DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT

SAN BERNARDINO COUNTY

2006 GENERAL PLAN PROGRAM

SCH# 2005101038

Prepared for:

County of San Bernardino
Land Use Services Division, Advance Planning Division
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 94215-0182

September, 2006

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COUNTY OF SAN BERNARDINO
PUBLIC AND SUPPORT
SERVICES GROUP

MICHAEL E. HAYS
Director

September 1, 2006

INTERESTED AGENCIES, ORGANIZATIONS AND INDIVIDUALS

RE: NOTICE OF AVAILABILITY OF THE DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE SAN BERNARDINO COUNTY GENERAL PLAN UPDATE PROGRAM

Dear Interested Party:

The Draft EIR for the **San Bernardino County General Plan Update Program (SCH# 2005101038)** is available for public review and comment. The purpose of the document is to identify and describe the probable environmental impacts that would result from the proposed project which includes the following: (1) Update the County General Plan text and maps; (2) adopt thirteen Community Plans (Bear Valley, Bloomington, Crest Forest, Hilltop, Homestead Valley, Joshua Tree, Lake Arrowhead, Lytle Creek, Lucerne Valley, Morongo Valley, Muscoy, Oak Glen and Phelan/Piñon Hills); and (3) update the County Development Code implementing the General Plan.

This document has been prepared to meet the State requirements of the California Environmental Quality Act. The Draft EIR has been prepared under the supervision of the County of San Bernardino Land Use Services Department.

The Draft EIR is available for review at the following locations:

San Bernardino County
Land Use Services Department
Advance Planning Division
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182
8 a.m. to 5 p.m.

San Bernardino County
Land Use Services Department
Big Bear Office
477 Summit Blvd.
Big Bear Lake, CA 92315
8 a.m. to noon; 1 p.m. to 5 p.m.

San Bernardino County
Land Use Services Department
Twin Peaks Office
26010 State Highway 189
Twin Peaks, CA 92391
8 a.m. to noon; 1 p.m. to 5 p.m

San Bernardino County
Land Use Services Department
Victorville Office
15456 Sage St.
Victorville, CA 92392
8 a.m. to 5 p.m.

San Bernardino County
Land Use Services Department
Yucca Valley Office
57407 Twentynine Palms Outer Hwy South
Yucca Valley, CA 92248
8 a.m. to noon; 1 p.m. to 5 p.m.

MARK UFFER
County Administrative Officer

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Assistant County Administrator
Public and Support Services
Group

Board of Supervisors
BILL POSTMUS. . . . . .First District
PAUL BIANE . . . . . .Second District
DENNIS HANSBERGER . . . . . Third District
GARY C. OVITT. . . . . Fourth District
JOSIE GONZALES. . . . . .Fifth District

The Draft EIR will be available via the Internet at the County branch libraries located in the following communities:

Adelanto	Crestline	Loma Linda	Trona
Apple Valley	Fontana	Lucerne Valley	29 Palms
Barstow	Grand Terrace	Mentone	Wrightwood
Big Bear	Hesperia	Montclair	Yucaipa
Bloomington	Highland	Needles	Yucca Valley
Chino	Joshua Tree	Rialto	
Chino Hills	Lake Arrowhead	Running Springs	

City libraries with Internet capability may also be used to review the Draft EIR.

The text of the Draft EIR is also posted on the San Bernardino County Land Use Services Department web page at www.sbcounty.gov/landuseservices or at www.sbcountygeneralplan.net, a special web site that was developed for this project The General Plan Update Program is being heard by the Planning Commission in six separate hearings. These hearings are scheduled for the following dates: August 24, 2006, September 7, 2006, September 21, 2006, October 5, 2006, October 19, 2006 and December 7, 2006. The Draft EIR will be considered by the Planning Commission at the December 7th hearing. If all hearings and proposed actions are completed on time, this project will be heard by the Board of Supervisors in late December.

As required by the Guidelines for the Implementation of the California Environmental Quality Act (CEQA), a 45-day public review and comment period has been established for the Draft EIR. **All comments on the Draft EIR should be received by the County on or before October 23, 2006**. Comments should be addressed to:

County of San Bernardino
Land Use Services Department, Advance Planning Division
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182
Attn: James Squire

Sincerely,

MICHAEL E. HAYS, AICP
Director, Land Use Services Department

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CHAPTER I.
EXECUTIVE SUMMARY

SAN BERNARDINO COUNTY
2006 GENERAL PLAN PROGRAM
SCH# 2005101038

CHAPTER I

A. PROPOSED ACTIONS

The San Bernardino County Board of Supervisors, as Lead Agency, proposes to update the General Plan for the County, which presently comprises 20,106 square miles. The current population (1/1/05) is approximately 1,946,202 people, of which 1,642,730 persons reside in 24 incorporated cities and 303,472 persons reside in unincorporated territory.

The previous General Plan, originally adopted in 1989 and subsequently amended, projected a population of 2.2 million within the time horizon of the year 2010. The present General Plan Update projects a population of 2.56 million within a time horizon of the year 2030.

Proposed actions are as follows:

1. Adopt a New General Plan

   The General Plan provides a projection of growth in the County through the year 2030. Text, tables and maps in the draft Plan and its elements identify goals and policies that will guide the future development of residential, commercial, industrial, public facilities, transportation facilities and other land uses that are desired by the public and county decision-makers. The goals and policies are intended to provide a basis for achieving the objectives of the update program while reducing potential impacts on the environment that may result from development during the 25-year planning horizon incorporated into the update of the General Plan. Goals and Policies are provided on a countywide and regional (Valley, Mountains, Desert) basis.

2. Adopt New Community Plans

   Community Plans focus on a particular region or community within the overall County's General Plan. As an integral part of the overall General Plan, Community Plans must be consistent with the General Plan. To facilitate consistency, the Community Plans build upon the goals and policies of each element of the General Plan. In addition, policies that are included within the Community Plans are regarded as refinements of the broader General Plan goals and policies that have been customized to meet the specific needs or unique circumstances raised by the individual communities. Eleven Community Plans that existed prior to the 1989 General Plan have been incorporated into the County General Plan program. The Community Plans have been updated and revised in a policy-oriented format consistent with the format of the Countywide and Regional Goals and Policies. Two new Community Plans, Lucerne Valley and Muscoy, have been prepared where none existed previously. The Oak Hills Community Plan, because of its relatively recent adoption in 2003, has merely been converted to the current format consistent with the other 13 community plans.

   The following is a listing of each of the 14 Community Plans that are included in the update program:

   - Bear Valley
   - Bloomington
   - Crest Forest
   - Hilltop
   - Homestead Valley
   - Joshua Tree
   - Lake Arrowhead
   - Lucerne Valley
   - Lytle Creek
   - Morongo Valley
   - Muscoy
   - Oak Glen
   - Phelan/Pinon Hills
   - Oak Hills

3. Adopt a New Development Code

   The Development Code implements the policies of the San Bernardino County General Plan by classifying and regulating the uses of land and structures within the County. The purpose of the Development Code is to promote and protect the public health, safety, and general welfare of County residents. The proposed San Bernardino Development Code (Title 8 of the County Code) would replace the existing County Development Code in its entirety.

4. Various Administrative Actions to Implement Items 1-3

B. AREAS OF CONTROVERSY KNOWN TO THE LEAD AGENCY

As required by Section 15123(a)(2) of the CEQA Guidelines, following are the issues identified through the public participation process for the General Plan Update. These issues are explained in more detail in Section II- G of this Draft Environmental Impact Report.

1. Incompatible Uses/Development Standards/Code Enforcement
2. Economic Development
3. Preservation of Rural Character
4. Public Transportation
5. Infrastructure and Community Facilities
6. Public Safety

C. SUMMARY OF ENVIRONMENTAL IMPACTS/ISSUES TO BE RESOLVED

Tables I-1 through I-3 summarize the potential environmental effects of the project. Table I-1 summarizes those potential effects which can be mitigated, while Table I-2 presents unmitigable impacts which cannot be fully mitigated to a level below significance despite the impositions of mitigation measures. Table I-3 summarizes impacts found not to be significant.

