation measures that should have been implemented, those mitigations measures should be incorporated into the DEIR for the above-referenced project as well.

As a courtesy we ask that you please provide copies of the screen check (administrative) draft traffic analysis, hydrology/hydraulics report, health risk assessment and other significant studies which may reflect impacts to Fontana in advance of circulating the DEIR. In this way both cities can avoid needless public disagreements over technical "fine points" that might arise through different organizational procedures.

Thank you for the opportunity to review the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Lytle Creek Ranch Specific Plan and to participate in the CEQA process. The City of Fontana looks forward to working with the City of Rialto to ensure that this project, which is very important to the region, is processed in a timely manner with minimum impacts to

all communities. If we may be of any assistance to you, please contact Stephanie Hall, Senior Planner at (909) 350-6656 or shall@fontana.org. Please provide notification to the City of Fontana of future meetings on the project and/or the DEIR.

Respectfully,

COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DIVISION

Don Williams, AICP
Director of Community Development

California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-200
Ontario, CA 91764
(909) 484-0167

ARNOLD SCHWARZENEGGER, Governor
DONALD KOCH, Director

RECEIVED
JUL 29 2009
By

July 29, 2009

Ms. Gina Gibson
City of Rialto
150 South Palm Avenue
Rialto, CA 92376

Re: Notice of Preparation for Lytle Creek Ranch Specific Plan - SCH 2009061113

Dear Ms. Gibson:

The Department of Fish and Game (Department) appreciates this opportunity to comment on the Notice of Preparation for the Draft Environmental Impact Report (DEIR) for the Lytle Creek Specific Plan. The project is the adoption and implementation of a specific plan and associated entitlements for up to 8,407 single-family and multi-family units, 849,420 gross square feet of retail commercial, office professional and light industrial uses, open space and conservation areas, public and private recreation facilities, school sites and infrastructure. The plan also involves the construction of a revetment levee along the southern bank of Lytle Creek for a distance of seven (7) miles and 2,000 linear feet of levee improvements to an existing levee on an adjoining property.

The Department is responding as a Trustee Agency for fish and wildlife resources [Fish and Game Code sections 711.7 and 1802 and the California Environmental Quality Act Guidelines (CEQA) section 15386] and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines section 15381), such as a Lake or Streambed Alteration Agreement (Fish and Game Code Section 1600 *et seq*) or a California Endangered Species Incidental Take Permit (Fish and Game Code Sections 2080 and 2080.1).

The project consists of 2,447.3 acres, 694.2 of which are in the City and 1,753.1 acres are within the City's Sphere of Influence. Approximately 20 acres are off-site. The project site is located within the County of San Bernardino, southwest of the community of Devore, west of the City of San Bernardino, south of the San Bernardino National Forest (SBNF), east of the City of Fontana and north of the confluence of Cajon and Lytle Creeks. The project includes acreage that was previously part of the "Lytle Creek North Planned Development Project" and the "Glen Helen Specific Plan".

The proposed project involves improvements that require a Lake and Streambed Alteration Agreement (Agreement). The estimated impacts include 0.7 acres of outfall structures, 0.5 acres of off-site levee improvements in the north, 10.1 acres of off-site levee improvements in the central portion of the site, 0.1acres of off-site levee improvements, and a 2.5 acre existing utility road. The entirety of the project is either located within the floodplain of Lytle Creek or adjacent to the floodplain of Lytle Creek.

Biological Issues

The Department recommends that the DEIR include a wetland delineation and graphics showing existing and proposed areas of active channel, braided channel, floodplain, areas that will be removed from the floodplain and current areas not subject to flooding. Additionally, the project should discuss the reason for on- and off-site levee improvements, as well as an impact analysis of the levees on jurisdictional waters and biological resources, and evidence that development will not require additional flood control structures to protect development. The DEIR should provide an analysis of the temporary and permanent impacts to site and downstream jurisdictional waters and how and where these impacts will be mitigated.

The DEIR should include an analysis of project impacts to San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and coastal California gnatcatcher (*Polioptila californica californica*) on a local and regional basis and should not defer the analysis or mitigation to negotiations with the United States Fish and Wildlife Service. The DEIR should also analyze the previous erosion impacts to the San Bernardino kangaroo rat "mitigation islands" that served as mitigation for the Lytle Creek North project. The DEIR should analyze wildlife movement between the site and the National Forest and from west to east along the foothills.

The Department recommends that the DEIR include a discussion of the local and regional biological importance of Lytle Creek and an in-depth analysis of how this development will affect sensitive biological resources, including species of special concern. Lytle Creek is an area of regional biological significance. The impacts to Lytle Creek should be viewed in the context of the remaining riparian fish and wildlife resources in the valley portion of San Bernardino County, as well as discussing the loss of additional fish and wildlife resources in Lytle Creek and the regional significance of any loss. This should be addressed in a cumulative impacts analysis. The document should identify any areas set aside for conservation or mitigation and assess whether and how the project would affect them.

The alternatives analysis should include an alternative for development of the project without additional flood control structures and improvements. Any adverse, unmitigated impacts to Lytle Creek would require a Section 15093 Statement of Overriding Considerations, as per the California Environmental Quality Act.

The nature of this development has impacts to area wildlife, both on an individual basis and a cumulative basis. Therefore, although not directly biological in nature, the Department's comments regarding land use and other issues are germane to its Trustee Agency role. Also, fire and flood control in the foothills are significant issues that also lead to impacts to habitats and jurisdictional areas. Please identify and address the potential impacts of flood and fire control relative to fish and wildlife resources and jurisdictional areas.

The Department is concerned about the continuing loss of jurisdictional waters of the State and the encroachment of development into areas with native habitat values. The DEIR should contain enough specific, up-to-date, biological information on the existing habitat and species, measures to minimize and avoid sensitive biological resources, and mitigation measures to offset the loss of native flora and fauna and State waters. If the site does contain Federal or State-listed species, the DEIR should include measures to avoid

and minimize impacts to these species as well as comprehensive mitigation measures. The document should not defer impact analysis and mitigation measures to future regulatory discretionary actions, such as a Lake or Streambed Alteration Agreement, California Endangered Species Act permit or Federal Endangered Species Act permit.