Table I-1. Summary of Potential Impacts That Can be Mitigated

Table I-1 summarizes potential environmental impacts that can be fully mitigated, in accordance with Section 21081(a)(1) of the Public Resources Code.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
BIOLOGICAL RESOURCES	
Impact BIO-4 Development allowed by the General Plan within the Valley Region may affect movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a number of mitigation measures that require the County to: coordinate with local, state and federal agencies prior to the approval of land use conversion to ensure adequate protections are in place; preserve habitat for resident and migratory species that may depend on aquatic/ riparian/ and urban habitat within the County; create a specific and detailed wildlife corridor map for the County; and finally, require that all new roadway, roadway expansion, and utility installation to include wildlife crossing for area wildlife. Other measures are included to reduce or prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats.
Impact BIO-5 Development allowed by the General Plan within the Valley Region may affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policies or ordinances. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	It is anticipated that development within the County will not conflict with local policies or ordinances protecting biological resources. The General Plan implementation encourages and supports the development of Habitat Conservation Plans and mitigation habitat sites created by others to mitigate adverse effect of development.
Impact BIO-6 Development allowed by the General Plan within the Valley Region may conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or state habitat conservation plan. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	It is anticipated that development within the County will not conflict with a Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plans. In fact, the Program EIR contains a mitigation measure that requires that the County coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protected areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in review and approvals of development programs.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact BIO-7 Development allowed by the General Plan within the Mountain Region may impact candidate, sensitive or special status plant and animal species that may occur within this region of the County. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR includes mitigation measures to require the County to: the create buffer areas and mitigation banks for sensitive species within the Mountain Region; minimize recreational uses in sensitive geological resources areas; coordinate with state and federal agencies to ensure that their programs to preserve rare and endangered species and protection of areas of special habitat value are reflected in the reviews and approvals of development programs and project conditions of approval; and use the County's Biotic Resources Overlay District to protect and conserve beneficial, rare and endangered plants and animal resources and their habitats
Impact BIO-10 Development allowed by the General Plan within the Mountain Region may affect movement of native resident or migratory fish or wildlife species or established wild life corridors or impede the use of native wildlife nursery sites. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The project EIR includes a mitigation measure to require that all new roadway, roadway expansion, and utility installations to include wildlife crossing for respective area wildlife with the design to prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats.
Impact BIO-11 Development of land uses allowed by the General Plan within the Mountain Region may adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policies or ordinances. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	It is anticipated that development within the County will not conflict with local policies or ordinances protecting biological resources. The General Plan implementation encourages and supports the development of Habitat Conservation Plans and mitigation habitat sites created by others to mitigate adverse effect of development.
Impact BIO-12 Development of land uses allowed by the General Plan in the Mountain Region may conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or state habitat conservation plan. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	It is anticipated that development within the County will not conflict with a Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plans. In fact, the Program EIR contains a mitigation measure that requires that the County coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protected areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in review and approvals of development programs.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact BIO-15 Development allowed by the General Plan in the Desert Region may adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	It is anticipated that development within the Desert Region will not adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act. The Desert Region supports primarily isolated wetlands and is not within the jurisdiction of agencies regulating compliance with the Clean Water Act.
Impact BIO-17 Development allowed by the General Plan within the Desert Region may adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policies or ordinances. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	It is anticipated that development within the County will not conflict with local policies or ordinances protecting biological resources. The General Plan implementation encourages and supports the development of Habitat Conservation Plans and mitigation habitat sites created by others to mitigate adverse effect of development.
Impact BIO-18 Development allowed by the General Plan within the Desert Region will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	It is anticipated that development within the County will not conflict with an Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plans. In fact, the Program EIR contains a mitigation measure that requires that the County coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protected areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in review and approvals of development programs.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
CULTURAL RESOURCES	
Impact CR-1 It is possible that future development may disturb known and unknown archaeological sites, historic buildings or structures, or paleontological resources. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	Mitigation measures have been included in the Program EIR that mitigate the project's impacts on cultural resources. These measures require: the identification and protection of important archaeological and historic cultural resources that have been determined to have known cultural resource sensitivity; preparation of a cultural resources field survey and evaluation for projects located within mapped County Cultural Resource Overlay area; mitigation of impacts to important cultural resources according to the standards established by CEQA and according to the Secretary of Interior Standards; conducting a preliminary cultural resource review by the Archaeological Information Center (AIC) at the San Bernardino County Museum; consultation with tribes identified by the California Native American Heritage Commission on all General Plan and specific plan actions; filing cultural resources site record forms and reports of surveys, test excavations and data recovery programs with the San Bernardino County Museum; and cataloging any artifacts collected or recovered as a result of cultural resource investigations and curating artifacts. With regard to paleontological resources, the mitigation measures also require the County to: conduct field surveys in areas of potential paleontologic sensitivity to establish the need for paleontologic monitoring; ensure monitoring by trained paleontologic crews in all paleontological sensitive areas to be rough graded so that fossils can be recovered and preserved. The mitigation measures also require the County to work with local Indian tribes to identify, protect and preserve man-made sites and resources and natural landscapes that contribute to the cultural significance of an area, returning Native American artifacts from private development project to the appropriated Indian tribe. Finally, the measures require adherence to the County's Cultural and Paleontological Resource Overlay Districts for new development.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
GEOLOGY AND SOILS	
Impact GEO-1 New development and people will be subject to strong seismic ground shaking and other geologic and soil hazards including poor or erosion susceptible soil conditions, landslides, soil liquefaction, unconsolidated granular soils and soil erosion when grading occurs on slopes and ridgelines. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A mitigation measures has been included in the Program EIR that require new development to comply with the County's Geologic Hazard Overlay District that identifies areas that are subject to potential geologic problems including active faulting, landsliding, debris flow, rockfall and liquefaction.
Impact GEO-2 New development may occur in areas where significant geology and soil conditions exist as indicated on the County's Geologic Hazard Overlay Maps, exposing this development and people to hazardous conditions. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A mitigation measure has been included in the Program EIR that requires new development to comply with the County's Geologic Hazard Overlay District.
Impact GEO-3 Significant impacts to topography will occur at locations within the County where grading and filling are allowed as part of a new development in hillside areas. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A mitigation measure has been included in the Program EIR that requires development in hillside areas to comply with the County's Hillside Grading standards in the County Development Code. These standards regulate grading and filling in hillside areas.
HAZARDS AND HAZARDOUS MATERIALS	
Impact HAZ-1 There is the potential that the San Bernardino County General Plan update may create a direct significant hazard to the public or the environment through the transport, use or disposal of hazardous materials; or through the foreseeable release of hazardous materials into the environment. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A mitigation measure has been included in the Program EIR that requires the County to promote the proper handling, storage, transport and disposal of hazardous material and hazardous wastes through implementing a variety of regulatory, technical oversight, emergency and waste management services.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact HAZ-2 There is the potential for siting new land uses that may expose sensitive receptors to hazardous emissions. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	Mitigation measures have been included in the Program EIR that require the County to conduct investigations and take enforcement actions as necessary for illegal hazardous waste disposal or the violations of hazardous materials laws and regulation.
Impact HAZ-3 The potential exists that a new facility could be constructed in the County that involves the generation of hazardous waste that will require the issuance of a RCRA Permit. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a number of mitigation measures that require the County to: provide affordable waste management alternatives to business that generate very small quantities of wastes; inspect hazardous materials handlers and waste generators to ensure full compliance with laws and regulations; and develop CUPA programs for the accident prevention and emergency plans, proper installation, monitoring and closure of UST, and the handling, storage, transportation and disposal of hazardous waste. The County's Certificate of Occupancy process will be used to identify new facilities that may handle hazardous materials, protect vital groundwater resources and other natural resources from contamination, and apply a uniform set of criteria to the siting of hazardous waste facilities. The requirements of the County's Hazardous Waste Overlay District will also be used to site hazardous waste facilities so these facilities are not sited next to an incompatible use.
Impact HAZ-4 The potential exists that new land uses may be constructed within the County that will expose occupants in aircraft to safety hazards. Also, those on the ground could be exposed to impacts from airplane crashes. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A mitigation measure has been included in the Program EIR that requires County review of any project within 2 miles of an airport to ensure its compatibility with the airport, thereby minimizing any potential hazards to airport operation, people and property.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact HAZ-5 New land uses could be developed within the County that would require a response by the County to the accidental release of hazardous materials and wastes. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	Mitigation measures have been included in the Program EIR that require the County to provide a 24-hour response to emergency incidents involving hazardous materials or wastes.
HYDROLOGY AND WATER QUALITY	
Impact HWQ-1 Development under the General Plan may substantially deplete groundwater supplies such that there could be a lowering of the local groundwater table level. New development may also adversely impact area water quality. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	Mitigation measures have been included in the Program EIR that will require the County to continue to monitor the County's adjudicated groundwater basin to ensure a balanced hydrological system. The County shall also promote water conservation by promoting activities/measures that facilitate the reclamation and reuse of water and wastewater, consistent with County, state and/or federal policies and regulations. New development projects shall also be required to implement feasible waster conservation measures recommended by water agencies or purveyors that supply the project with water. To protect groundwater quality, high density developments proposing to use septic tanks/leach fields will be required to analyze the use of alternative wastewater treatment and disposal methods.
Impact HWQ-2 Development under the General Plan may alter the existing drainage pattern of an area or project site through the alteration of the course of a stream or river that would result in substantial erosion or siltation on or off an area or site. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	Mitigation measures have been included in the Program EIR that will require drainage courses be kept in their natural condition to the greatest extent feasible, in order to retain habitat and allow groundwater recharge. Also, the County shall prohibit the conversion of natural watercourses to culverts, storm drains or other underground structures except to protect public health and safety.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact HWQ-3 New development under the General Plan may be subject to distinct flooding risks in the Valley, Mountain and Desert Regions of the County. New development may also be subject to seiches in the Mountains and mudflows in the Desert Regions of the County. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	Mitigation measures have been included in the Program EIR that will require the capacity of existing natural drainage channels to be maintained where feasible and that flood-proof structures allow 100-year storm flows to be conveyed through the development without damage to structures. Also, the requirements of the County's Flood Plain Safety Overlay District shall be used to regulate development and construction within flood prone areas.
LAND USE AND PLANNING	
Impact LU-1 Development under the General Plan could physically divide an established neighborhood. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The update to the General Plan does not contain policies or programs proposing development that would physically divide an established community in the County. No mitigation measures are necessary.
Impact LU-2 The update to the General Plan could contain redundant policies that could conflict with the delivery of sound guidance for future land development. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The update to the General Plan contains new, re-written and consolidated policies that will not conflict with County plans, policies and regulations governing future land use in the County. No mitigation measures are necessary.
Impact LU-3 Development under the General Plan could potentially conflict with existing or proposed Habitat Conservation Plans in the County. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The implementation of the Update to the General Plan encourages cooperation with any adopted or proposed HCPs in the County. No mitigation measures are necessary.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
MINERAL RESOURCES	
Impact MR-1 Development of new mines under the General Plan could conflict with adjacent land uses, precluding the availability for future development of significant mineral resources. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A number of mitigation measures have been included in the Program EIR to: require the protection of current and future extraction of mineral resources; protect the access to and economic use of mineral resources; identify mineral areas on the County's Infrastructure Map; and implement the state Mineral Resource Zone to establish a system that identifies mineral potential and economically viable reserves.
Impact MR-2 The siting and permitting of new mineral operations in the County could create surface and groundwater issues as well as noise, dust and truck-traffic in populated areas. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A mitigation measure has been included in the Program EIR that requires mining operators/owners to provide buffers between mineral resources and abutting incompatible land uses. Also, applicable hydrology and water quality, noise, air quality and traffic mitigation measures in this EIR will reduce surface and groundwater, noise, dust and truck-traffic impacts of new mines on adjacent land uses.
NOISE	
Impact N-1 Development under the General Plan potentially could be exposed to high vehicular traffic noise from freeways and arterial roadways to above acceptable levels for residential and other sensitive land uses. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A number of mitigation measures have been included in the EIR to reduce high traffic noise by: preventing incompatible land uses in high noise areas unless effective mitigation measures are incorporated into the project design; enforcing State Noise Insulation Standards in the Uniform Building Code; limiting truck traffic in residential and commercial areas to designated truck routes; and limiting the time new project construction takes place. New development will also be subject to the requirements of the County's Noise Hazard Overlay District that includes review procedures and requirements for land use in areas identified as having high noise levels.
Impact N-2 The development of new industrial and commercial uses may create stationary noise sources that generate noise levels that are incompatible with adjacent residential or other sensitive land uses. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A mitigation measure has been included in the Program EIR that requires noise levels generated by industrial and commercial uses to not exceed the County's performance standard for outdoor activity areas.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact N-3 Development of residential other noise sensitive uses in the vicinity of airports may expose people to incompatible noise levels. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	Mitigation measures have been included in the Program EIR that requires development plans for project near airports to be submitted to the County for review by the Airport Land Use Commission. Appropriate measures will be included in the project to reduce noise from aircraft use at the airport in the vicinity of the project.
POPULATION AND HOUSING	
Impacts PH-1 and PH-2 The update of the General Plan will result in an increase in population and housing in the County, and may result in displacement of existing housing and/or people. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a number of mitigation measures that will require the County to: utilize the Planned Development density bonus and density transfer provisions of the County Development Code to increase the density of proposed projects; allow mobile home parks in Single and Multiple Residential Land Use districts; use the Community Development Block Grant single-family homeowner rehabilitation loan program in order to rehabilitate housing and improve neighborhoods; use the County Rehabilitation Guide for inspection of existing renter-and owner-occupied dwelling units to validate economical and safe rehabilitation of housing and preserve existing housing stock; and use incentives or other federal subsidies and affordability covenants or contracts to preserve units at risk of losing their availability to low income households.
RECREATION	
Impacts REC-1, REC -2 and REC-3 Development allowed under the General Plan may result in the need to add more park space and recreational trails to serve the project population called for by the General Plan. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	A number of mitigation measures have been included in the Program EIR to require the County to support: the establishment of urban open space areas within urban areas; the dedication of lands when specific projects are reviewed that exhibit natural features worthy of regional park land status; the extension of the County trail system so that it connects with local, state and federal trail systems. In addition, the County will provide a regional trail system and rest areas that provide continuous interconnecting trails that serve major populated areas of the County, including bicycle and pedestrian staging areas consistent with the master plan of Regional Trails.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impacts REC-1, REC -2 and REC-3 (cont)	The County will: encourage the dedication or offers of dedication of trail easements when appropriate for establishing a planned trail system alignment or where an established trail is jeopardized by impending development or subdivision activity; use active and abandoned road, utility, and railroad rights-of-way for non-vehicular circulation in all new development when found feasible. The County will: require proposed development adjacent to trail systems to dedicated land for trailhead access points; develop multipurpose regional open spaces and advocate multi-use access to public lands including national parks, national forests, state parks, and BLM areas; utilize public funding mechanisms wherever possible to protect and acquire regional park lands; and utilize small parcels adjacent to flood control facilities for equestrian, pedestrian and biking staging areas.
TRAFFIC AND CIRCULATION	
Impact TR-1 The General Plan may result in roadway operations at LOS E or F in the Valley or Mountain Regions, or at LOS D, E, or F in the Desert Region. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR includes mitigation measures that require the County to strive to achieve Level of Service "D" on all County roadways in the Valley and Mountain Regions and LOS "C" on all County roadways in the Desert Region. The County will only approve development proposals when they are consistent with the County's Level of Service objective in these Planning Regions on County roadway segments and intersections affected by the development.
Impact TR-4 The land uses permitted by the Land Use Element of the General Plan will generate additional demand for air travel to and from San Bernardino County that will result in additional demand at Ontario International Airport and, to a lesser extent, at the general aviation airports within the County. An increase in demand for air freight services will also result in increased air traffic levels at the Southern California Logistics Airport and San Bernardino International Airport. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR includes a mitigation measure that requires the County to expand transportation services and public transit between the Ontario International Airport, John Wayne/ Orange County International Airport and Los Angeles International Airport, and consider promotion of future high-speed train and Maglev systems for better long-range airport connectivity.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact TR-5 Development under the General Plan could increase hazards due to a design feature or incompatible uses. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR includes mitigation measures that require that the County to work with adjacent jurisdictions to minimize inconsistencies in existing and ultimate right-of-way and roadway capacity across jurisdictional boundaries and use current innovative traffic engineering practices listed in the measure to increase roadway capacity and safety.
Impact TR-6 Development under the General Plan could result in inadequate emergency access. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR includes a mitigation measure that requires the County to ensure that future development projects have no less than two points of access for emergency evacuation and emergency vehicles, in the event of wildland fires and other natural disasters.
Impact TR-7 Development under the General Plan could result in inadequate parking capacity. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The County's Land Use Services Department reviews all development plans to ensure that adequate parking is provided for a project. No further mitigation is necessary.
Impact TR-8 Implementation of new land uses under the General Plan could conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks etc.) *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR includes several mitigation measures that require the County to: promote and encourage land use patterns that will reduce the number of automobile trips, by providing neighborhood shopping facilities and connectivity through pedestrian and bicycle paths; 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 place local retail uses close to new residences; and provide safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial and institutional development to facilitate access to public and private facilities to reduce vehicular trips.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
PUBLIC UTILITY SYSTEMS	
Impacts UT-1 and UT-2 Development under the General Plan will impact the ability of the Crestline-Lake Arrowhead Water District and the Big Bear Lake Department of Water and Power to provide additional amounts of water in the Mountain Region due to population growth due to the shift from a higher percentage of part-time residents to full-time residents. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a number of mitigation measures that require the County to: pace future growth with the availability of public infrastructure; equitably distribute throughout the County new public facilities and services; coordinate and cooperate with governmental agencies at all levels to ensure a safe, reliable, and high quality water supply for all residents and ensure prevention of surface and groundwater pollution; assist in the development of additional conveyance facilities and use of groundwater basins to store surplus imported water; and monitor future development to ensure that sufficient local water supply or alternative imported water supplies can be provided.
Impact UT-3 An increase in municipal consumption, golf courses and industrial consumption will result in the need for additional amounts of water in the Desert Region. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a number of mitigation measures that require the County to: ensure that new development pay a proportional fair share of the costs to provide infrastructure facilities required to serve such development; utilize Fiscal Impact Analysis to determine the County's ability to provide adequate services and facilities through the imposition of conditions of approval, fees, special taxes financing mechanism etc.; make the approval of new development contingent on the availability of adequate and reliable water supplies and conveyance systems consistent with coordination between land use planning and water system planning; and monitor future development to ensure that sufficient local water supply or alternative imported water supplies can be provided.
Impact UT-4 Sewer mainlines in the Valley Region will continually need to be installed and dedicated as the population increases in this Region. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains mitigation measures to reduce this impact and require that the County ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public heath and water quality. In the Inland Valley Development Agency Redevelopment Area, the County shall permit the construction of a new water treatment plant or connection to existing and/or proposed wastewater collection and treatment facilities rather than connection to nearby city wastewater collection and treatment facilities.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact UT-5 Some sewering agencies in the Mountain Region will need to increase their capacity as part-time residents become full-time residents in this area. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains several mitigation measures to require that the County ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of existing and future County residents. In addition, the County will ensure that adequate facility and service standards are achieved and maintained though the use of equitable funding methods, and will support the local wastewater/sewering authorities in implementing wastewater collection and treatment facilities when and where required by the appropriate REQCB and County Department of Environmental Health and Safety.
Impact UT-6 Private sewage treatment systems in the Desert Region can pollute groundwater or surface waters with pathogens and nitrates when not properly maintained or operated. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a mitigation measure that requires the County to direct urban development to areas that are served by domestic sewer systems and away from areas in which soils cannot adequately support septic tank/leach field systems.
Impact UT-7 Development under the General Plan will result in an increase in the amount of waste requiring disposal at landfills. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains several mitigation measures that require the County to ensure a safe, efficient, economical and integrated solid waste management system that considers all waste generated within the County; and ensure that a variety of feasible processes including source reduction/ transfer/ recycling/ landfilling/ composting and resource recovery will be used to achieve an integrated and balanced approach to solid waste management. In addition, the County will assist the private sector where ever possible in developing methods for the reuse of inert materials that currently use valuable landfill space, and will carefully plan and oversee the siting of solid waste disposal facilities to ensure equitable distribution of these facilities throughout the County.
Impact UT-8 Development under the General Plan will result in a rise in population in the County of San Bernardino that will result in the need for additional or extended natural gas providers. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a mitigation measure that will reduce this impact and requires that the County provide efficient and cost-effective natural gas utilities that serve the existing and future needs of people in the unincorporated areas.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact UT-9 Development under the General Plan will result in a rise in population in the County of San Bernardino that will result in the need for additional or extended electricity service providers. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a mitigation measure that requires the County to provide efficient and cost-effective electrical utilities that serve the existing and future needs of people in the unincorporated areas.
Impact UT-10 Development under the General Plan will result in a rise in population in the County of San Bernardino that will result in the need for additional telecommunication infrastructure. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains mitigation measures that require the County to improve its telecommunications infrastructure and expand access to communications technology and network resources to take advantage of the ecological and financial efficiencies of new telecommunications technologies, and work with telecommunications industries to provide a reliable and effective network of facilities that is commensurate with open space aesthetics and human health and safety concerns.
PUBLIC SERVICES	
Impact PS-1 Development under the General Plan will result in an increase in population and human activity in the area and will result in an increase in the need for law enforcement services. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a number of mitigation measures to reduce this impact and require that the County provide adequate law enforcement facilities to deliver services to deter crime and meet the growing demand for police services associated with increasing populations and commercial/industrial developments in the County.
Impact PS-2 Development under the General Plan will result in growth and development in the unincorporated communities of San Bernardino County that will result in an increase in demand for fire protection services. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a number of mitigation measures that require the County to protect its residents and visitors from injury and loss of life and protect property from fires through the continued improvement of existing Fire Department facilities and the creation of new facilities and also through the improvement of related infrastructure that is necessary for the provision of fire service delivery such as water systems and transportation networks. The County will create a Fire Master Plan that can be used to identify areas in the County that are in need of increased levels of fire service delivery, and create a Community Facilities District or other long-term financial instruments with proposed developments and areas available for development to provide a fair share funding mechanism to support pro-rata increases for the provision of long-term fire protection.

Significant, Adverse Impact that Can be Mitigated	Mitigation Measures
Impact PS-3 Development under the General Plan will result in growth in the unincorporated area of San Bernardino County that will result in an increased use of health care facilities. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Land Use Element of the General Plan provides a number of designations for land uses, including one that will allow for the development of health care facilities. Therefore, it is anticipated that adequate health care facilities will be constructed in the future to serve the County's population. No further mitigation is necessary.
Impact PS-4 Development under the General Plan will result in future growth within the County and will result in the need for additional library facilities to serve the needs of future County residents. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains a mitigation measure that requires the County to ensure that adequate library facilities are available and appropriately located to meet the needs of County residents
Impact PS-5 Development under the General Plan will result in the population growth in the County that will increase the number of school age children needing to be served by the various school districts in the County. *This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.*	The Program EIR contains mitigation measures that requires that the County to ensure that adequate school facilities are available and appropriately located to meet the needs of its residents, and ensure that convenient access to K-12 and higher educational opportunities are available for all County residents.

Table I-2. Summary of Potential Impacts That Cannot be Mitigated to Below a Level of Significance

Table I-2 summarizes potential impacts that may require mitigation measures, but those measures cannot reduce impacts to a level below significance, or the mitigation measures or alternatives are infeasible due to specific economic, legal, social, technological or other considerations, as described in Section 21081(a)(3) of the Public Resources Code.

Unmitigable Significant, Adverse Impacts	Mitigation Measures
AESTHETICS	
Impact AES-1 Potential damage to scenic resources within a federal, state, county or local scenic highway or by-way. Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.	Mitigation measures have been included in the Program EIR that require the County to maintain and enhance the visual character of scenic routes in the County, designate additional scenic routes, establish criteria for designating a scenic resource and require that development along scenic corridors demonstrate through visual analysis the compatibility of new improvements with scenic resources.
Impact AES-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. Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.	Mitigation measures have been included in the Program EIR that mitigate this impact. They require: compliance with the County's Scenic Resources Overlay District for new development; directing growth where it will not adversely impact scenic resources, establishing off-street pull-outs at designated view points; offering scenic uses in areas where new development is not suitable for habitable structures; locating trail routes to highlight County scenic features; preservation and protection of scenic resources that contribute to a distinctive visual experience; and protection of scenic and open space qualities of cinder cones and lava flow areas. The County will require that hillside development be compatible with natural features on a project site and establish buffer areas between scenic resources and development areas. In addition, the County will design flood control and drainage improvements that preserve the scenic values of the County's streams and creeks. Finally, the County's Sign Control Overlay District and Hillside Grading Standards will also be used to preserve scenic resources.

Unmitigable Significant, Adverse Impacts	Mitigation Measures
Impact AES-3 Create additional amounts of light at night that will impact dark sky areas in the County. Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.	A mitigation measure has been included that requires the use of the Glare and Outdoor Lighting section of the Development Code to help preserve dark skies in the Mountain and Desert Regions of the County.
AGRICULTURAL RESOURCES	
Impact AG-1 Decline of agricultural uses within the County due to urban expansion and economic considerations. Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.	Mitigation measures have been included in the EIR that only partially mitigate this impact. Those measures require: the protection of prime agricultural lands from the adverse effects of urban encroachment; the avoidance of highly alkaline soils for agricultural uses; allowance for the development of prime agricultural lands only after the supply of non-productive areas has been exhausted; use of the Williamson Act to preserve commercially viable agricultural areas; and County support of property and estate tax relief measures that assess long-term agriculture at farm-use value. The County will encourage agriculture use of commercially productive agricultural lands and discourage city sphere of influence extensions into areas containing commercially productive agricultural lands.
Impact AG-2 Land uses allowed by the update to the General Plan will further accelerate the conversion of the Chino Dairy Preserve to urban uses. Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.	Most of the Chino Dairy Preserve has been annexed by the City of Ontario for residential and other types of urban development purposes. Some of the Dairy Preserve does exist but conflicts with existing urban uses. Therefore, it is unfeasible to preserve the remnant pieces of the Dairy Preserve since they are in the path of development and ultimately will be converted to urban uses.

Unmitigable Significant, Adverse Impacts	Mitigation Measures
Impact AQ-1, AQ-2 and AQ-3 Growth facilitated by the update of the General Plan will result in the construction of new roads and infrastructure and the increased urbanization of agricultural lands leading to increased emissions. Growth will also create emissions that affect sensitive populations (e.g., those with respiratory illness and the older population). *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes a number of mitigation measures that will partially reduce this impact and require that the County replace existing vehicles in the County fleet with the cleanest vehicles commercially available that are cost-efficient and meet the vehicle use needs, manage the County's transportation fleet fueling standards to improve the number of alternative fuel vehicles in the County fleet, and establish programs for priority or free parking on county streets or in county parking lots for alternative fuel vehicles.
Impact BIO-1 Development allowed by the General Plan Update will adversely affect candidate, sensitive, or special-status plant and animal species in the Valley and Mountain Regions of the County. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes a number of mitigation measures that will partially reduce this impact and require that the County: coordinate with state and federal agencies for the creation of buffers and mitigation banks for sensitive species within all the Planning Regions in the County that are greater than one-mile from state or federal lands; and work with these agencies to conserve critical habitat and minimize recreational uses in sensitive areas supporting protected or sensitive species. The County will coordinate with these resource agencies to ensure that their programs preserve rare and endangered species and protected areas of special habitat value, as well as conserve populations and habitats of commonly occurring species. The County will ensure that these programs are reflected in review and approvals of County development programs. Finally, the County will require the preparation of a report that identifies all biotic resources located on a project site shown on the County's Biotic Resource Overlay or Open Space Mapping as well as on adjacent parcels that could be adversely affected by the proposal.

Unmitigable Significant, Adverse Impacts	Mitigation Measures
Impact BIO-2 Development allowed by the General Plan Update will adversely impact riparian habitat or other sensitive natural communities as identified by state and federal agencies in the Valley, Mountain and Desert Regions of the County. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes mitigation measures that will partially mitigate this impact and require the County to preserve 75% of each existing natural water resource on a project site, including ephemeral streams and rivers with the remaining 25% of each water resource being permitted by local, state or federal agencies. The County will ensure that permanent loss of habitat will be mitigated by habitat enhancement of conserved area, and the County participate with regional plans to improve water quality and habitat that are downstream of a project and beyond County limits.
Impact BIO-3 Development allowed by the 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. 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 within the scope of the General Plan. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes a mitigation measure that will partially reduce this impact and requires the preparation of a report that identifies all biotic resources including wetland areas located on a project site and on adjacent parcels that could be adversely affected by the project. These reports will outline mitigation measures designed to eliminate or reduce impact of identified resources and the County will require the conditions of approval of any land use application to incorporate the County's identified mitigation measures.
Impact BIO-8 Development allowed by the 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. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes a number of mitigation measures that will partially reduce this impact and requires that the County coordinate with local, state and federal agencies prior to the approval of land use conversion to ensure adequate protections are in place to preserve habit for resident and migratory species that may depend on riparian habitat within the County, preservation of at least 75% of existing natural water resources including streams and rivers with the remaining 25% of each water resource permitted by the above agencies mitigated by habitat enhancement of conserved areas. Also included in a measure that the County participate with regional agencies to minimize degradation of water quality within the County that affects downstream resources and habits.

Unmitigable Significant, Adverse Impacts	Mitigation Measures
Impact BIO-9 Development allowed by the General Plan with the Mountain Region may directly and indirectly affect federal protected wetlands. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes mitigation measures to require the County to preserve at least 75% of each existing natural waster resource that includes ephemeral streams and rivers, and participate with regional plans to improve water quality and habitat that are down steam of a project and beyond County limits
Impact BIO-13 Development allowed by the General Plan update in the Desert Region will adversely affect candidate, sensitive or special-status plant animal species. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes a number of mitigation measures that partially reduce this impact and are the same ones as outlined under Impact BIO-1. Also included in the EIR is a measure that requires that land conversion in the Desert Region not be permitted until adequate mitigation is provide to reduce impacts on biological resources in this Region to less than significant.
Impact BIO-14 Development allowed by the 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 riparian habitat that is a very limited resource in the Desert Region and has a more significant consequence and recover from temporary effect because it takes substantially longer for these impacts to be mitigated because of the limited amount of rainfall in this Region. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes a number of mitigation measures that will partially reduce this impact that are outlined under Impact BIO-1. However, these mitigation measures will take longer to partially reduce impacts on riparian habitat areas because of the lack of rain in the Desert Region.

Unmitigable Significant, Adverse Impacts	Mitigation Measures
Impact BIO-16 Development allowed by the General Plan in the Desert Region may impact movement of native resident or migratory fish or wildlife species through established wildlife corridors or impede the use of native wildlife fawning, and land banking sites. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes a number of mitigation measures that will partially reduce this impact and requires that the County coordinate with local, state and federal agencies prior to the approval of land use conversion, to ensure adequate protections are in place to preserve habit for resident and migratory species that may depend on riparian habitat within the County. The County will ensure preservation of at least 75% of existing natural water resources including streams and rivers with the remaining 25% of each water resource permitted by the above agencies mitigated by habitat enhancement of conserved areas. Also, the County will participate with regional agencies to minimize degradation of water quality within the County that affects downstream resources and habitats.
HAZARDS AND HAZARDOUS MATERIALS	
Impact HAZ-6 Development allowed in high fire hazards areas by the update to the General Plan will ultimately be exposed to wildland fires that have the potential to damage or destroy land uses in the path of such fires. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	A measure has been include in the Program EIR that requires the County to closely review proposed development within the high fire hazard areas as shown in the Fire Safety Overlay Ordinance found in the Development Code. New development in this area shall be constructed to reflect the most current fire-safe building and development techniques and standard in order to be built in a high fire hazard area.
Impact TR-2 Traffic is projected to grown 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. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes a number of mitigation measures that will partially reduce this impact and require that the County to work with adjacent jurisdiction to minimize inconsistencies in existing and ultimate right-of-way and roadway capacity across jurisdictional boundaries, work with Caltrans and SANBAG on appropriate fair share mitigation for impacts of development on state highways.

Unmitigable Significant, Adverse Impacts	Mitigation Measures
Impact TR-3 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 County. This will result in deficiencies in some roadways in these areas. *Despite the imposition of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report, this impact cannot be fully mitigated to a level below significance.*	The Program EIR includes mitigation measures that will partially reduce this impact and requires the County to work with staff of surrounding counties to minimize inconsistencies in roadway capacity across jurisdiction boundaries. The County will work with Caltrans and SANBAG on appropriate fair share mitigation for impacts of development on County and state highways.

Table I-3. Summary of Potential Effects Which Have Been Found not to be Significant

Table I-3 summarizes potential environmental effects that were found not to be significant. Therefore, in accordance with Section 15128 of the California Environmental Quality Act (CEQA) guidelines, no mitigation measures are required.

Effect	Reason Why Effect Was Not Found Significant
Inundation of new land uses by a tsunami.	The County is located far enough inland from the Pacific Ocean that it is not subject to inundation by an earthquake-generated tsunami.

CHAPTER II.
INTRODUCTION

SAN BERNARDINO COUNTY
2006 GENERAL PLAN PROGRAM
SCH# 2005101038

A. PURPOSE OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

This Draft Environmental Impact Report (DEIR) provides an analysis of the potential environmental effects associated with a comprehensive update to the County's General Plan, the 13 areas within the County where Community Plans have been prepared, and the new County of San Bernardino Development Code (Title 8 of the County Code) that replaces the existing Development Code in its entirety.

B. LEAD AGENCY

The County of San Bernardino is the lead agency for the preparation of the DEIR for the update of the County' General Plan, the 13 Community Plans developed as part of the update of the General Plan, and the new County of San Bernardino Development Code. As defined by Chapter 21067 of the Public Resources Code, "lead agency" means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment."

C. INTENT AND USE OF THE DEIR

The DEIR assesses the environmental effects associated with the implementation of the proposed General Plan Update, 13 Community Plans, and the new County Development Code. The five main objectives of this document as established by the California Environmental Quality Act (CEQA) are listed below.

- To disclose to decision-makers and the public the significant environmental affects of proposed project activities.
- To identify ways to avoid or reduce environmental damage.
- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

D. ORGANIZATION OF THE DEIR

The DEIR has been formatted as described below:

Chapter I. Executive Summary – This section includes an Introduction that summarizes the information that is included in the DEIR. Also included is a discussion of the purpose of the DEIR, the project description, objectives for the update of the General Plan, 13 Community Plans and new County Development Code, areas of known controversy, summary of project impacts and mitigation measures, a description of project alternatives and other CEQA-related conclusions on growth-inducement, cumulative impacts, and required approvals of the EIR.

Chapter II. Introduction – This section includes a discussion of the purpose of the DEIR, the lead agency for the DEIR, intent and use of the DEIR, organization of the DEIR, and location of DEIR documents.

Chapter III. Project Description – This section describes the project location, project components (i.e., General Plan, Community Plans, and County Development Code), objectives for the components of the project and intended use of the EIR.

Chapter IV. Project Analysis – This section provides a description of the setting, significance criteria, impact analysis, mitigation measures and significant unmitigated impacts for each environmental

parameter analyzed in the project DEIR. The DEIR includes an analysis of potential impacts of the project on Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, and Utilities/ Service Systems.

Chapter V. Alternatives to the Proposed Project – This section, prepared in accordance with Section 15126.6 of the CEQA Guidelines, provides a description of the alternatives to the proposed General Plan Update project, including Alternative 1 – No Project Alternative (Existing 1989 General Plan), Alternative 2 – Reduced Intensity Alternative, and Alternative 3 – Intensified Sphere Alternative.

Chapter VI. Cumulative Impacts and Consumption of Non-Renewable Resources – This section describes the cumulative impacts and the consumption of non-renewable resources that would occur should the proposed project be approved.

Chapter VII. Growth- Inducing Impacts – This section provides a discussion on the growth-inducing impacts of the proposed project.

Chapter VIII. Mitigation Monitoring Program – This section provides a discussion on the Mitigation Monitoring Program that is intended to ensure the implementation of all mitigation measures adopted through the preparation of this EIR for the proposed and subsequent projects.

Appendices – The appendices to this document contain supporting documents and other material too detailed and voluminous to be included in the body of the DEIR. The following appendices are found at the end of this DEIR:

- Appendix A: Initial Study / Notice of Preparation and EIR Scoping Process
- Appendix B: Comment letters on the Notice of Preparation.
- Appendix C: 2030 Growth Projections- Background Information, prepared by Stanley R. Hoffman Associates, March 20, 2006
- Appendix D: Traffic Analysis Report/Circulation Background Report
- Appendix E: Land Use Background Report
- Appendix F: Housing Background Report
- Appendix G: Open Space Background Report
- Appendix H: Conservation Background Report
- Appendix I: Noise Background Report
- Appendix J: Safety Background Report
- Appendix K: Economic Development Background Report

E. LOCATION OF DOCUMENTS

The project DEIR, the updated General Plan elements, the 13 Community Plans prepared as part of the update to the General Plan, the updated County Development Code, and all other documents used in the preparation of the DEIR are located at the County of San Bernardino Land Use Services Department, Advanced Planning Division and the County Clerk of the Board of Supervisors.

Requests to review these documents should be addressed to:

County of San Bernardino
Land Use Services Department, Advanced Planning Division
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, California 92415-0182
Contact Person: Jim Squire, AICP, Supervising Planner
Phone Number: 909-387-4147

Requests to review these documents may also be e-mailed to:
www.sbcounty.gov/landuseservices

F. PREPARATION PROCESS

This section describes how the development of Alternative Growth Scenarios led to the selection of the updated General Plan, which is the "preferred project" for this Environmental Impact Report. These Alternative Growth Scenarios should not be confused with the Environmental Alternatives presented in Chapter V of this EIR, which were prepared to comply with Section 15126.6 of the CEQA Guidelines. Chapter V of this EIR presents a reasonable range of alternatives that would avoid or substantially lessen the significant impacts of the preferred project, i.e., the 2006 San Bernardino County General Plan.

The state's guidelines for the preparation of general plans direct cities and counties to include projections of population, housing and employment in the land use element of the plan. For the 2006 General Plan, three alternative growth scenarios were identified. The growth projections underlying these scenarios served several purposes, including:

- Giving the public and decision-makers a general idea about the growth that is expected to occur over the life-span of the plan;
- How future growth compares with either the growth that would have occurred under a previous plan or how growth would occur in the absence of a plan and only in response to market forces; and
- Providing information to help plan for facilities and uses that would be affected by the projected future growth, such as roads, water and sewer systems, schools, parks, and other public services and facilities.

The County's current General Plan was adopted in 1989. The County and other agencies that rely on the General Plan now consider the growth projections provided in that Plan as out-of-date. In the 16 years since they were prepared, growth rates in the County have exceeded the 1989 projections and, among other consequences, the Plan's programs to accommodate future growth have been strained by the faster rate of growth that has occurred in the County.

To respond to the state's guidelines, cities and counties take a two-step approach to prepare growth projections consistent with federal census numbers and regional growth trends. The first step is to prepare a preferred land use plan with a total holding capacity identified for each land use shown in the plan. The second step is to develop goals and policies to guide the implementation of programs to achieve the growth desired for the build-out year consistent with objectives of the city or county. The update of the San Bernardino County General Plan utilized the same two steps, but the steps were taken concurrently, making it easier to understand the ability of the County to continue to grow in the next 25 years. The County staff and the Board of Supervisors believe that the land use policy map of the 1989 General Plan only needed some minor adjustments and corrections to provide for an appropriate mix and distribution of development within the County. However, in order to prepare adequate policy guidance to properly direct the buildout of the land use policy map, substantial emphasis was placed on re-formatting and streamlining the text of the elements, primarily the goals and policies of the General Plan,. The intent of the Board is to make the General Plan more useable while remaining responsive to public needs and values. The direction of the Board was to prepare a new General Plan that is more policy oriented and less technical and procedural. The Board also indicated that policies would be updated to match contemporary needs, address changes in State law since 1989 and be responsive to future growth trends.

The County's General Plan program was initiated with the preparation of a Vision Statement, the result of an extensive public participation program. The Board of Supervisors adopted the Vision Statement for the General Plan update in June 2004. Consultants and County staff spent several months preparing

technical background reports to provide the necessary information on natural and man-made resources in the County to determine what issues, opportunities and constraints needed to be addressed in the new General Plan and to guide the update and reformatting of existing goals and policies. Finally, draft Community Plans have been prepared and have been the subject of considerable review by the communities they address. Throughout the preparation of the Vision Statement, the technical background reports and the draft Community Plans, an underlying assumption that the growth that has occurred in the County shall continue for years and decades to come has not changed. The County has the advantage with an updated General Plan to use the opportunities offered by future growth as an asset for planning new resources and services as well as for expanding economic development opportunities in the County. For that reason, the County directed the updated General Plan to include with the seven state-mandated elements one elective element, an Economic Development Element.

The 2006 General Plan document provides policies to guide and encourage future residential, commercial and industrial development in the County. Although the General Plan is therefore growth inducing, the Plan's policies are written to respond to the external growth pressures that the County is facing from Southern California and beyond (see Chapter VII). As part of the General Plan Update process, the County commissioned a study by Stanley R. Hoffman Associates (the "Hoffman Report") to assess regional population projections for applicability to San Bernardino County. The Hoffman Report, with updated growth projections, is presented in Appendix C to this EIR.

Briefly stated, the Hoffman Report concluded that the present General Plan ("1989 General Plan, As Amended") allowed for a buildout capacity substantially higher (e.g., 3-4 times higher capacity for population and 7-8 times higher capacity for employment) than Regional Growth Forecasts prepared by the Southern California Association of Governments ("SCAG Regional Growth Forecasts"), which in turn were based on recent regional economic forecasts.

In response to the difference in General Plan growth capacities, the proposed 2006 General Plan contains policy directions for a lower, more realistic buildout capacity, closer in magnitude to the SCAG Regional Growth Forecasts. The 2006 General Plan policy document, therefore, significantly reduces potential environmental impacts at the outset, compared to the present General Plan, by adopting a lower and more realistic buildout capacity.

For the purposes of this EIR, therefore, the analysis presented herein discusses environmental impacts in relation to the lower buildout projections of the Regional Growth Forecasts adopted by SCAG and presented in the Hoffman Report. To be clear, the analysis of potential environmental effects related to adoption and implementation of the 2006 General Plan is based on growth projections that form the "generator" of future potential impacts. This Draft EIR utilizes an approach that recognizes General Plan policies and Development Code requirements as the mitigation measures to be adopted in the 2006 General Plan to manage that growth.

As directed by the Board of Supervisors, the 1989 land use policy map remains relatively unchanged, although development densities may be adjusted in targeted areas and infrastructure facility development will be more coordinated on a regional basis with local jurisdictions. The type of development will occur consistent with the land use policy map and will be dependent on the adopted goals and policies as well as economic and market conditions in the region.

Because population and growth projections are not an exact science, three alternative growth scenarios were developed based on population housing and its forecasts from the Hoffman Report. The growth scenarios were developed in concert with the draft goals and policies and the Vision Statement. Since population and growth can be directed through land use policies as they interact with market conditions, alternative growth scenarios were developed based on differing growth assumptions. Each alternative is

perhaps best thought of as themes to achieve the adopted Vision Statement. The Vision Statement, like the entire update program, is based on an extensive public participation program sought by the Board of Supervisors. The public participation program included 24 community meetings and extensive public surveys (with more than 1,000 respondents), as well as public meetings of the General Plan Advisory Committee and eventually the County Planning Commission and Board of Supervisors. The three alternative growth scenarios have been developed in response to public input, an expression of community values relating to land uses, growth, transportation and other issues. However, although each alternative places a different emphasis on aspects of the Vision Statement, each alternative scenario is consistent with the Vision Statement's underlying values.