This particular project has the potential to have significant environmental impacts on sensitive flora and fauna resources, including Federal and State listed endangered species. Therefore, critical aspects of the DEIR should include an alternatives analysis which focuses on environmental resources and in-kind mitigation measures for impacts identified as significant. To enable Department staff to adequately review and comment on the proposed project, we suggest that updated biological studies be conducted prior to any environmental or discretionary approvals. The following information should be included in any focused biological report or supplemental environmental report:

1. A complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.
   a. A thorough assessment of rare plants and rare natural communities, following the Department's May 1984 Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities.

   b. A complete assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

   c. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (See CEQA Guidelines, 15380)

   d The Department's California Natural Diversity Data Base in Sacramento should be contacted at (916) 327-5960 to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.

   a. CEQA Guidelines, 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

   b. Project impacts should be analyzed relative to their effects on off-site

habitats. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, should be fully evaluated and provided.

c. The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.

d. A cumulative effects analysis should be developed as described under CEQA Guidelines, 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

e. The document should include an analysis of the effect that the project may have on completion and implementation of regional and/or subregional conservation programs. Under 2800-2835 of the Fish and Game Code, the Department, through the Natural Communities Conservation Planning (NCCP) program is coordinating with local jurisdictions, landowners, and the Federal Government to preserve local and regional biological diversity.

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated (CEQA Guidelines 15126.6). A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

   a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitat elsewhere should be addressed.

   b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts.

   c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

4. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plants or animals listed

under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to the proposed project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:

a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.

b. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

5. The Department opposes the elimination of watercourses and/or their channelization or conversion to subsurface drains. All wetlands and watercourses, whether intermittent or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations.

a. Under Section 1600 *et seq* of the Fish and Game Code, the Department requires the project applicant to notify the Department of any activity that will divert, obstruct or change the natural flow or the bed, channel or bank (which includes associated riparian resources) of a river, stream or lake, or use material from a streambed prior to the applicant's commencement of the activity. Streams include, but are not limited to, intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams, and watercourses with subsurface flow. The Department's issuance of a Lake and Streambed Alteration Agreement for a project this is subject to CEQA will require CEQA compliance actions by the Department as a responsible agency. The Department, as a responsible agency under CEQA, may consider the local jurisdiction's (lead agency) Negative Declaration or EIR for the project. However, if the CEQA document does not fully identify potential impacts to lakes, streams, and associated resources (including, but not limited to riparian and alluvial fan sage scrub habitat) and provide adequate avoidance, mitigation, monitoring and reporting commitments, additional CEQA documentation will be required prior to execution (signing) of the Streambed Alteration Agreement. In order to avoid delays or repetition of the CEQA process, potential impacts to a lake or stream, as well as avoidance and mitigation measures need to be discussed within this CEQA document. The Department recommends the following measures to avoid subsequent CEQA documentation and project delays:

(i) Incorporate all information regarding impacts to lakes, streams and associated habitat within the DEIR. Information that needs to be included within this document includes: (a) a delineation of lakes, streams and associated habitat that will be directly or indirectly impacted by the proposed project; (b) details on the biological resources (flora and fauna) associated with the lakes and/or streams; (c) identification of the presence or absence of sensitive plants, animals, or natural communities; (d) a discussion of environmental alternatives; (e) a discussion of avoidance measures to reduce project impacts, (f) a discussion of potential mitigation measures required to reduce the project impacts to a level of insignificance and (g) an analysis of impacts to habitat caused by a change in the flow of water across the site. The applicant and lead agency should keep in mind that the State also has a policy of no net loss of wetlands.

(ii) The Department recommends that the project applicant and/or lead agency consult with the Department to discuss potential project impacts and avoidance and mitigation measures. Early consultation with the Department is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Streambed Alteration Agreement Notification package, please visit our website at: http://www.dfg.ca.gov/habcon/1600/ or call (562) 430-7924.

Thank you for this opportunity to comment. Please contact Robin Maloney-Rames at (909) 980-3818, if you have any questions regarding this letter.

Sincerely,

Jeff Brandt
Staff Environmental Scientist

cc: State Clearinghouse, Sacramento
Michael Flores, CDFG
Nancy Ferguson, USFWS
Adam Fisher, RWQCB

LOCAL AGENCY FORMATION COMMISSION

215 North "D" Street, Suite 204 • San Bernardino, CA 92415-0490
(909) 383-9900 • Fax (909) 383-9901
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Established by the State of California to serve the Citizens, Cities, Special Districts and the County of San Bernardino

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Deputy Clerk to the Commission

REBECCA LOWERY
Deputy Clerk to the Commission

LEGAL COUNSEL

CLARK H. ALSOP

July 28, 2009

Gina M. Gibson, Senior Planner
Development Services Department
City of Rialto
150 South Palm Avenue
Rialto, CA 92376

RE: Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Lytle Creek Ranch Specific Plan

Dear Ms Gibson:

The San Bernardino Local Agency Formation Commission (LAFCO) would like to request an extension for submission of comments related to the NOP described above. As identified at the Scoping Meeting this afternoon, our request is to allow the submission of comments by Monday, August 3, 2009.

We thank you for your consideration of this request. Should you have any questions, please do not hesitate to contact me at the address listed above or by phone at (909) 383-9900.

Sincerely,

KATHLEEN ROLLINGS-McDONALD
Executive Officer

cc: Mike Story, Director of Development Services

LOCAL AGENCY FORMATION COMMISSION

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Deputy Clerk to the Commission

REBECCA LOWERY
Deputy Clerk to the Commission

LEGAL COUNSEL

CLARK H. ALSOP

July 31, 2009

Gina M. Gibson, Senior Planner
Development Services Department
City of Rialto
150 South Palm Avenue
Rialto, CA 92376

RE: Notice of Preparation of a Draft Environmental Impact Report for the Lytle Creek Ranch Specific Plan

Dear Ms. Gibson:

The Local Agency Formation Commission (LAFCO) received a copy of the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) for the Lytle Creek Ranch Specific Plan on June 30, 2009. A copy of this document has also been forwarded to the Commission's Environmental Consultant, Tom Dodson and Associates, who may respond under a separate cover. After reviewing the document, LAFCO has the following comments and/or concerns:

Overall Project Proposal:

The annexation to a City and/or District is a LAFCO process and therefore, LAFCO will be using the EIR as a responsible agency under CEQA. Some of the issues that need to be addressed in the EIR include the type of services to be provided, the types of services that are available, and the existing infrastructure needs required to serve the area. These issues, among others, have potential indirect effects on environmental factors such as Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, and Utilities and Service Systems that should be addressed in the EIR.

Annexation to the City of Rialto

The Specific Plan encompasses areas that include the City of Rialto (City) and its unincorporated sphere of influence that will require annexation to the City. The draft EIR must clearly identify the areas that are proposed for annexation to the City, identify the pre-zoning, land use designations to be assigned as required by law, as well as address the annexation to the West Valley Water District required for water service and the detachments from the San Bernardino County Fire Protection District and its Valley Service Zone and County Service Area 70 and its Improvement Zone GH.

Issues Regarding Exclusion Areas

Based on the information provided, the Specific Plan identifies four (4) neighborhood areas that are a part of the overall Specific Plan project. However, in reviewing the maps provided in the NOP, there were lands located between each neighborhood that were left out of the overall project that have a direct effect on the ability of these neighborhood areas to be annexed to the City. As presently outlined, Neighborhood 4 cannot be annexed since it will not be contiguous to the City unless the freeway area between Neighborhood 3 and 4 is included as part of the annexation to the City (see Figure 1 attached). Likewise, Neighborhood 1 would not be considered to be a part of the annexation to the City unless the right-of-way area along Sycamore Creek Road between Neighborhood 1 and 4 is included as part of the annexation (see Figure 1 attached).

In addition, the exclusion area along the freeway within Neighborhood 1 (identified at the Scoping Meeting as the "toe" area) needs to be included as part of the overall annexation to eliminate the creation of an unincorporated County pocket (see Figure 2 attached). LAFCO staff is questioning the creation of the larger island area along the I-15 corridor in the Sycamore Canyon area of Neighborhood 1. Figure 2 also identifies this island area of the sphere of influence territory for the City in question. LAFCO law restricts the Commission's ability to create these islands through an annexation proceeding (Government Code Section 56744) unless specific findings can be made (Government Code Section 56375(m)).

Likewise, LAFCO questions the exclusion of the West Valley Water District tanks in Neighborhood 4 (see Figure 3 attached). As shown on the map, the tank locations are actually not confined within the parcel being excluded. Unless some parcel configuration adjustment is made, it is LAFCO's position that the parcel should be a part of the overall annexation area discussed and evaluated in the EIR.

If the City is pre-zoning the project through its Specific Plan, then the draft EIR must evaluate all these areas as part of the overall Specific Plan.

Issues Regarding Parcel Boundary

Based on the information provided, a few of the boundaries of the project did not follow existing parcel lines. It should be noted that, unless there are parcel changes, such as splits/mergers proposed separate from this review and completed prior to the annexation, the annexation/detachment boundaries must conform to existing lines of parcel assessment or ownership. The scale of the maps did not provide any detail; however, LAFCO staff has identified 5 parcels where the Specific Plan boundary splits a parcel (See Figures 4, 5, and 6 attached).

Annexation to West Valley Water District:

A portion of the project will also require the annexation to West Valley Water District (WVWD) for water service. It should be noted that only a portion of the area being annexed to the City is to be annexed into WVWD (see Figure 7 attached). Although a water district can annex non-contiguous areas, it is LAFCO staff's position, pursuant to Commission policy, that the City/District boundary should be coterminous, the annexation should include the freeway area between Neighborhood 3 and 4 and the right-of-way area along Sycamore Creek between Neighborhood 1 (existing boundaries of the District) and Neighborhood 4. This position also applies to the split parcels identified earlier.

Comments on the NOP:

Project Location:

The project location in the NOP describes the area of the Specific Plan as a whole. However, the project location in the EIR should specifically identify the area that is being annexed to the City (including the acreage). A map of the City and its sphere of influence showing clearly the overall project area and the area to be annexed should be included as part of the exhibits.

The EIR should also specifically identify the area that is being annexed into WVWD. A separate map of WVWD's boundary and sphere of influence showing clearly the overall project area and the area to be annexed should also be included as part of the exhibits.

Project Description:

The project description in the NOP describes areas that are being assigned land use designations within the City and within its existing sphere of Influence. It would be helpful to clearly identify the land uses (existing or proposed) that are within the City and those within its sphere of influence. Since LAFCO will be evaluating the pre-zoning for the City's sphere of influence, the Specific Plan and the draft EIR should classify the land uses within the City and those within the annexation area separately. Likewise, a map that clearly delineates the

General Plan/Specific Plan land use designations within the City and those within its unincorporated sphere of influence would also be helpful.

2nd Paragraph, Item 5, page 3, should include, "...through the Local Agency Formation Commission....," to clearly identify the LAFCO process.

Specific Factors to be Considered in the EIR:

Land Use and Planning:

The EIR must compare the existing County land use designation for the area being annexed into the City versus the land uses for the area assigned by the City's General Plan and/or the proposed Specific Plan. A discussion regarding the environmental impacts between the existing and proposed land uses must be evaluated in the draft EIR.

Public Services:

Fire Protection. The standard for evaluation of the proposal would be to include the detachment of the San Bernardino County Fire Protection District and its Valley Service Zone and the transfer of those responsibilities to the City fire department. However, it was identified to LAFCO at the Scoping Meeting on July 28, that there was the possibility that a portion of the Specific Plan area will be detached from the San Bernardino County Fire Protection District but continued to be served by that agency through an out-of-agency contract with the City's fire department. Whether the City serves the entire Specific Plan area or a portion will be served by the County, these options for providing fire protection and paramedic services to the overall project must be outlined and evaluated in the draft EIR, including a discussion of the creation of auxiliary financing mechanisms as outlined in the EIR prepared for the Lytle Creek North project, now known as Rosena Ranch.

The issue of removal of the State Responsibility Area (SRA) designation for wildland fire protection, which occurs upon annexation of the area to the City, must be discussed in the draft EIR. As required by State law, this designation is removed upon annexation of SRA lands into a city. Therefore, the EIR should identify if the City will make arrangements with the State Department of Forestry for the retention of its services in a wildland fire situation or if other financial agreements will be made upon removal of the SRA designation. Attached to this letter is a map outlining the SRA lands within the vicinity of the project.

Schools. It should be noted that the overall project area is currently within three school districts: the Rialto Unified School District (RUSD), the San Bernardino Unified School District (SBUSD), and the Fontana Unified School District (FUSD). Neighborhood 1 is served by both RUSD and SBUSD. The issue related to the division of school jurisdiction must be evaluated in the draft EIR

especially since the Specific Plan is proposing schools within the overall project area.