The three alternative growth scenarios, and a description of the related theme for each scenario, are as follows:

Scenario 1–Existing General Plan, As Amended

The County's current General Plan was adopted in 1989, and has been amended a number of times since then. The 2003 analysis of the General Plan identified that the current Plan needs some technical changes for several reasons, including:

- Most of the projections in the Plan and its elements are out of date; and
- The format and writing style of the current General Plan make it difficult to use by County staff decision-makers and the public.

While the current 1989 General Plan, as amended, is not projected to 2030, the assumption is made that the Southern California Association of Governments (SCAG) Trend Projection represents the local city and County General Plans. The overall San Bernardino County projections have been provided by Meyer Mohaddes Associates at a Traffic Analysis Zone (TAZ) level (this includes both the incorporated and unincorporated areas of the County).

The jobs projection under this trend forecast is 106,961, virtually the same as the 106,997 projected for the Southern California Association of Government's (SCAG's) 2004 Regional Transportation Plan (RTP). This job forecast is relatively higher than the 83,420 projection for the current General Plan, or the 90,573 projection under the Sub-Regional Development Collaborative alternative. The major reason for this job difference is SCAG's relatively higher projection for the Valley area.

Under Scenario 1, the rate of growth will be somewhat tempered by the goals and policies that place an emphasis on public infrastructure to be developed prior to major developments. This will affect the location of growth to those areas of the County that either have infrastructure with sufficient capacity or will be built in "in-fill" locations (often thought of as undeveloped islands). In most respects, however, growth under this alternative will continue the sprawl the County and the state have witnessed for the past 30 or more years.

Scenario 2–Regional Planning Perspective

SCAG and the San Bernardino Associated Governments (SANBAG) are responsible for preparing growth projections for use in the preparation of regional plans, such as the Regional Transportation Plan (RTP). SCAG's regional growth projections are also used for the preparation of the South Coast Air Quality Management Plan (SCAQMP) prepared by the South Coast Air Quality Management District (SCAQMD). In addition, the projections are used by SCAG to prepare the Regional Housing Needs Assessment used by SCAG to review housing elements prepared by local cities and counties. SCAG's regional projections are based on SCAG's objectives relating to encouraging local agencies, such as the

24 cities in the County and the County itself, to plan for future growth that balances housing and employment growth and opportunities.

SCAG recently completed an extensive multi-year program of meetings and workshops at the local level to discuss regional growth with the public and to solicit comments and suggestions from public agencies about where future growth in the region should occur in the coming decades. The regional projections SCAG has recently prepared are based on that public input program - the COMPASS Program. The regional growth projections, used by SCAG and other regional agencies in the preparation of regional plans, would further SCAG's objectives, if adopted in local plans, to achieve regional goals to reduce the increasing need for long home/work commutes with corresponding reductions in traffic demand, air pollution emitted from vehicles, and conversion of land for new housing and employment developments. The regional growth projections prepared by SCAG also reflect objectives that future growth should be focused on transportation nodes and corridors.

Future growth under Alternative Scenario 2 would occur along transportation corridors (including freeways, rail-transit lines, bus transit routes and similar facilities). This is one of SCAG's underlying objectives for future regional growth and development. Increasing the density of housing and locating future employment centers near transportation corridors or transit centers may not result in substantially more growth in the County, but would rather redirect the future growth to these corridors and/or transit centers. From a regional perspective, this alternative would contribute to achieving SCAG's objective to reduce home/work commuting distances, and increase reliance on public transportation (and less reliance on the single-passenger automobile) and associated benefits.

Scenario 3–Sub-Regional Development Collaboration

The County of San Bernardino has a history of collaborating with local cities to manage the development of unincorporated County areas for the mutual benefit of the County and the affected local jurisdictions. Continuing in this tradition, the Sub-Regional Development Collaboration Alternative Scenario facilitates economic development where it can benefit the County on a sub-regional level and looks to guide that development where it creates the greatest benefit for the County as a whole. For example, economic development, such as a major multi-modal complex in the High Desert sub-region, can serve to benefit the jobs-housing balance of that area, create higher wage jobs, and improve the flow of commuter traffic throughout the County. Also, where development may take place initially within unincorporated areas, collaboration would be encouraged so that coordinated infrastructure financing systems and tax sharing arrangements lead to urbanization patterns that are both efficient and provide adequate levels of public services allowing for the smooth integration of these areas into incorporated jurisdictions upon future

Some of the benefits to the County and the sub-region of this alternative include:

- Reduced friction or competition between the County and the cities for the proposed land use(s);
- Application of development, design and performance standards that are mutually acceptable to both the County and the city or sub-region;
- Assurance that potential impact of a proposal can be offset by mutually acceptable conditions of approval to both the city and the County; and
- Tax sharing agreement and agreement regarding provision of public services to that area.

The land use policy map prepared for the 1989 land use element of the General Plan designates land for residential, commercial and industrial development. The designated lands have potential build-out capacity beyond that projected in the General Plan; that is, the land use policy map of the 1989 General Plan has a capacity for substantially more growth than anticipated to occur during the span of that land use policy map and General Plan. The General Plan update program is currently at the phase of work

where the land use policy map is being updated at specific locations. However, consistent with the initial recommendation from the 2003 General Plan evaluation report and subsequent discussions and direction from the Board of Supervisors, the update of the land use policy map will have relatively few and minor changes to the current land use designations. Therefore, the total capacity of the land use policy map will continue to allow for building at a much greater level than the growth projections under any of the four alternative growth scenarios.

The alternative growth scenarios presented in this narrative do not represent the total holding capacity of the General Plan. Holding capacity is the total amount of development that could be permitted under the land use policy map. On the other hand, each scenario is a projection of the amount of growth or build-out that would occur by 2030 under the direction (goals, policies and theme) of each of the three alternatives.

In regard to the Sub-Regional Collaborative alternative scenario, the level of employment will increase by 7,153 jobs, which is the difference between SCAG's RTP 2004 forecast and the draft General Plan projection based on the 1990 to 2000 trend methodology. Additionally, it has been assumed that the additional housing (4,637 units) in the SCAG projection would also occur in the alternative's projection as more job growth stimulates additional housing growth. This would, in turn, generate additional population growth (12,380) using the estimated household size of 2.67 from the draft General Plan trend projection. Also, as shown in the table, this results in an increase in the jobs per household ratio from 0.67 to 0.70. This is similar to the SCAG forecast of jobs per household as well for the overall unincorporated area.

It should be noted that some of the basic, or logistics driven, employment growth would also stimulate some local serving retail jobs. Thus, additional neighborhood and community centers may be developed within the unincorporated areas, but the major regional commercial centers are assumed to be in the urbanized or urbanizing areas along the major transportation corridors.

Scenario 3 assumes the adoption of the Community Plans and the same goals and policies as Scenario 1 with the addition of specific goals and policies to support the County to reach agreement with cities to cooperate in the development of specific projects (but, of course, not yet identified projects) in planning areas to benefit both the County and the respective cities. The targeted areas would generally be those areas most feasible for future annexations where economic collaboration can facilitate orderly growth that receives adequate and efficient public facilities and is sensitive to job/housing balance considerations. The benefits would include increased revenue (from property tax, sales tax, utility tax and other fees), improved design of projects to ensure land use and design compatibility, and provision of off-site improvements and infrastructure.

Scenario 3 was selected as the growth alternative that best matched the desired buildout conditions reflected in the Vision Statement and would occur as a result of applying the new General Plan Goals and Policies.

G. AREAS OF CONTROVERSY KNOWN TO THE LEAD AGENCY

As initially presented in Section I-B of this EIR, following is a discussion of the areas of concern raised by the public. The County identified the following areas of concern as expressed by County residents at the community meetings, stakeholder interviews and during the visioning program conducted for the General Plan Update. Therefore, the growth forecasts contained in Scenario 3 were chosen for impact evaluation in this EIR.

1. INCOMPATIBLE USES/DEVELOPMENT STANDARDS/CODE ENFORCEMENT

Many of the areas in the County have incompatible uses located next to each other. The transitions between differing land uses (particularly the land use transitions between residential, commercial, and industrial uses) are often sudden, with little or no buffering offered by distance/setbacks, landscaping or design considerations.

During the community meetings in all three planning regions, residents expressed concern regarding lack of code enforcement by the County. In some cases, poorly maintained properties are in violation of the County Code, often combining multiple incompatible uses within their properties.

2. ECONOMIC DEVELOPMENT

The lack of economic development is one of the most important concerns for the County of San Bernardino. At a regional scale, the County has lagged behind adjoining counties in attracting investments and producing meaningful jobs, and/or achieving a balance between where people live and where they work.

Throughout most of the unincorporated Valley communities, there appears to be a lack of economic development activities, particularly a lack of revenue-generating commercial and industrial development within the unincorporated areas. Residents of the Valley communities emphasized the need for job creation during the community meetings, while other stakeholders, in their interviews, reinforced the necessity for bolstering economic development.

Job growth is one of the major concerns in the Mountain areas as well. Many of the residents in this area commute to Valley cities for work. Others work locally, often compromising wages in lieu of commuting time. Home-based businesses and professionals that telecommute are sharing increased levels of employment. Many Mountain communities depend on tourism, although many of tourist-related businesses are not doing well. The Mountain communities do not have many industrially zoned areas and local industrial uses (such as concrete mixing, firewood storage and sales, auto repair, etc.) are needed to support the local population.

Access to jobs is one of the major concerns identified by the Desert residents, both in terms of availability of jobs and road improvements for mobility. The Desert communities do not have many industries or manufacturing operations. Many of the Desert residents commute to other areas for work; therefore, there are opportunities for increased home-based businesses.

3. PRESERVATION OF RURAL CHARACTER

Residents in all three planning regions of the County expressed concerns regarding rapid urbanization and the erosion of the rural character of their communities. Residents were concerned about the threat of annexation from adjoining incorporated cities. Many unincorporated community residents expressed that they do not want their communities to be annexed by the adjoining cities, but would like to incorporate in the future, when fiscally possible.

4. PUBLIC TRANSPORTATION

The size of the County area and the low density of development in the County have prohibited development of a public transportation network connecting the three planning regions of the County. In addition, there is significant traffic congestion in the Valley Region; lack of road capacity due to topography has contributed to traffic congestion in the Mountain Region. Residents of the Desert communities identified lack of transit system and road improvements as one of their major concerns.

5. INFRASTRUCTURE AND COMMUNITY FACILITIES

Some parts of unincorporated County territory are not served by sewers, public roads and a reliable water source. Residents in all three of the County's regional planning areas expressed concerns that the existing infrastructure system is strained due to rapid growth in the County. They are concerned that the infrastructure capacity is inadequate to support projected growth. Also, residents in the Mountain and Desert Planning Areas were concerned about the carrying capacity of the land to handle the percolation from additional septic systems that may be needed to handle increased growth in these areas.

Mountain community residents expressed concerns regarding emergency access to their communities, while Desert residents in the more rural part of the County cited access to healthcare facilities as one of their concerns.

6. PUBLIC SAFETY

Mountain community residents identified emergency access and safety as two of their primary concerns. Fire protection services are also constrained due to the mountainous topography of the region and inadequate emergency access to communities in this area of the County.

Fire protection is an issue in the Mountain communities. The danger is especially high due to bark beetle infestation and forest densification that has led to insect and disease caused tree mortality with the corresponding heavy fuel loading.

A police/sheriff response time to calls was also identified by many residents in all three Planning Regions of the County as an issue of particular concern.

CHAPTER III.
PROJECT DESCRIPTION

SAN BERNARDINO COUNTY
2006 GENERAL PLAN PROGRAM
SCH# 2005101038

A. LOCATION AND BOUNDARIES

The County boundaries form the General Plan boundaries for the San Bernardino County General Plan Update (Figure III-1. Regional Location Map). San Bernardino County is located in the southeast portion of California. The County is bordered by Inyo County to the north, the states of Nevada and Arizona to the east, Riverside County and Orange County to the south, and Los Angeles County and Kern County to the west. Interstate (I-) 15 traverses through all three Regions of the County (Valley, Mountain, and Desert) generally in a north-south direction (Figure III-2, Planning Regions Map). The most urbanized portion of the County, the Valley Region, is also interconnected with Los Angeles County to the west by the I-10 and the I-210. Interstate 40 from its intersection with I-15 in Barstow to Interstate 10 provides an intermediate east-west connector between I-10 and I-15. These interstate freeways serve as the regional transportation network.

B. PROJECT CHARACTERISTICS

This section has been prepared to respond to the requirements in Section 15124 of the CEQA Guidelines that state the need for "a general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposal if any and supporting public service facilities" to be included in the project description.

1. GENERAL OVERVIEW

San Bernardino County encompasses an area of over 20,000 square miles, of which approximately 78% is under federal and state ownership and, therefore, exempt from land use jurisdiction by the County Board of Supervisors. Most, but not all, of the policy changes proposed by the General Plan Update affect the remaining 22% of the land area within the County that is privately owned or owned by local government agencies

The San Bernardino County General Plan is part of a comprehensive planning program that includes Countywide and Regional goals and policies along with the preparation of 14 Community Plans and the completely revised Development Code. The current General Plan, which was adopted in July 1989, is being updated since many physical and demographic changes have occurred at the countywide level since then, which present new opportunities and challenges. The General Plan has been updated to reflect these new demographic and economic conditions, altered growth patterns, and current land uses.

The General Plan identifies and proposes the following land use designations to accommodate the range of land uses that meet the needs of the residents and landowners of the County:

Resource Conservation (RC)	General Commercial
Agriculture (AG)	Service Commercial
Rural Living (RL)	Community Industrial
Single Residential (RS)	Regional Industrial (IR)
Multiple Residential (RM)	Institutional (IN)
Neighborhood Commercial (CN)	Special Development
Office Commercial (CO)	Floodway (FW)
Rural Commercial (CR)	Specific Plan (SP)
Highway Commercial (CH)	Open Space (OS)

2. JURISDICTIONAL ISSUES

Although San Bernardino County is the largest County in the contiguous United States (12,867,840 acres), the span of control of the Board of Supervisors over the entire County is quite limited. The environmental analysis of this General Plan Update has been undertaken with full recognition of the limited land use jurisdiction over much of the County's geographic area. A characterization of the issues of land use control in San Bernardino County is presented below; all acreages and percentages in the following discussion are approximated and presented for descriptive purposes only.

a. Federal and State Agencies Own and Control Most of the County Lands

First and foremost, of the almost 13 million acres comprising San Bernardino County, approximately 10.5 million acres (78% of the total) are completely outside any governing control of the County Board of Supervisors. This land is referenced as "non-jurisdiction" land or "non-jurisdiction" territory. Of this non-jurisdiction land, approximately 6 million acres are owned and controlled by the Federal Bureau of Land Management; and 1.9 million acres are owned and controlled by the United States Department of Defense. The remaining federal jurisdictions are nearly equally divided by the National Park Service and the U.S. Forest Service.

b. "Non-Jurisdiction" Territory is Fragmented and Scattered throughout the County

The fact that the vast majority of the County territory is outside the control of the Board of Supervisors is further compounded by the scattered distribution of these "non-jurisdiction" properties. Rather than one singular unified ownership pattern (such as a military base or a National Park), the non-jurisdiction territory is distributed throughout the Mountain and Desert Subareas, interspersed with other parcels owned by private entities, which are subject to the land use jurisdiction of the County. Such fragmentation of property ownership and land use regulations can nevertheless be addressed, through comprehensive land use planning in San Bernardino County.

c. Incorporated Cities Control Land Use on Much of the Remaining Land

As stated, 78% of the total land area of the County is outside any control of the County Board of Supervisors. Of the remaining 22% of the County's total land area, approximately 15% or about 1.9 million acres is entirely under County Jurisdiction and 7% lies within 24 incorporated cities. While the County influences a certain degree of development activity within these cities (primarily County owned administrative buildings, criminal justice facilities and certain associated infrastructure), the City Councils of these 24 cities directly regulate land use within these municipalities.

d. The General Plan Update provides an opportunity for the Board of Supervisors to exercise leadership in resolving many inter-jurisdictional policies.

The General Plan program evaluated in this EIR relates primarily to the land area directly under the jurisdiction of the County Board of Supervisors. Of the 12,867,840 total acres comprising San Bernardino County, only 15% of the total land area is regulated by the County Board of Supervisors. This General Plan Update, therefore, can only directly influence a small portion (less than 2 million acres) of the total land area of San Bernardino County. Nevertheless, many of the environmental issues identified in this EIR span all of the above jurisdiction and non-jurisdiction areas. Policies proposed in the proposed project address areas of commonality

between the County and cities regarding their Spheres of Influence and between the County and federal and state agencies.

C. PROJECT OBJECTIVES

Section 15124(b) of the CEQA Guidelines indicates that "a clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid decision makers in preparing findings or a statement of overriding considerations, as necessary."