Utilities and Service Systems:

Water Service. The EIR must take into consideration the potential environmental impacts in annexing the area into the WVWD. The document should also include a discussion of the environmental consequences that would result in the extension of infrastructure facilities to the area as well as any other service needs. Based on the project description, the annexation to WVWD should include the determination of whether there is sufficient water supply to the project as required by SB610 and/or SB221.

Sewer Service: Although the City currently provides sewer collection and treatment services, it was identified to LAFCO at the Scoping Meeting on July 28, that there was the possibility that a portion of the Specific Plan area will be provided these services by County Service Area 70 Improvement Zone GH (SA 70 GH), through an out-of-agency service contract with the City. County Service Area 70 and its Improvement Zone GH will be detached as a part of the reorganization. This contractual option should be evaluated in the draft EIR.

In addition to sewer service, CSA 70 GH also provides recycled water, park and recreation, streetlights, and storm drain services. Since an out-of-agency agreement is being contemplated for sewer service LAFCO staff would question the balance of these services and whether they would be included in such a contract. If such is the case, the provision of these other services should also be evaluated in the EIR as an option.

If you have any questions concerning the information outlined above, please do not hesitate to contact me or Samuel Martinez, Senior LAFCO Analyst, at (909) 383-9900. Please maintain LAFCO on your distribution list to receive further information related to this process. We look forward to working with the City on its future processing of this project.

Sincerely,

Kathleen Rollings-McDonald

KATHLEEN ROLLINGS-McDONALD
Executive Officer

Attachments:

Figures 1 through 7
Map of State Responsibility Areas

cc: Tom Dodson, Tom Dodson & Associates, LAFCO Environmental Consultant

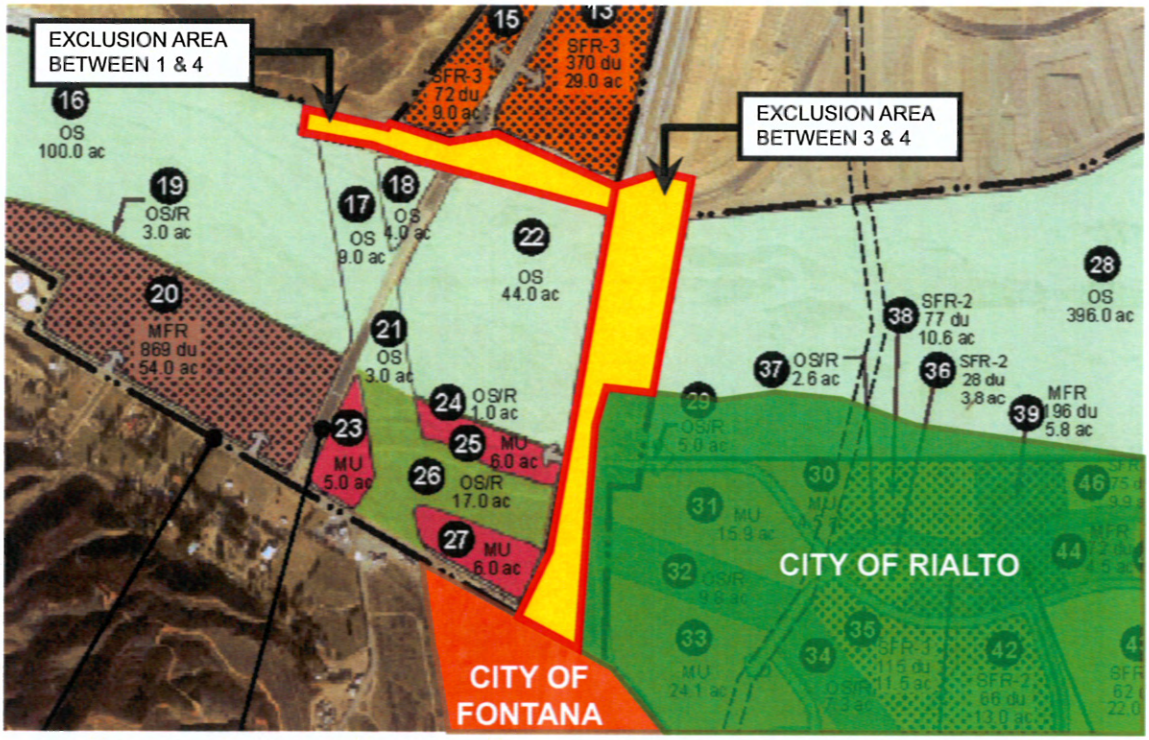


FIGURE 1 - Exclusion Areas Between Neighborhoods 1, 3, & 4

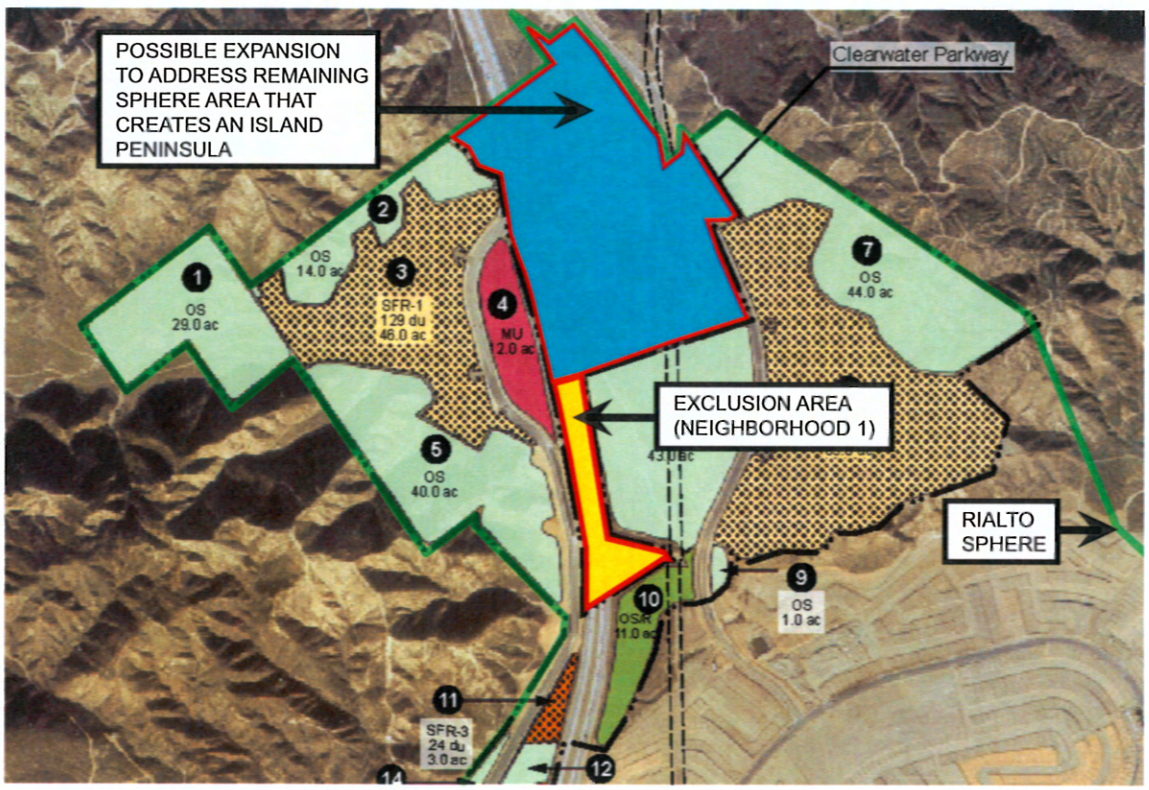


FIGURE 2 - Exclusion Areas within Neighborhood 1

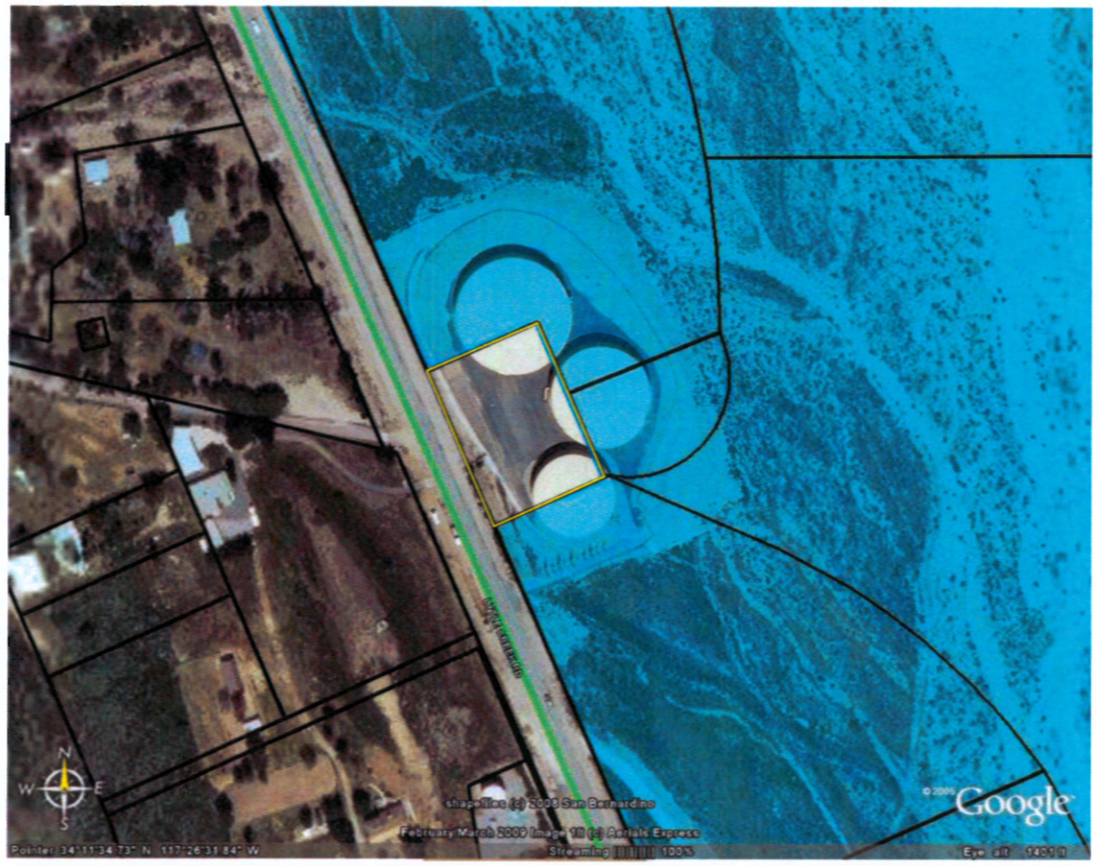


FIGURE 3 - WVWD Parcel Exclusion: APN 0239-312-02 (Neighborhood 4)