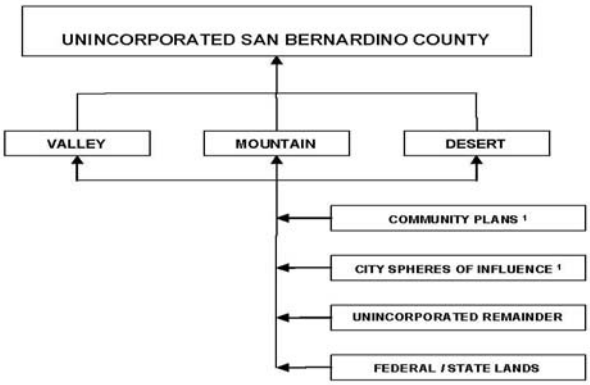
The County has the following basic objectives for the comprehensive update of the General Plan:

- Promote economic development to provide jobs to match population growth.
- Promote comprehensive planning approaches to deal with increasingly complex land development and public facilities and services issues.
- Provide transportation and circulation systems that adequately provide for intra-city and regional transportation needs. Alternatives to the drive-along mode, such as mass transit, ride sharing, bicycling, trail systems and telecommuting should be encouraged to reduce traffic congestion and enhance air quality. Also, coordinate the County's transportation planning efforts with regional transportation planning efforts wherever possible.
- Foster new development in the County that strives for a jobs/housing balance by facilitating business growth, and encouraging the economic revitalization of business centers in the communities within the County. New development opportunities within the County should be focused on the types of businesses that will thrive in the 21st Century.
- Support the growth of the County so that the quality of life is enhanced by ensuring that infrastructure, community amenities and public safety are provided. Significant fiscal burdens on the existing communities within the County shall be avoided by requiring that new development pay its fair share of the costs public infrastructure required to serve new development.

D. PROJECT COMPONENTS

The diagram below graphically portrays a hierarchical structure of policies presented in the 2006 General Plan. Each of the planning area components is discussed further in this section.

1.



GENERAL PLAN

The State of California requires each city and county to prepare and adopt a general plan to identify goals, policies and programs to guide future development of that jurisdiction. Each general plan in the state is required to address a variety of issues through the preparation of elements, or chapters organized by topics, relating to the seven state-mandated elements: land use, circulation, housing, safety, noise, open space and conservation. Economic Development, an optional element in the San Bernardino County General Plan, has been included to recognize the importance of economic considerations in future land use decisions.

The General Plan provides a projection of growth in the County through the year 2030. Text, tables and maps in the draft Plan and its elements identify goals and policies that will guide the future development of residential, commercial, industrial, public facilities, transportation facilities and other land uses that are desired by the public and county decision-makers. The goals and policies are intended to provide a basis for achieving the County's objectives while reducing potential impacts on the environment that may result from development during the 25-year planning horizon of the General Plan.

2. PLANNING REGIONS OF THE COUNTY

San Bernardino County is vast, consisting of three distinct geographic regions: the Valley, the Mountains, and the Desert, shown on Figure III-2 Planning Regions Map. The EIR has been prepared keeping in mind these distinctions between the three geographic regions. The three diverse planning regions of the county vary not only by terrain and climate, but also in the issues and opportunities they face. The three planning regions provide an opportunity to formulate custom-tailored solutions for each region and can be further described as follows:

Valley Planning Region

The Valley Planning Region is defined as all the area within the county that is south and west of the National Forest boundaries. The San Bernardino Mountains range forms the eastern limit of the Valley Region, along with the Yucaipa and Crafton Hills. The southern limits of the valley extend south from the Santa Ana River to the Jurupa Mountains and from the Chino Basin to the Chino Hills. The Valley Planning Region of the county is approximately 60 miles east of the Pacific Ocean and borders Los Angeles, Orange, and Riverside Counties. It is approximately 50 miles long from west to east and encompasses 500 square miles. It covers only 2.5 percent of the total county land, but holds approximately 75 percent of the county's population. Most of the valley land area is incorporated. Refer to the introduction to the Background Reports (Appendix E) for more information on the Valley Planning Region.)

Incorporated cities within the Valley Region include the following: Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa.

Unincorporated Communities within the Valley Region include the following: Bloomington, Crafton, Del Rosa, Devore, Mentone, Muscoy, San Antonio Heights, South Montclair, and Verdemont. Unincorporated pockets exist within the cities of Montclair, Chino, Fontana, and San Bernardino.

Mountain Planning Region

North of the Valley Planning Region is the Mountain Planning Region, consisting of the San Bernardino Mountain Range and the eastern extent of the San Gabriel Mountain Range. Of the 872 square miles within this planning region, approximately 715 square miles are public lands managed by state and federal agencies—principally, the U.S. Forest Service. The region contains forests, meadows, and lakes. The San Gabriel Mountains, which extend from Los Angeles County, form the western end of the Mountain Planning Region. The San Gabriel Mountains comprise about one-third of the Mountain Planning Region, with the San Bernardino Mountains making up the remainder (refer to the introduction to the Background Reports, see Appendix E for more information on the Mountain Planning Region).

The City of Big Bear Lake is the only incorporated area within the Mountain Region.

Unincorporated communities within the Mountain Region include the following: Angeles Oaks, Arrowbear, Arrowhead Woods, Baldwin Lake, Barton Flats, Bear Creek, Big Bear, Blue Cut, Blue Jay, Cedar Glen, Cedarpines Park, Crestline, Erwin Lake, Fawnskin, Forest Falls, Fredalba, Green Valley Lake, Holcomb Valley, Lake Arrowhead, Lake Gregory, Lytle Creek, Mount Baldy, Oak Glen, Rim Forest, Running Springs, Silverwood, Sky Forest, Sugarloaf, Twin Peaks, Valley of Enchantment, and Wrightwood.

Desert Planning Region

The Desert Planning Region, the largest of the three planning regions, includes a significant portion of the Mojave Desert and contains about 93 percent (18,735 square miles) of the land within San Bernardino County. The Desert Planning Region is defined as including all of the unincorporated area of San Bernardino County lying north and east of the Mountain Planning Region. The Desert Planning Region is an assemblage of mountain ranges interspersed with long, broad valleys that often contain dry lakes (refer to the introduction to the Background Reports, see Appendix E for more information on the Desert Planning Region.).

Following are the incorporated cities and towns in the Desert Region:

Adelanto, Apple Valley, Barstow, Hesperia, Victorville, Needles, Twentynine Palms, and Yucca Valley.

Unincorporated communities within the Desert Region include: Amboy, Baker, Baldy Mesa, Cadiz, Cima, Daggett, El Mirage, Essex, Flamingo Heights, Goffs, Harvard, Havasu, Helendale, Hinkley, Johnson Valley, Joshua Tree, Kelso, Kramer Junction, Landers, Lenwood, Lucerne Valley, Ludlow, Morongo Valley, Newberry Springs, Oak Hills, Oro Grande, Parker Dam, Phelan, Pinon Hills, Pioneertown, Red Mountain, Rimrock, Silver Lakes, Spring Valley Lake, Summit Valley, Trona, Vidal, Vidal Junction, Wonder Valley, Yermo, and Yucca Mesa.

3. COMMUNITY PLANS

Community Plans focus on individual, distinct communities within the overall County's General Plan. As an integral part of the overall program, Community Plans must be consistent with the General Plan. To facilitate consistency, the Community Plans build upon the goals and policies of each element of the General Plan. In addition, policies that are included within the Community Plans are regarded as refinements of the broader General

Plan goals and policies that have been adapted to meet the specific needs or unique circumstances raised by the individual communities.

The Community Plan provides an opportunity to address unique issues facing the individual communities and to establish priorities to guide future development. Common priorities were established for each of the individual plan areas within the regions that:

- Maintain a mix of land uses;
- Protect the plan area's natural resources and open spaces; and
- Ensure the availability of adequate services and infrastructure to serve the needs of existing and future residents.

As a result, the land use elements within each of the Community Plans are often the core around which other elements develop, do not propose significant land use changes. Instead, goals and policies guide development in a manner that maintains the existing mix of land uses, preserves the character of the community, and complements existing development. To preserve the existing community character, many of the land use goals and policies in the Community Plan direct the location and concentration of future development areas consistent with the land use map and the scale and arrangement of future development such that it complements the existing community character. The Community Plans also include the same "elements" that are required by the state to be addressed in the County's General Plan: Circulation and Infrastructure, Open Space, Conservation, Safety and Economic Development elements. Within each of these elements, goals and policies have been developed to further support preservation of the existing character of the Community Plan area.

The following is a brief description of each of the 13 Community Plan areas organized by Planning Region.

Valley Region

- Bloomington: The community of Bloomington includes approximately 7 square miles of unincorporated area located just north of the San Bernardino/Riverside County line. The plan area is almost entirely surrounded by incorporated cities. The City of Fontana is adjacent to the west and north, and the City of Rialto is located along the north and east boundaries of Bloomington. The community of Bloomington is located entirely within the adjacent cities' SOI areas.
- Muscoy: The community of Muscoy includes approximately 3 square miles of unincorporated area directly abutting the City of San Bernardino, and in its SOI. The City of San Bernardino surrounds the plan area on the north, east and south. The plan area is separated from the City of Rialto on the west by a railroad line, the Lytle Creek Wash and the Cajon Creek Wash. Cajon Boulevard runs along the eastern boundary of the plan area. SR-210 borders the community on the south. Railroad lines border the community on both the east and west boundaries.

Mountain Region

- Bear Valley: The Community Plan area includes approximately 135 square miles of unincorporated area surrounding the City of Big Bear Lake. The plan area is located in the San Bernardino Mountains and is entirely surrounded by the San Bernardino

National Forest. The plan area includes the unincorporated communities of Baldwin Lake, Big Bear City, Erwin Lake, Fawnskin, Lake Williams, Moonridge and Sugarloaf.

- Crest Forest: The community of Crest Forest includes approximately 18 square miles of unincorporated area located west of Lake Arrowhead and south of Lake Silverwood. The plan area is entirely within the San Bernardino National Forest and includes the communities of Crestline, Cedar Pines Park, Valley of Enchantment, and the Lake Gregory Village area.
- Hilltop: The Hilltop Community Plan area is completely within the San Bernardino National Forest; it lies east of Lake Arrowhead and west of Big Bear Lake. The planning area encompasses approximately 40 square miles, which includes the communities of Running Springs, Arrowbear and Green Valley Lake. Also included are the neighborhoods of Fredalba, Smiley Park, Nob Hill, Seymour Flats, Crab Tree Flats and the Snow Valley ski area.
- Lake Arrowhead: The Plan area is located in the San Bernardino Mountains and is surrounded by the San Bernardino National Forest. The Lake Arrowhead Plan area is bound to the southwest by the Crestline Community Plan and to the southeast by the Hilltop Community Plan. The Lake Arrowhead Community Plan area encompasses approximately 30 square miles and includes the communities of Agua Fria, Arrowhead Villas, Blue Jay, Cedar Glen, Crest Park – Meadowbrook Woods, Deer Lodge Park, Lake Arrowhead, Rimforest, Skyforest and Twin Peaks.
- Lytle Creek: 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.
- Oak Glen: The Oak Glen community is located at the foot of the San Bernardino National Forest, 60 miles east of the City of Los Angeles and just east of the City of Yucaipa. Oak Glen Road is the only main access road through the Oak Glen community. The planning area includes approximately 14,213 acres, or 22 square miles of unincorporated County area.

Desert Region

- Homestead Valley: The community of Homestead Valley is located in the eastern portion of the Mojave Desert and includes approximately 124 square miles of unincorporated County area. The plan area is located north of the Town of Yucca Valley and west of the U.S. Marine Corps Air Ground Combat Training Center. The plan area includes the communities of Landers, Flamingo Heights, Johnson Valley and Yucca Mesa.
- Joshua Tree: Joshua Tree is nestled against the foothills of the Little San Bernardino Mountains at the southern edge of the Mojave Desert. The plan area covers approximately 94 square miles generally bordered on the north by the Twentynine Palms Marine Corps Base, partially on the east by the City of Twentynine Palms, on the south by the Joshua Tree National Park, on the southwest by the Town of Yucca

Valley and on the northwest by the eastern boundary of the Homestead Valley Community Plan area.

- Lucerne Valley: The Lucerne Valley Community Plan Area is located at the southwestern edge of the Mojave Desert and covers an area of approximately 433 square miles. It is located approximately 35 miles south of Barstow, 45 miles northwest of Yucca Valley on State Route (SR-) 247, 15 miles southeast of Apple Valley and is approximately 20 miles north of Big Bear Lake on SR-18. The intersection of SR-18 and SR-247 is a central point for the community, and adjacent to the downtown commercial center.
- Morongo Valley: Morongo Valley is located in the south central portion of San Bernardino County, on the edge of the southern Mojave Desert. The Morongo Valley plan area covers about 44 square miles. The planning area is bordered by the Sawtooth Mountains on the north, the Town of Yucca Valley to the northeast, Joshua Tree National Park to the east, Riverside County on the south, and the San Bernardino Mountain Range on the west.
- Phelan/Pinon Hills: The Community Plan area of Phelan/Pinon Hills includes approximately 134 square miles of unincorporated area located at the transition between the foothills of the San Gabriel Mountains and southwestern portion of the Mojave Desert. The plan area is bordered on the south by the San Bernardino National Forest, Los Angeles County to the west, the Oak Hills Community Plan area and the cities of Adelanto and Victorville to the east, and the unincorporated area of El Mirage to the north. The Community Plan area includes the communities of Phelan and Pinon Hills.

4. DEVELOPMENT CODE

The Development Code implements the policies of the San Bernardino County General Plan by classifying and regulating the uses of land and structures within the County. The purpose of the Development Code is to promote and protect the public health, safety, and general welfare of County residents.

The proposed San Bernardino Development Code (Title 8 of the County Code) would replace the existing County Development Code in its entirety. The proposed Development Code contains the following divisions:

- Development Code Authority and Applicability;
- Land Use Zoning Districts and Allowable Land Uses;
- Countywide Development Standards;
- Standards for Specific Land Uses and Activities;
- Permit Application and Review Procedures;
- Development Code Administration;
- Subdivisions;
- Resource Management and Conservation
- Public Facilities Financing.
- Glossary

5. LAND USE/ ZONING DESIGNATION CHANGES

The County of San Bernardino maintains a "One Map" System for the General Plan Land Use map and the Zoning map. While the scope of the General Plan Update, as directed by the Board of Supervisors, did not include comprehensive revisions to land use designations, certain changes were included in the update program. Focused zoning level examinations were anticipated in the scope of work and were performed on three "hot spot" areas, West Fontana, Mentone and Newberry Springs. These three unincorporated areas in the Valley Region have not had detailed zoning review performed in the past, and the areas have experienced considerable growth coupled with inconsistent land uses since the 1989 General Plan. The Newberry Springs area has maintained a rural atmosphere with small agricultural uses and other home based businesses. The community's location along the I-40 coupled with National Trails Highway (Old Route 66) extending through the community provide opportunities for business growth appropriate to the area. In addition to the hot spot analyses, other minor changes were made as described below (the specific changes are denoted on the land map set that accompanies this EIR). The project includes the following modifications to the land use/zoning map:

- Made comprehensive changes relative to non-jurisdictional lands and made boundary adjustments to those lands where land ownership had changed;
- Redefined Resource Conservation boundaries abutting non-Resource Conservation areas where deleting designations from non-jurisdictional land created a discrepancy;
- Aligned land use designations to parcel boundaries;
- Removed all obsolete zoning "prefixes" and "suffixes";
- Revised all residential land use designations into a standardized list of minimum lot sizes for the Agriculture, Rural Living, and Single Family Residential designations;
- Changed all Planned Development (PD) designations to Specific Development (SD) with either a residential or commercial suffix;
- Corrected City Boundary discrepancies and adjusted the maps for all recent annexations;
- Changed land use zoning district designations in certain small unincorporated pockets in the SOI of the Cities of Chino and Montclair to establish a more consistent land use pattern;
- Changed land use zoning district designations in the West Fontana and Mentone areas where "hot spot" analyses were conducted to establish a more consistent land use pattern and to achieve greater consistency with the neighboring cities pre-zoning; and
- Made limited land use changes to specific properties in Pinon Hills, Muscoy, Green Valley Lake, Lucerne Valley, Homestead Valley, Apple Valley, Newberry Springs, Ludlow and Hesperia.

E. INTENDED USES OF THE DEIR

The intended use of this DEIR is to disclose to decision makers and the public, the significant environmental impacts of the San Bernardino County General Plan Update. The lead agency for this project is the County of San Bernardino. At the present time, no Responsible Agencies have been identified which would use this EIR in their subsequent actions to permit or otherwise allow this entire project to be implemented.

Figure III-1. Regional Location Map

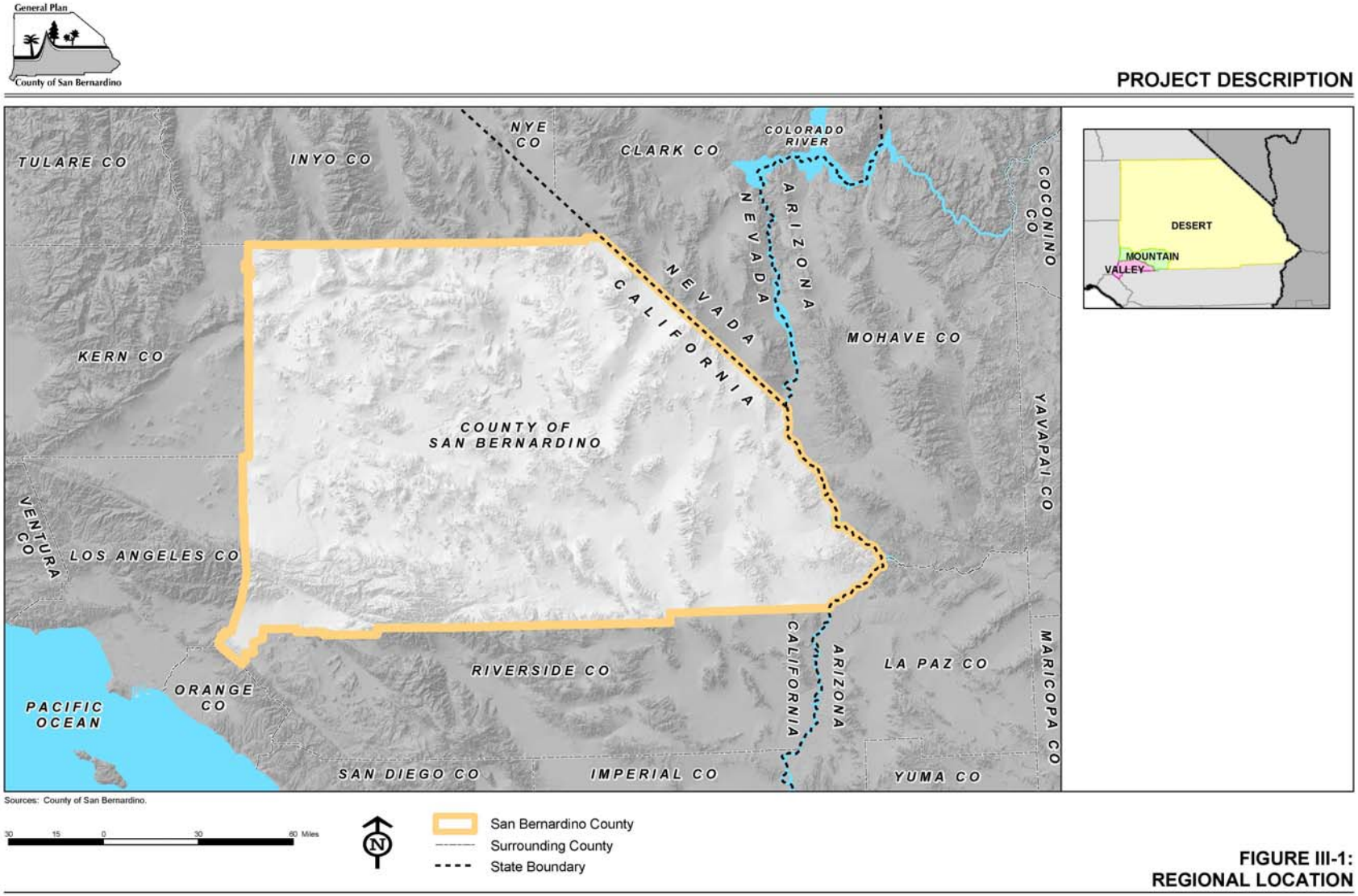
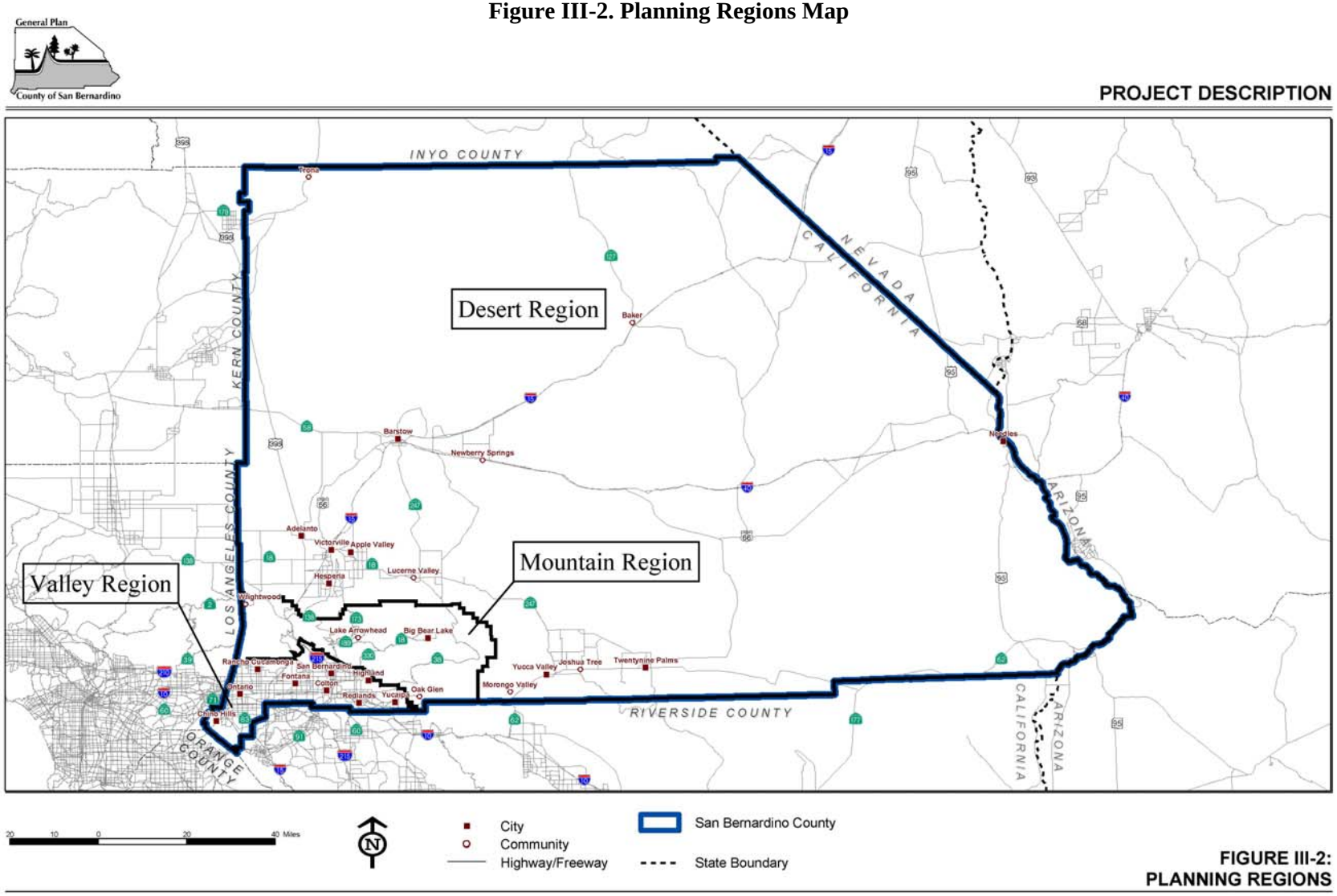


Figure III-2. Planning Regions Map



CHAPTER IV.
PROJECT ANALYSIS

SAN BERNARDINO COUNTY
2006 GENERAL PLAN PROGRAM
SCH# 2005101038

INTRODUCTION AND BACKGROUND

Section 15143 of the CEQA Guidelines directs that an EIR "shall focus on the significant effects on the environment. The significant effects should be discussed with emphasis in proportion to their severity and probability of occurrence. Effects dismissed in an Initial Study [which was attached to the Notice of Preparation and included in Appendix B] as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the Lead Agency subsequently receives information inconsistent with the finding in the Initial Study".

The significance of the environmental issues presented in this Chapter should be viewed in the context of the differences between the present General Plan, originally adopted in 1989, and the presently proposed General Plan. Briefly stated, the 1989 General Plan would allow significantly more population and nonresidential uses than would the proposed 2006 General Plan. The various environmental issues presented in this Chapter take into account the fact that ultimate buildout capacities have been significantly reduced through the proposed 2006 General Plan.

As background context for the environmental analysis, an analysis of County buildout capacity was prepared on March 29, 2006 by Stanley R. Hoffman Associates ("Hoffman Report", see Appendix C). This analysis compared the theoretical buildout capacity of the County's present General Plan ("1989 General Plan As Amended': no specific buildout timeframe specified) with the present project ("Proposed 2006 General Plan"; buildout timeframe of 2030 and with regional transportation planning forecasts of the Southern California Association of Governments ("SCAG RTP 2004"; buildout timeframe of 2030).

Key conclusions of the Hoffman Report, particularly those relevant to the environmental analysis presented in this Chapter, are as follows:

- For the overall unincorporated County, assuming no change in political boundaries during the forecast period, the estimated land use build-out capacities from the 1989 General Plan As Amended far exceed the projected 2030 development under either the Proposed 2006 General Plan projections or the SCAG 2004 forecast.
- For population, the current estimated build-out capacities range from about 3 to 4 times greater than either the SCAG RTP 2004 or the Proposed 2006 General Plan projections (1,440,552 persons vs. 436,515 or 427,606, respectively)
- For households, the current estimated build-out capacities range from about 3 to 4 times greater than either the SCAG RTP 2004 or the Proposed 2006 General Plan projections (495,318 housing units vs. 152,477 or 130,209, respectively).
- Employment projections, based on build-out capacities, range from about 7 to 8 times larger than economic projections due to the fact that the County currently permits non-residential building intensities to be so much greater than typical suburban patterns and the traditional growth seen in the County (751,197 jobs vs. 106,997 or 90,465, respectively).
- When the build-out capacities are compared against the projections by the major planning areas, the differences are least pronounced in the Valley area, which is largely built-out. The differences are most pronounced in the Desert area where large expanses of vacant land exist.
- The Mountain area, which is more environmentally constrained, is roughly one-third built-out in terms of population and households, and about 43 percent in terms of employment.

Not all of the environmental issues presented in this Chapter are affected by the above-noted discrepancies. For example, biological resources and cultural resource impacts are more related to the total land area disturbed, rather than the population distributed on that land. On the other hand, issues such as traffic and air quality are directly related to population and employment levels of magnitude.

Given the above-noted differences between the present 1989 General Plan as Amended and the proposed 2006 General Plan, following are the environmental issues discussed in this EIR (Sections A through P) that are clearly significant and most likely to occur. With reference to earlier discussions regarding limited jurisdiction of the Board of Supervisors over land area of the County, the mitigation measures presented in this Chapter are within the control and responsibility of the County.

REGIONAL CONCEPT OF THE REVISED GENERAL PLAN

The County of San Bernardino has been developed into three distinct geographical regions: the Valley Planning Region, the Mountain Planning Region and the Desert Planning Region. The three planning regions provide the County an opportunity to formulate solutions to the land use issues tailored to each region. The geographic setting and the land ownership conditions included in each region were previously discussed in Section III (Project Description) of this EIR. The following additional information is provided for each Planning Region.

Adjoining Counties and States:

a. Valley Region

   The Valley Region is located north of Orange and Riverside Counties, and to the east of Los Angeles County.

b. Mountain Region

   The Mountain Region is located north of Riverside County and east of Los Angeles County.

c. Desert Region

   The Desert Region is located to the south of Inyo County, to the north of Riverside County, east of Kern and Los Angeles Counties, and to the west of the states of Nevada and Arizona.

Incorporated cities and unincorporated communities in the County:

a. Valley Region

   The Valley Region includes the following incorporated cities and unincorporated communities:

   Incorporated Cities - Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa. Unincorporated Communities within the Valley Region include the following: Bloomington, Crafton, Del Rosa, Devore, Mentone, Muscoy, San Antonio Heights, South Montclair, and Verdemont.

   Unincorporated pockets exist within the cities of Montclair, Chino, Fontana, and San Bernardino.

b. Mountain Region

   The Mountain Region includes the following incorporated cities and unincorporated communities:

   Incorporated Cities - Big Bear Lake.

   Unincorporated communities - Angeles Oaks, Arrowbear, Arrowhead Woods, Baldwin Lake, Barton Flats, Bear Creek, Big Bear, Blue Cut, Blue Jay, Cedar Glen, Cedarpines Park, Crestline, Erwin Lake, Fawnskin, Forest Falls, Fredalba, Green Valley Lake, Holcomb Valley, Lake Arrowhead, Lake Gregory, Lytle Creek, Oak Glen, Rim Forest, Running Springs, Silverwood, Sky Forest, Sugarloaf, Twin Peaks, Valley of Enchantment, and Wrightwood.

c. Desert Region

The Desert Region includes the following incorporated cities and unincorporated communities:

Incorporated Cities - Adelanto, Apple Valley, Barstow, Hesperia, Victorville, Needles, Twentynine Palms, and Yucca Valley.

Unincorporated communities - Baker, Baldy Mesa, Cadiz, Daggett, El Mirage, Essex, Flamingo Heights, Harvard, Havasu, Helendale, Hinkley, Johnson Valley, Joshua Tree, Kelso, Kramer, Landers, Lenwood, Lucerne Valley, Ludlow, Morongo Valley, Newberry Springs, Oak Hills, Oro Grande, Parker Dam, Phelan, Pinon Hills, Pioneertown, Red Mountain, Rimrock, Searles Valley, Spring Valley Lake, Summit Valley, Sunfair Heights, Trona, Vidal, Wonder Valley, Yermo, and Yucca Mesa.

A. AESTHETICS

This section evaluates the potential visual impacts associated with the San Bernardino County General Plan, Community Plans, and Development Code, including assessing the potential for creating new sources of light and glare. This analysis also includes mitigation measures that comply with the County's limited jurisdiction over territory actually controlled by the County.

1. SETTING

San Bernardino County, with a land area of 20,106 square miles, is the largest County in the continental United States. The County contains vast undeveloped tracts of land that offer significant scenic vistas. This vast County consists of three distinct geographic regions - the Mountains, the Valley, and the Desert. These diverse geographies not only vary by terrain but also in visual character. The three areas, combined, encompass all the unincorporated lands within the County. The planning regions include the spheres of influence of the incorporated cities.

The proposed new General Plan carries forward the Open Space Plan adopted in 1991, which amended the 1989 General Plan. The Open Space Diagram was prepared to provide mapped depiction and text identification of 62 major open space areas throughout the County. These areas contain private and public lands (refer to the Open Space Background Report in Appendix G). There are numerous designated federal, state, and local open space and recreational areas throughout the County that offer scenic vistas and views. These include 28 designated Bureau of Land Management (BLM) Wilderness Areas among other BLM land holdings, which constitute approximately 47% of San Bernardino County's total acreage. Other key recreational areas that offer scenic vistas and views include two National Parks (2.6%), one National Preserve (10.7%), two National Forests (3.6%), four State Parks (.2%), and eight regional parks (.05%).

Numerous interstate routes, state highways, county roads and roads on federal lands are either designated scenic highways or byways. Table IV-A-1 lists state highways eligible for official designation as a State Scenic Highway. Table IV-A-2 lists the routes that are designated as scenic routes in the County General Plan. The Rim of the World Highway is a Scenic Byway that has been designated by the United States Forest Service (USFS) and includes portions of SR-138, 18 and 38. The BLM has also designated a number of remote desert roadways as Back Country Byway, which is intended to alert people to their scenic quality. There are also a number of other scenic routes designated by the California Department of Transportation (Caltrans) and a number of locally designated scenic routes that are subject to land use and aesthetic controls, including portions of I-15, I-40, and SR-395.

The San Bernardino County General Plan states that a feature or vista can be considered scenic if it provides a vista of undisturbed natural areas, includes a unique or unusual feature that comprises an important or dominant portion of the viewshed, or offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas) (San Bernardino County General Plan [San Bernardino County, Open Space Element, Policy OS 5.1]).

Primary scenic concerns of County residents include the preservation of scenic views within the desert communities and limits for development on ridge tops within the mountain communities. Other localized concerns have been expressed by residents within the Valley

Region for mountain foothills and areas such as the Crafton Hills. (San Bernardino County General Plan, Conservation Element, Policy CO 11.2)

Vast undeveloped areas and undisturbed scenic vistas within the County provide a significant scenic resource as they contrast against the developed urban areas. Designated federal, state, and local open space and recreational areas offer scenic vistas and views if they are visible and provide a break from the urban landscape.

A substantial amount of federal and state lands and local recreational areas throughout the County function as open space by providing scenic vistas and views. Scenic resources have been threatened with increased urbanization, intrusion of higher density development into rural areas and less scenic developments that were not anticipated by the public and county decision-makers. The proposed update of the County's General Plan, Community Plans, and Development Code include goals, policies and programs to give more definition to aesthetic and scenic resources adding clarification to distinguish unique and varied policies that add greater certainty to the manner of how the County will preserve these resources. Nonetheless, although the County General Plan, Community Plans, and Development Code, have several goals and policies and development standards relating to aesthetics, the potential impacts from future development as responses to continued population growth will occur.