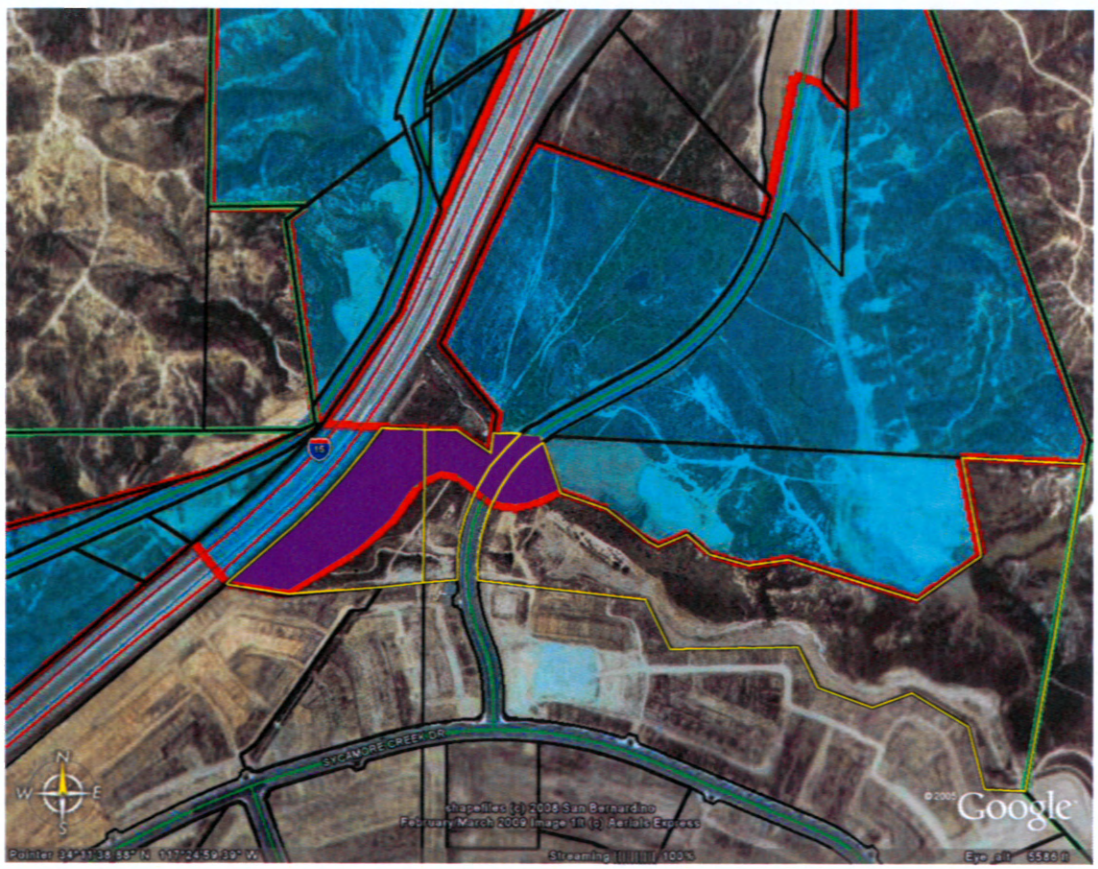


FIGURE 4 - Split Parcels: APN 0239-061-51, 52, & 54 (Neighborhood 1)

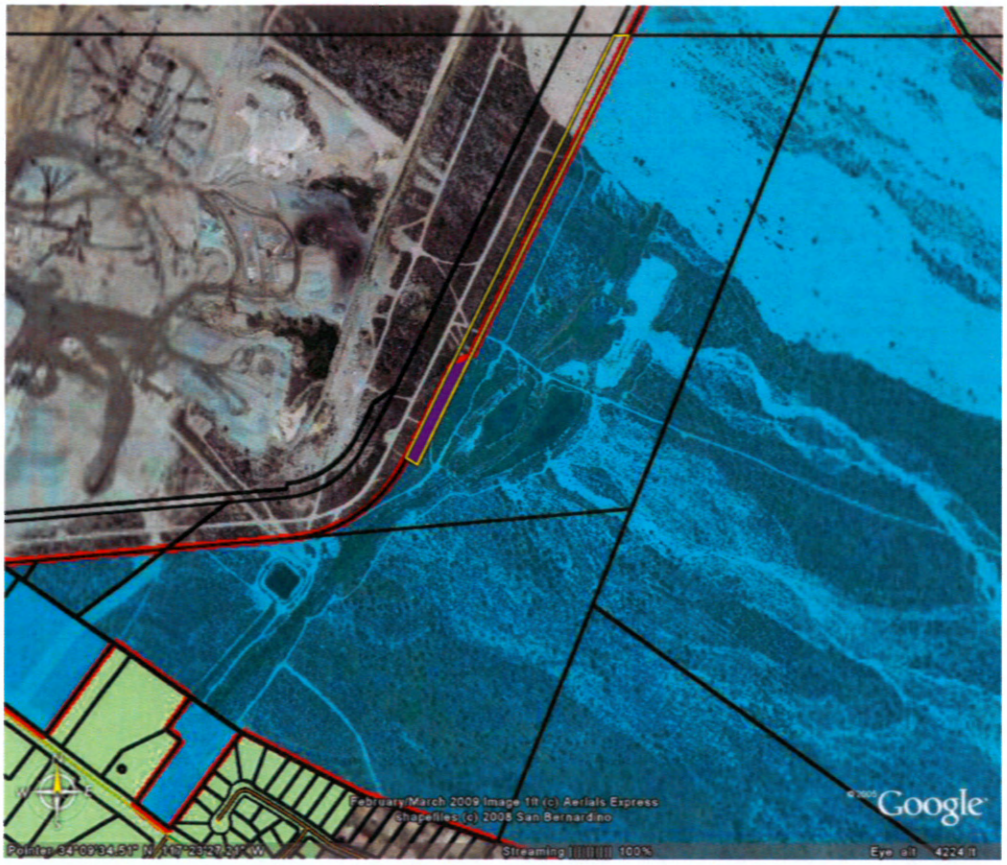


FIGURE 5 - Split Parcel: APN 0262-071-21 (Neighborhood 2)