While scenic visas are normally associated with daytime viewing, Residents of San Bernardino County consider night sky viewing and nighttime vistas as important aesthetic qualities. Due to the valued night sky conditions of desert and mountain residents, the County of San Bernardino has Ordinance 3900 in place. This ordinance, known as the Night Sky Ordinance, maintains the following:

"The residents of much of the Mountain and Desert Areas of the County currently enjoy a dark night sky unlike the residents of the more populated areas within the County. To preserve this dark night sky, two cities within the County and the County for a portion of the Morongo Basin have adopted ordinances setting outdoor lighting standards. This ordinance is consistent with the cities' ordinances, the previously adopted County ordinance and the desires of the residents of the Mountain and Desert Areas to provide broader protection of the night sky." The ordinance outlines specific standards relating to glare and outdoor lighting. Those standards are included in Sections 87.0920 and 87.0921 of the Updated Development Code.

a) Valley Region

The Valley Planning Region consists of all the area within the County that is south and west of the National Forest boundaries along the foothills of the San Gabriel and San Bernardino Mountain ranges. The San Bernardino Mountain range, where it trends southeast, forms the eastern limit of the Valley, along with the Yucaipa and Crafton Hills. The southern limits of the Valley are marked by alluvial highlands of the Laloma, Jurupa Hills and Chino Hills where they extend westerly from the San Gorgonio Pass to their intersection with the Los Angeles Coastal plan region.

The Valley Planning Region of the County is approximately 60 miles east of the Pacific Ocean and borders Los Angeles, Orange and Riverside counties. It is approximately 50 miles long from west to east and encompasses 500 square miles. It covers only 2.5% of the total County land, but holds approximately 75 percent of the County's population. Elevations within the Valley range from about 500 feet on the

Valley floor to 1,700 feet in Live Oak Canyon, and to about 5,400 feet in the Yucaipa Hills. Most of the Valley lies within the jurisdiction of 15 cities.

The predominant native plant communities within the undeveloped areas of the Valley Planning Region are chaparral, coastal sage scrub, deciduous woodlands, grasslands, and wetlands. Vegetation in urbanized areas consists of primarily of introduced exotic landscape species. The visual character of the Valley Region is primarily an urban landscape that spreads out against a backdrop of steeply ascending mountain ranges to the north and east and low lying hills to the south and west.

b) Mountain Region

North of the Valley Planning Region is the Mountain Planning Region, consisting of the San Bernardino and San Gabriel Mountain ranges. Elevations range from 2,000 feet along the foothills to the 11,502-foot summit of Mount San Gorgonio, the highest peak in Southern California. Of the 872 square miles within this planning region, approximately 715 square miles are public lands managed by State and Federal agencies, principally the U.S. Forest Service. The region contains chaparral-covered slopes generally below the 4000-foot elevation and forests, meadows, and lakes.

The San Gabriel Mountains, which extend from Los Angeles County, form the western end of the Mountain Planning Region. The San Gabriel Mountains form about one-third of the Mountain Planning Region, with the San Bernardino Mountains making up the remainder. The San Bernardino Mountains feature four large lakes (Big Bear Lake, Silverwood Lake, Lake Arrowhead, and Lake Gregory), and many smaller lakes. The Mountain Planning Region is the perfect setting for year-round sports and recreational opportunities offering ample scenic opportunities. The differences in elevation and topography are primarily responsible for variations in temperature and precipitation. Of significant importance to the downstream areas of San Bernardino, Riverside and Orange counties are the headwaters of the Santa Ana River, which lie within these mountains. In addition to the Santa Ana River, four other major creeks and rivers, Mill Creek, Lytle Creek, Deep Creek, Mojave River and Whitewater River.

The predominant plant communities in the Mountain Region include chaparral, sage scrub, deciduous woodlands, conifer forests, and wetlands. The Mountain Region sustains many unique plant associations due to the diverse geology and varied micro-climates. Unique associations such as the pebble or pavement plains which are limited to approximately thirty locations in and around by Big Bear Lake and Holcomb Valley are found on clay soils and have formed where frost-leave action has pushed cobbles in scattered clay deposits to the surface, creating pebble plain habitat. The orthographic effect of the elevation gradient increases the amount of precipitation that the Mountain Region receives during winter storms. Higher rainfall amounts and cooler temperatures support mountain vegetation at the higher elevations. The visual character of the Mountain Region is defined by a rugged forested landscape consisting of prominent ridgelines and steep canyons interspersed with small isolated communities, valleys and lakes that contain scattered populations.

c) Desert Region

The Desert Planning Region, the largest of the three planning regions, includes a significant portion of the Mojave Desert and contains about 93% (18,735 square miles) of the land area within San Bernardino County. The Desert Planning Region is defined as including the area that extends north to the boundaries with Kern and Inyo Counties and easterly to the state borders of Nevada and Arizona. The Desert Region also extends westerly to the boundary with Los Angeles County. The planning region from a landscape perspective is further sub-divided into the high desert and the low desert.

Due to the persistent winds that blow throughout the year, large portions of the desert surface have been modified into a mosaic of ground surfaces that consists of stones and cobbles known as desert pavement. A major physical resource of the Desert Planning Region is the Mojave River, a critical water source for many of its residents. Among the few rivers that both flow north and do not empty into an ocean, the Mojave River travels north and east away from its watershed in the San Bernardino Mountains. The major part of it's over 100-mile length is marked by a dry riverbed that only on occasion reveals the water within it. Except in exceedingly wet years, the Mojave River ends its flow just north of the Mojave Narrows in the Helendale area. Significant wet years produce flows that extend to Afton Canyon and ultimately to Soda Dry Lake.

The Desert Region is the largest geographic area within San Bernardino County. The Desert Region includes the greatest diversity of plant communities within the County including at least ten distinct plant communities that support a great diversity of biological resources. These plant communities include white fir woodland, pinion/juniper woodland, desert sage shrub, Joshua tree woodland, Mojave Desert scrub, saltbush scrub, alkali sink, dunes and wetlands. The visual character of this Planning Region is defined by its arid landscape consisting of sparsely vegetated mountain ranges and broad valleys with expansive bajadas and scattered dry lakes. The region provides a scope of extensive open space and expansive vistas.

Existing Regulatory Policies Applying To the Study Area

Currently aesthetic resources within San Bernardino County are regulated under several planning programs. These include the San Bernardino County General Plan, fourteen (14) Community Plans, and the San Bernardino Development Code. In addition San Bernardino County is regulated by Ordinance No. 3900 that regulates glare, outdoor lighting and night sky protection. There are no designated wild and scenic rivers located in San Bernardino County. Finally, Caltrans has regulated State Scenic Highways within the County. Scenic roadways are discussed in further detail in the Criteria of Significance section below under Recognition of BLM and Forest Service Scenic Resource Policies.

Many of the vistas that have been deemed as "scenic" are located along roadways, especially throughout the Mountain and Desert regions. To ensure the quality and character of these locations are not compromised through obtrusive development, improvements of any kind are subject to additional land use and aesthetic controls outlined under the County's Scenic Highway Overlay.

These controls include, but are not limited to, the following:

- Review of proposed development along scenic highways to ensure preservation of scenic values for the traveling public and those seeking a recreational driving experience.
- Expanding the established right-of-way of a designated Scenic Corridor to extend 200 feet to either side, measured from the outside edge of the right-of-way.
- Development along these corridors will also be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.
- More restrictive sign ordinance standards regarding visual quality and size.
- Require new development to provide ample recreation and scenic opportunities along Scenic Corridors.
- Restrict development along prominent ridgelines and hilltops.
- Review site plans, specifically architectural design, landscaping and grading, to prevent obstruction of scenic views and to blend with surrounding landscape.
- Prohibit off-site advertising signs (i.e., billboards) within and adjacent to all scenic corridors.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Aesthetics, if the project would cause any of the following effects:

- *Have a substantial adverse effect on a scenic vista.*
- *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, which would adversely affect day or nighttime views in the area.*

3. IMPACT ANALYSIS

Impact AES-1

Several scenic routes within the Valley Region have been deleted, including I-15 south of Devore. Some new scenic routes have also been added in the county including the Coxey Truck Trail. Billboards would be prevented by sign-control overlay; however billboards would be allowed in areas with a highway commercial designation. Potential to damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway have been threatened with more urban, less rural and less scenic developments that were not anticipated by the public and County decision-makers. The proposed update of the County General Plan, Community Plans, and updated Development Code, includes goals, policies and programs to give more definition to aesthetic and scenic resources as well as for those scenic routes recognized by the state and county. Nonetheless, although the County General Plan, community plans, and Development Code have several

goals and policies relating to aesthetics, the potential impacts may be significant due to increasing growth and development projected to occur during the buildout of the General Plan.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact AES-2
San Bernardino County contains a myriad of scenic resources, which have been recognized by federal, state, and local jurisdictions as worthy of special protection to preserve their aesthetic value. There are numerous designated federal, state, and local open space and recreational areas throughout the County that offer scenic vistas and views. These include 28 designated BLM Wilderness Areas among other BLM land holdings which equate out to approximately 47% of the land in the County. Other key recreational areas that offer scenic vistas and views include three National Parks, Federal Forest Plan Areas, four State parks, and eight local parks.

As the County General Plan, Community Plans, and updated Development Code include goals and policies relating to aesthetics, the potential to substantially degrade the existing visual character or quality of the site and their surroundings may be significant. However, the County does not currently regulate certain private improvements such as landscaping that may block views or detract from vistas and views along scenic highways or routes.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact AES-3
Although the San Bernardino Night Sky Ordinance is in place, and although the County General Plan, Community Plans, and updated Development Code have several goals and policies relating to lighting/glare, the potential to create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area, may be significant.

New land uses in response to the growth anticipated during the planning horizon of this General Plan update may slowly and incrementally change conditions of nighttime (i.e., valley, mountain, or desert) within the County. Continued development will incrementally increase ambient light and glare, and incrementally degrade "dark skies" conditions. However, the amount of changes to nighttime views can be significantly reduced by following the goals, policies and ordinances already in effect within the County General Plan, Community Plans, Development Code and County Night Sky Ordinance. Nonetheless, long-term development even when mitigated to the extent practical will contribute to cumulatively considerable amounts of nighttime light in the County.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

4. MITIGATION MEASURES

Mitigation AES-1
Within the Development Code, one overlay district was established relating specifically to preserving aesthetic or scenic areas within the County. These areas are designated under the "SR" or Scenic Resources Overlay District (Chapter 82.22). The intent of the Scenic

Resources Overlay District is to provide development standards that will protect, preserve and enhance the aesthetic resources of the County. Design considerations can be incorporated in many instances to allow development to coexist and not substantially interfere with the preservation of unique natural resources, roadside views and scenic corridors. It is also the intent of the Scenic Resources Overlay District to implement state and federal programs and regulations regarding scenic highway routes.

Mitigation AES-2
Direct future growth to areas where infrastructure facilities and public services exist or can easily be provided or acquired and where other desired attributes of the land, such as open space, watershed areas and scenic resources, will not be adversely impacted.

Mitigation AES-3
The County shall maintain and enhance the visual character of scenic routes in the County.

Mitigation AES-4
To improve access to scenic vistas, the County seeks to establish off-street pull-outs at designated view points where appropriate along scenic highways.

Mitigation AES-5
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 have beauty to the County.

Therefore, the County designates the following routes as scenic highways, and applies all applicable policies to development on these routes:

- SR-71 — All of the route in unincorporated County area;
- Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy, in the Mountain Region;
- SR-83 (Euclid Avenue/Mountain Avenue) --- 24th Street northwest to San Antonio Dam;
- Oak Glen Road in the Mountain Region;
- Sand Canyon Road;
- SR-2 from SR-138 southwest to the Los Angeles County line;
- Lone Pine Canyon Road;
- SR-330 from the San Bernardino National Forest Boundary northeast to SR-18;
- Green Valley Lake Road/101 Mile Drive;
- Crest Forest Drive from SR-18 west to Sawpit Canyon Road;
- Playground Drive;
- Devil's Canyon Road;
- Sawpit Canyon Road/Sawpit Creek Road;
- Lake Gregory Drive;

- San Moritz Drive;
- Dart Canyon Road;
- North Road from Lake Gregory Drive northeast to SR-189;
- Lake Drive from Knapps Cutoff northeast to Dart Canyon Road;
- Grass Valley Road;
- Kuffel Canyon Road;
- Park Blvd./Quail Springs Road from SR-62 southeast to Joshua Tree National Park;
- Amboy Road from Bullion Mt. Road northeast to Amboy;
- SR-127 from I-15 at Baker northwest to Inyo County line;
- ∗Kelbaker Road from I-15 southeast to I-40;
- ∗Kelso-Cima Road from Kelso northeast to Cima;
- ∗Cima Road from I-15 southeast to Cima;
- ∗Essex Road from Essex northwest to Mitchell Caverns;
- ∗Cedar Canyon Road from Kelso Cima Road southeast to Lanfair Road;
- ∗Black Canyon Road;
- ∗Parker Dam Road from Parker Dam southwest to the Colorado River Indian Reservation;
- I-15 from the intersection with I-215 northeast to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development, those portions within the Yermo area from Ghost Town Road to the East Yermo Road overcrossing on the south side only and from First Street to the East Yermo Road overcrossing on the north side, and all incorporated areas;
- SR-38 within the Redlands and Yucaipa SOIs; from the Yucaipa SOI northeast to Big Bear Dam;
- SR-138 from Crestline cutoff at SR-18 northwest to Los Angeles County line;
- SR-173 from SR-18 northwest to Hesperia; from Hesperia west within the Hesperia SOI;
- Coxey Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive, with some of this truck trail located on privately owned land;
- Rim of the World Drive from Green Valley Lake Road to SR-38;

∗ Designated by the BLM as a part of their Back Country Byway Program, a component of the National Scenic Byway System

- SR-18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville SOI; from Victorville and Adelanto to the Los Angeles County line;
- Baldwin Lake Road from SR-18 southeast to Pioneer Town Road; continuing east on Pioneer Town Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; continuing southeast on Rimrock Road to Pipes Canyon Road;
- National Trails Highway from Oro Grande northeast to Lenwood;
- I-40 from Newberry Springs northeast to Needles, excepting the Highway Commercial designation at the Hector Road Interchange and the Crucero Road Interchange;
- Burns Canyon
- Piper Canyon
- Lanfair/Ivanpah Road;
- Pioneer Town Road from Pipes Canyon Road to the Town of Yucca Valley; and
- SR-247 (Old Woman Springs Road/Barstow Road) from the Town of Yucca Valley north to Barstow.

Mitigation AES-6
The County shall provide plentiful open spaces, local parks, and a wide variety of recreational amenities for all residents.

Mitigation AES-7
Areas in new developments which are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to increase its build-able area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.

Mitigation AES-8
Locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.

Mitigation AES-9
The County shall preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.

Mitigation AES-10
The County shall protect the scenic and open space qualities of cinder cones and lava flows. Permit extractive uses of cinder resources only when the scenic values can be adequately maintained.

Mitigation AES-11
Features meeting the following criteria shall be considered for designation as scenic resources:

- A roadway, vista point, or area that provides a vista of undisturbed natural areas;
- Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer); and
- Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

Mitigation AES-12
The County shall 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 shall be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.

Mitigation AES-13
The County shall require that hillside development be compatible with natural features and the ability to develop the site in a manner which preserves the integrity and character of the hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.

Mitigation AES-14
The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County shall continue the review undertaken as part of this General Plan Update of the Land Use Zoning 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.

Mitigation AES-15
The County shall 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.

Mitigation AES-16
The County shall 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.

Mitigation Measure AES-17
The following additional Development Code sections would also help to preserve County aesthetics:

CHAPTER 82.23 – SIGN CONTROL (SC) OVERLAY DISTRICT

82.23.020 – Location Requirements

The SC overlay district shall be applied where it is determined that the location of large freestanding signs may be detrimental to the character of the neighborhood.

CHAPTER 83.10 –Glare and Outdoor Lighting

83.10.030 – Glare and Outdoor Lighting – Valley Region

(a) Light trespass prohibited. *Commercial or industrial lighting shall be fully shielded to preclude light pollution or light trespass on any of the following:*

(1) An abutting residential land use zoning district;

(2) A residential parcel; or

(3) Public right-of-way.

83.10.040 – Glare and Outdoor Lighting – Mountain and Desert Regions (Night Sky Ordinance)

(a) Residential, commercial and industrial land use zoning districts. *The following standards shall apply to all structures and freestanding outdoor light fixtures in residential, commercial and industrial land use zoning districts.*

Chapter 83.12 – Hillside Grading Standards

83.12.010 – Purpose

This Chapter establishes regulations for development within hillside areas to:

(b) Ensure that development in the hillside areas is designed to fit the existing landform.

(c) Preserve significant features of the natural topography, including swales, canyons, streams, knolls, ridgelines, and rock outcrops.

(e) Provide alternative approaches to conventional grading practices by achieving development intensities that are consistent with the natural characteristics of hillside areas (e.g., land form, scenic quality, slopes, and vegetation).

5. SIGNIFICANT UNMITIGATED IMPACTS

The updates of the County General Plan, Community Plans, and Development Code are meant to be used as a roadmap or guidelines to development that is consistent with the General Plan Vision. Nonetheless, significant unmitigable irreversible aesthetic impacts are probable with this project. With any development comes change to the natural and/or developed environment. Changes to the visual character of an area, changes to scenic vistas and/or views from/to scenic roadways, changes including additional lighting and or glare are inevitable, and cannot be fully mitigated.