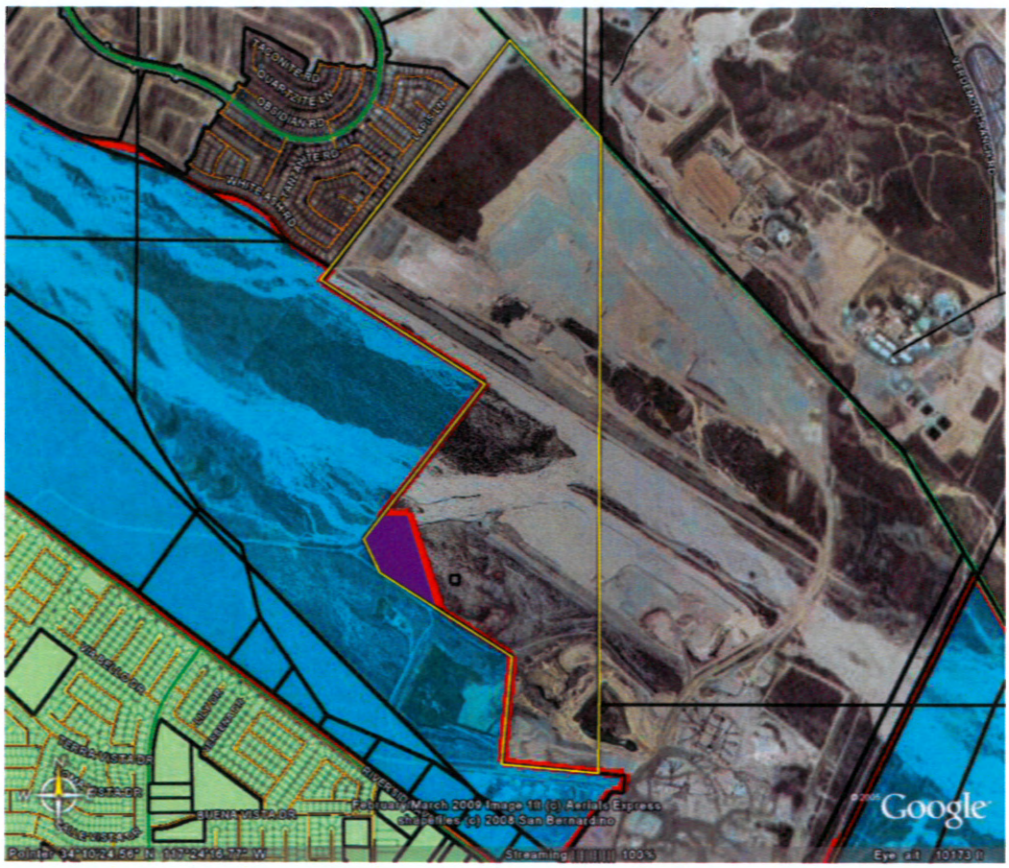


FIGURE 6 - Split Parcel: APN 0239-121-16 (Neighborhood 3)

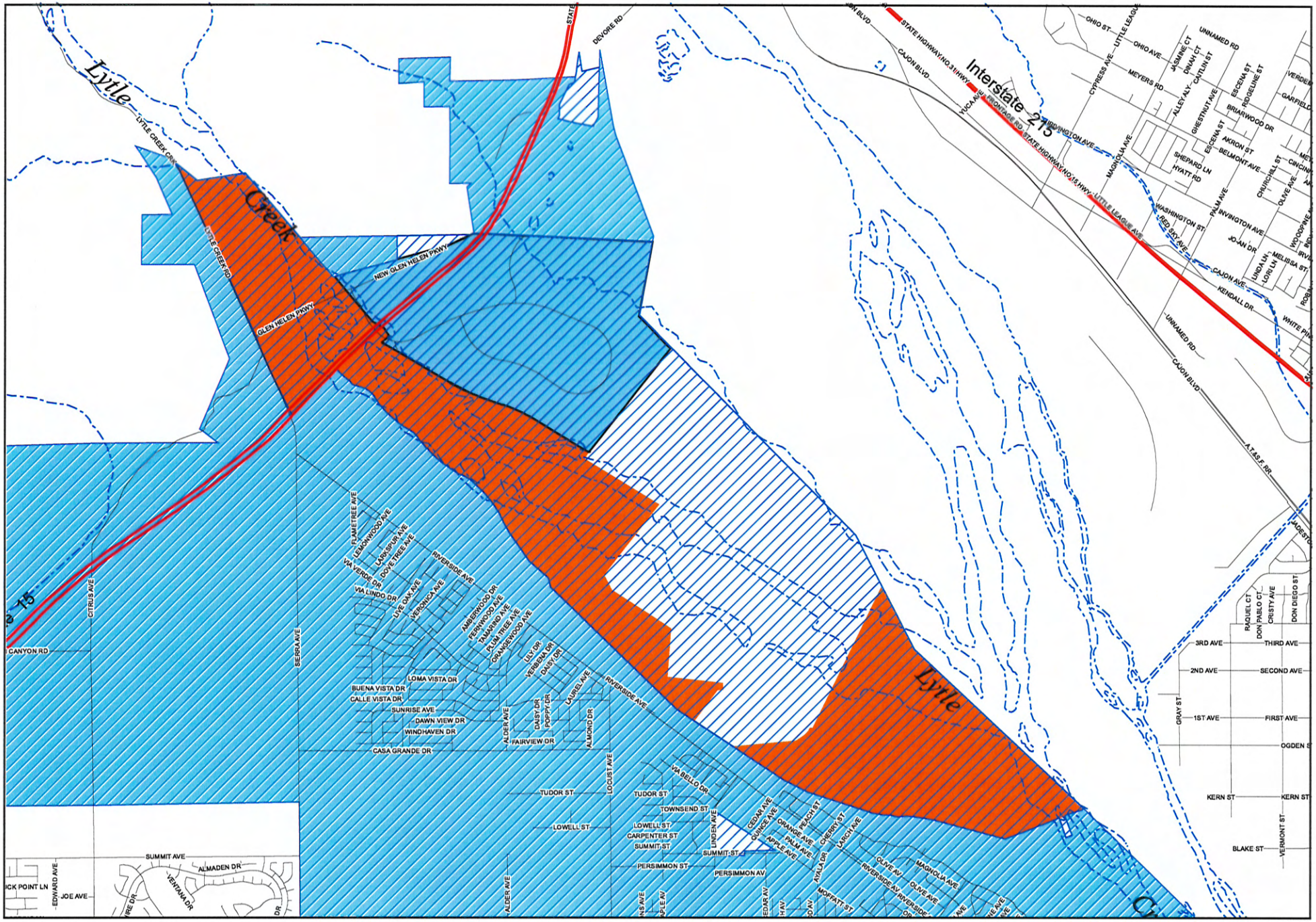
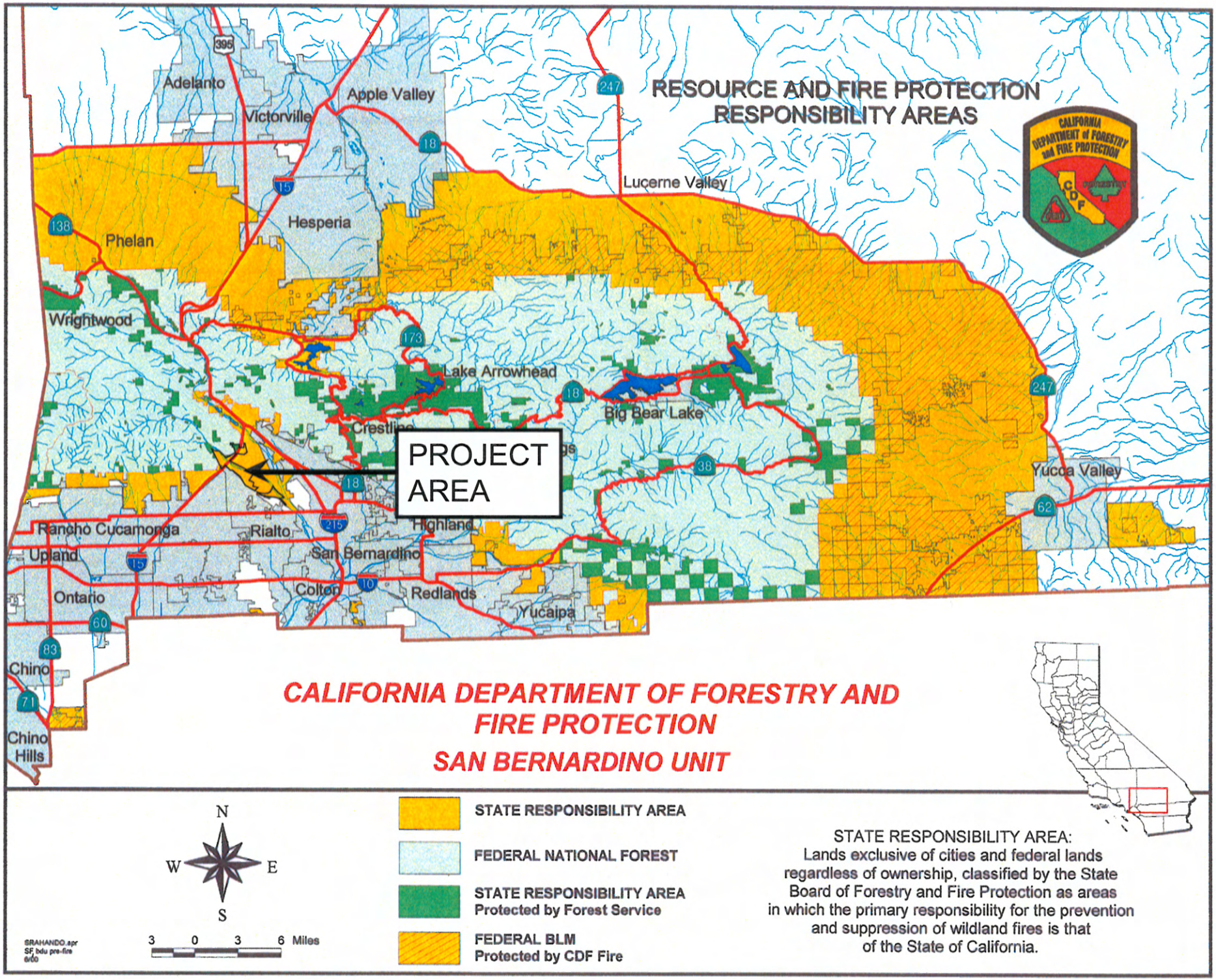


FIGURE 7 - West Valley Water District Annexation Area

ANNEXATION AREA

WVWD BOUNDARY

WVWD SPHERE


RESOURCE AND FIRE PROTECTION
RESPONSIBILITY AREAS
CALIFORNIA DEPARTMENT of FORESTRY and FIRE PROTECTION
CDF
Adelanto
Victorville
Apple Valley
Hesperia
Phelan
Wrightwood
Lucerne Valley
Lake Arrowhead
Big Bear Lake
Crestline
PROJECT AREA
Yucca Valley
Rancho Cucamonga
Rialto
Highland
Upland
San Bernardino
Ontario
Colton
Redlands
Yucaipa
Chino
Chino Hills
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION
SAN BERNARDINO UNIT
N
W
E
S
3 0 3 6 Miles
SBRAHANDO.apr
SF, bdu pre-fire
6/00
STATE RESPONSIBILITY AREA
FEDERAL NATIONAL FOREST
STATE RESPONSIBILITY AREA
Protected by Forest Service
FEDERAL BLM
Protected by CDF Fire
STATE RESPONSIBILITY AREA:
Lands exclusive of cities and federal lands regardless of ownership, classified by the State Board of Forestry and Fire Protection as areas in which the primary responsibility for the prevention and suppression of wildland fires is that of the State of California.

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RIALTO UNIFIED SCHOOL DISTRICT

182 East Walnut Avenue Rialto, California 92376-3598 Telephone (909) 820-7700 FAX (909) 873-2489

BOARD OF EDUCATION

Joseph Ayala

Joanne T. Gilbert

John R. Kazalunas, Ed.D.

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Michael G. Ridgway

JOSEPH G. DAVIS, Ed. D.
Deputy Superintendent
Business Services

August 3, 2009

CITY OF RIALTO-PLANNING DEPT
150 S. Palm Avenue
Rialto, CA 92376
Att: Gina Gibson

RECEIVED
AUG 03 2009
By

RE: LYTLE CREEK RANCH

Dear Ms Gibson:

Thank you for the opportunity to review the above-listed project. Following are our comments:

SITE LOCATION

We have received the project listed above and are stating that the Rialto Unified School District is directly impacted by this project as the majority of the plan lies within the RUSD boundaries.

RESIDENTIAL UNITS

By the project description it appears that of the over 7,000 dwelling units, approximately 5,866 dwelling units lie within the Rialto Unified School District. The current student generation factor (SFG) for the Rialto area will produce 1,533 elementary students, 415 middle school students, and 824 high school students.

It is noted that planning areas (PA) 49 and PA 69 will address the elementary and middle school students to be generated by this project. There is no mitigation measure mentioned for the 824 high school students that will be generated. Please note that many high school students are currently housed in portable classrooms as the student enrollment has exceeded the high school building capacities.

MITIGATION FEES

The Rialto Unified School District requests to be notified in writing in advance of any and all public hearings on this development as any modification to land use affecting population and traffic would trigger studies by the school district. The Rialto Unified School District is empowered to collect all Commercial and Residential Mitigation Fees pursuant to Board of Education Resolution No. 08-09-68. The fee must be paid prior to the issuance of any building permits. Upon payment of fees, a Certificate of Compliance will be issued.

TRANSPORTATION, TRAFFIC AND SAFETY

The District requests assurance that the project will not create any potential safety and transportation concerns for our students. The Rialto School District needs to ensure that all safe routes to school measures are adhered to in this development.

Thank you in advance for any further notifications and correspondence.

If you have any questions regarding this letter please call me at 909.421.7555.

Respectfully,

Anna Ulibarri

Anna Ulibarri, Director
Facilities Planning

AU/kp

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Environmental Impact Sciences
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Mission Viejo, California 92691-5614
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(949) 837-1195