Table IV-A-1. Eligible State Scenic Routes in San Bernardino County

Route	District	Location (From/To)	Post Miles
I-10	8	SR-38 near of Redlands to Riverside County Line	30.9 – 29.7
SR-18	8	SR-138 near Mt. Anderson to SR-247 near Lucerne Valley	R17.7 – 73.8
SR-30	8	SR-330 near Highland to I-10 near Redlands	T29.5 – 33.3
SR-38	8	I-10 near Redlands to SR-18 near Fawnskin	0.0 – 49.5
SR-58	6/8	SR-14 near Mojave to I-15 near Barstow	112.0 – R4.5
SR-127	8/9	I-15 near Baker to Nevada State Line	L0.0 – 49.4
SR-138	8	SR-2 near Wrightwood to SR-18 near Mt. Anderson	6.6 – R37.9
SR-142	8	Orange County Line to Peyton Drive	0.0 – 4.4
SR-247	8	SR-62 near Yucca Valley to I-15 near Barstow	0.0 – 78.1

Source: Caltrans Scenic Highways Program

Table IV-A-2. County Designated Scenic Routes

WEST VALLEY REGION	
	SR-11 – All unincorporated frontage.
	SR-83 - All unincorporated frontage south of Riverside Drive.
	Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy.
	SR-83 - Curled Avenue/Mountain Avenue from 24th Street northwest to San Antonio Dam.
	Wilson Avenue (proposed).
	Day Creek Blvd. (proposed).
EAST VALLEY REGION	
	Cedar Avenue from Bloomington Avenue south to Riverside County line.
	Nevada Street within the Redlands SOI.
	Alabama Street within the Redlands SOI.
	Tennessee Freeway (SR-30) within the Redlands SOI.
	I-10 from the City of Redlands southeast to the City of Yucaipa.
	San Bernardino Avenue within the Redlands SOI.
	Mentone Blvd. within the Redlands SOI.
	Colton Avenue within the Redlands SOI.
	Citrus Avenue within the Redlands SOI.
	Highland Avenue within the Redlands SOI.
	I-10 from the City of Redlands southeast to the City of Yucaipa.
	Fifth Avenue within the Redlands SOI.
	Crafton Avenue within the Redlands SOI.
	San Timoteo Canyon Road within the Loma Linda SOI.
	Beaumont Avenue within the Loma Linda SOI.
	Barton Road within the Loma Linda SOI.
	Orange Avenue within the Loma Linda SOI.
	Nevada Street within the Loma Linda SOI.
	I-215 from San Bernardino northwest to I-15.
MOUNTAIN REGION	
	San Gabriel Mountains.
	Lone Pine Canyon Road.
	SR-2 from SR-138 southwest to Los Angeles County line.
	SR-330 from the San Bernardino National Forest Boundary northeast to SR-18.
	Green Valley Lake Road/101 Mile Drive.
	Crest Forest Drive from SR-18 west to Sawpit Canyon Road.
	Playground Drive.
	Devil's Canyon Road.
	Sawpit Canyon Road/Sawpit Creek Road
	Lake Gregory Drive
	San Moritz Drive

Table IV-A-2. County Designated Scenic Routes

	Dart Canyon Road
	North Road from Lake Gregory Drive northeast to SR-189
	Grass Valley Road
	Kuffel Canyon Road
	North Road from Lake Gregory Drive northeast to SR-189.
	Lake Drive from Knapps Cutoff northeast to Dart Canyon Road.
DESERT REGION	
	Park Blvd./Quail Springs Road from SR-62 southeast to Joshua Tree National Park.
	Amboy Road from Bullion Mountain Road northeast to Amboy.
	SR-127 from I-15 at Baker northwest to Inyo County line.
	*Kelbaker Road from I-15 southeast to I-40.
	*Kelso-Cima Road from Kelso northeast to Cima.
	*Cima Road from I-15 southeast to Cima.
	*Essex Road from Essex northwest to Mitchell Caverns.
	*Cedar Canyon Road from Kelso Cima Road southeast to Lanfair Road.
	*Black Canyon Road.
	Parker Dam Road from Parker Dam southwest to the Colorado River Indian Reservation.
	Highway 395 to Highway 58
MULTIPLE PLANNING REGIONS	
	I-15 Devore (junction with I-215) to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development, those portions within the Yermo area from Ghost Town Road to the East Yermo Road Overcrossing on the south side only and from First Street to the East Yermo Road Overcrossing on the north side, and all incorporated areas.
	SR-38 from Greenspot Road to Big Bear Dam.
	SR-138 from Crestline cutoff at SR-18 northwest to Los Angeles County.
	SR-173 from SR-18 northwest to Hesperia; from Hesperia west within the Hesperia SOI.
	Coxey Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive.
	Rim of the World Drive from Green Valley Lake Road to SR-38.
	SR-18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville SOI; from Victorville and Adelanto to the Los Angeles County line.
	Baldwin Lake Road from SR-18 southeast to Pioneertown Road; continuing east on Pioneertown Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; continuing southeast on Rimrock Road to Pipes Canyon Road.
	National Trails Highway westerly from Oro Grande northeast to Lenwood easterly from Ft. Cady to I-15.

Table IV-A-2. County Designated Scenic Routes

MULTIPLE PLANNING REGIONS Cont.	
	I-40 from Ludlow northeast to Needles.
	Lanfair/Ivanpah Road.
	Pioneertown Road from Pipes Canyon Road to the Town of Yucca Valley.
	SR-247 (Old Woman Springs Road/Barstow Road) from the Town of Yucca Valley north to Barstow.
	SR-62 (Twentynine Palms Highway) from Riverside County line northeast to town of Yucca Valley; from the town of Yucca Valley east to Twentynine Palms; from Twentynine Palms southeast to Riverside County line; from Riverside County line northeast to state line.

B. AGRICULTURAL RESOURCES

1. SETTING

Agriculture has historically been an important part of the County of San Bernardino's economy. The County consistently ranks in the top 15 agricultural-producing counties in California (State of California Employment Development Department, 2002). The value of agricultural production in the year 2002 for the County totaled $631,550,100, a decrease of nearly $72 million from the previous year (County of San Bernardino Department of Agriculture/Weights, and Measures, 2002). The decrease in value is attributable to the lower-economic output of the dairy industry, due to the low value of milk in 2002. The top agricultural products by sales value are listed in Table IV-B-1.

Table IV-B-1. Top 10 Products

Product	Value	% of Total	2001 Rank*	2002 Rank
Milk	$371.4 million	58.8%	1	1
Cattle and Calves (meat)	$47.4 million	7.5%	2	2
Replacement Heifers	$45.2 million	7.2%	3	3
Eggs	$33.3 million	5.3%	4	4
Trees/Shrubs	$22 million	3.5%	8	5
Oranges	$17.4 million	2.8%	5	6
Alfalfa, All	$11.2 million	1.8%	6	7
Indoor Decoratives	$9.9 million	1.6%	7	8
Bok Choi	$7.6 million	1.2%	10	9
Chickens (meat)	$7.4 million	1.2%	9	10
Total	$573,087,200	90.7%		

*of Counties within California
Source: County of San Bernardino Department of Agriculture/Weights, and Measures, 2002

The agricultural industry in San Bernardino County is dominated by the dairy industry and the related industries of calf production and forage crops. Combined, the direct monetary contribution of the dairy industry in the County is over $480 million dollars, or 76% of the total agricultural production in the County (County of San Bernardino Department of Agriculture/Weights, and Measures, 2002).

The County's agricultural diversity also includes numerous fruit orchards in the east San Bernardino Valley area and substantial nursery and vegetable production. Field crop value in the desert declined due to a significant reduction in alfalfa acreage and poor range conditions due to a lack of rainfall in 2002.

Williamson Act/California Land Conservation Act of 1965

The California Land Conservation Act (CLCA) of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the "Williamson Act", enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value.

Local governments receive an annual subvention of foregone property tax revenues from the state via the Open Space Subvention Act of 1971.

California Farmland Mapping and Monitoring Program

The State Farmland Mapping and Monitoring Program (FMMP) was established in 1982 in response to a critical need for assessing the location, quality, and quantity of agricultural lands and conversion of these lands over time. FMMP is a nonregulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. Creation of the FMMP was supported by the Legislature and a broad coalition of building, business, government, and conservation interests.

Prime Farmland

Prime farmland is rural land with the best combination of physical and soil characteristics for the production of crops. To qualify for this classification, farmland must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use. Approximately 25,665 acres of prime farmland were inventoried in the County in 2000, a decrease from the 29,975 acres inventoried in 1998 (refer to Table IV-B-2). According to Table IV-B-2, there was an increase in the total of grazing lands due to land conversions that occurred from 1998 through 2000. The conversion of land was primarily due to land left idle for three updated cycles and urban boundary adjustments on the Prado Dam Quadrangle.

Table IV-B-2. Total Acreages of Agricultural Land by Category

	Total Acres Inventoried		
Land Use Category	**1998**	**2000**	**Net Change**
Prime Farmland	29,975	25,665	-4,310
Farmland of Statewide Importance	12,026	10,616	-1,410
Unique Farmlands	3,888	3,644	-244
Farmland of Local Importance	5,036	4,816	-220
Important Farmland Subtotal	**50,925**	**44,741**	**-6,184**
Grazing Land	954,225	957,214	2,989
Agricultural Land Subtotal	**1,005,150**	**1,001,955**	**-3,195**

Source: California Department of Conservation, Division of Land Resources Protection. Table A-24. San Bernardino County, 1998-2000 Land Use Category.

Farmland of Statewide Importance

The state of California designated 10,616 acres as Statewide Important Farmland Soils in San Bernardino County in 2000, down from the 12,026 designated acres in 1998. Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and soil characteristics for the production of crops. It must have been used for the production of irrigated crops at some point during the two update cycles prior to the mapping date.

Unique Farmland

Unique Farmland is land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance. This land has been used for the production of specific high economic value crops at some point during the two update cycles prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to current farming methods. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Approximately 3,644 acres of Unique Farmland were inventoried in the County in 2000, a decrease from the 3,888 acres inventoried in 1998 (Table IV-B-2).

Farmland of Local Importance

Farmland of Local Importance is land of importance to the local economy, as defined by each County's local advisory committee and adopted by its Board of Supervisors. Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Authority to adopt or to recommend changes to the category rests with the Board of Supervisors. Approximately 4,816 acres of Farmland of Local Importance were inventoried in 2000 within the County (Table IV-B-2).

a) Valley Region

The Valley Region contains considerable agricultural development, predominantly in the vicinity of the cities of Chino and Ontario in the west end of the valley, and in the cities of Highland and Redlands in the east end of the valley. There are approximately 19,706 acres of agricultural land located within the valley. Table IV-B-3 provides a breakdown of acreages by crop type and total agricultural value.

Table IV-B-3. Product Type by Acreage for the Valley Region

	Fruits and Nuts	Vegetables	Field, Nursery and Miscellaneous	Livestock & Poultry (value only)	Total Acreage	Total Value
West End North[1]	253	6	36	$264,700	**295**	**$4,849,900**
West End South[2]	144	3,806	15,461	$442,364,000	**19,411**	**$487,560,400**
Central[3]	89	1,487	202	$16,509,200	**1,778**	**$32,257,400**
East End[4]	5,681	30	19,110	$12,803,000	**24,821**	**40,319,400**
Total	**6,167**	**5,329**	**34,809**	**$471,940,900.00**	**46,305**	**$564,987,100.00**

Source: County of San Bernardino Department of Agriculture/Weights, and Measures, 2002.
1/ West end north - area north of Mission Blvd and west of I-15
2/ West end south - area south of Mission Blvd near the cities of Ontario and Chino
3/ Central – area east of I-15 to SR- 30, south of San Bernardino Mountains
4/ East end – area east of SR-30 and south of the San Bernardino Mountains

Continued urban expansion primarily in the Valley Region, where the bulk of the County population currently resides, is resulting in conversion of agricultural uses due to economic pressure. The Chino Dairy Preserve is a case-in-point for conversion to urban development. In the last five years over 12,000 acres of dairy

lands have been annexed to municipalities in the Valley Region. The City of Ontario has annexed approximately 8,000 acres and the City of Chino has annexed approximate 4,000 acres of unincorporated dairy lands for the purpose of developing master planned communities. Much of the existing urban development in the valley is located in areas formerly utilized for agricultural purposes (e.g., extensive citrus groves)

Prime Farmland
The Valley Region contains a number of soils that meet the criteria for valuable agricultural soil groups described above. The greatest concentrations of these soils are in the vicinity of the cities of Chino and Ontario, and in the east valley area north of Loma Linda and Redlands.

b) Mountain Region

There are no agricultural resources in the Mountain Region with exception of the Oak Glen area. Much of the Mountain Region is not amenable to agricultural development. Little information is available regarding current agricultural development in the mountains, although it is assumed that existing agricultural activities are limited primarily to range and pasture uses (County of San Bernardino, 1998). The community of Oak Glen remains the exception to the Mountain Region where apple orchards and related agribusiness activities maintain the agricultural heritage of the area.

Prime Farmland
Most areas of the Mountain Region are expected to exhibit generally shallow, coarse soils with excessive drainage, and steep slopes. Possible exceptions to this include more level terrain in the vicinity of major storage reservoirs.

c) Desert Region

Agricultural development in the Desert Region is limited primarily to areas bordering the Mojave River as far north as the community of Harvard-Newberry Springs. Historic alfalfa production occurs on a limited basis in areas that previously had sufficient groundwater for irrigation, such as Lucerne Valley and Harper Dry Lake. Table IV-B-4 provides a breakdown of acreages by crop type and total agricultural value.

Prime Farmland
Information on the occurrence of Important Farmlands in the Desert Region is limited to the areas near Lenwood, Yermo, and Newberry Springs and Lucerne Valley. Large areas of grazing land are also located in the southwest areas of the Desert Region.

Table IV-B-4. Product Type by Acreage for the Desert Region

	Fruits and Nuts	Vegetables	Field, Nursery and Miscellaneous	Livestock & Poultry (value only)	Total Acreage	Total Value
North Desert[1]	1,295	104	1,188,516	$25,459,400	**1,189,915**	**$39,803,300**
South Desert[2]	118	65	396,461	$20,681,800	**396,645**	**$26,759,700**

Total	**1,413**	**169**	**1,584,977**	**$46,141,200.00**	**1,586,560**	**$66,563,000.00**

Source: County of San Bernardino Department of Agriculture/Weights, and Measures, 2002.
1/ North desert – the area north of Victorville, and includes the areas east along I-40 and National Trails Highway
2/ South desert – the communities of Adelanto, Apple Valley, Victorville, Hesperia, Lucerne Valley, Yucca Valley, 29 Palms, and the surrounding areas.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Agriculture Resources, if the project would cause any of the following effects:

- *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.*
- *Conflict with existing zoning for agricultural use, or a Williamson Act contract.*
- *Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.*

3. IMPACT ANALYSIS

Impact AG-1

Agricultural use within the County continues to decline due to the effects of urban expansion and economic considerations. Most agricultural development is located in areas with relatively level terrain and stable soil conditions. For similar reasons, these types of areas are also the most desirable (and economically valuable) for urban development. As urban expansion encroaches into agricultural areas, remaining agricultural developments are often surrounded by urban activities. This situation exacerbates the further conversion of agricultural land due to the presence of urban services extensions (sewer, water, etc.), the associated increases in potential land values for urban uses (which often exceed the agricultural dollar value), and the increased incidence of land use incompatibility. In addition, a number of agricultural areas within the County have been converted to other uses due to declining viability, decreasing air quality, and increasing water costs. As farmers relocate, agricultural uses often change to more specialized and high unit value crops that can be grown in less desirable (from the standpoint of urban development) terrain. The net result of the above situation is that the amount of vacant land that can be converted to most agricultural uses is steadily diminishing.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact AG-2

The conversion of the Chino Dairy Preserve is exacerbated by rapid urban/suburban growth. Rising land values are only one of the many incentives to convert the remaining dairy farms in combination with operational compliance with water quality regulations. Both the dairy farms and new development are impacted by increased traffic congestion and diminished air quality and water quality. Air and water quality regulations coupled with the adverse impact of conflicting development activities also place additional pressure on the remaining preserves to relocate to other parts of the State or out of state. Water impacts include the leaching of chemicals such as nitrates into groundwater, as well as runoff from construction

and operational activities associated with continued urbanization. Regional air quality is diminished from the combined release of pollutants from urban activities and dairy farm activities such as nitrogen oxides, hydrocarbons and methane gases. The presence of urban uses and the infrastructure to support urban development will encourage more urban expansion now and in the future.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

4. MITIGATION MEASURES

Following are the new General Plan Policies, which serve to mitigate impacts to agriculture:

Mitigation AG-1
The County shall protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

Mitigation AG-2
Highly alkaline soils present special problems for all plant species and should generally be avoided. Desert playas and lakebeds are not suitable for agricultural uses that involve growing of crops and irrigation.

Mitigation AG-3
The County shall allow the development of areas of prime agriculture lands, as designated in this Plan's Land Use Policy Map supporting commercially viable and valuable agriculture to urban intensity only after the supply of non-productive areas have been exhausted.

Mitigation AG-4
Preservation of prime and statewide important soils types, as well as areas exhibiting viable agricultural operations, as shown on the Resource Overlay Maps, will be considered as an integral portion of the Conservation Element when reviewing development proposals.

Mitigation AG-5
The County shall utilize the provisions of the Williamson Act to further the preservation of commercially viable agricultural open space and designate preserves on the Resource Overlay Maps.

Mitigation AG-6
The County shall support property and estate tax relief measures that assess long-term agriculture at farm-use value.

Mitigation AG-7
The County shall encourage agricultural use of commercially productive agricultural lands; and discourage city SOI extensions into areas containing commercially productive agricultural lands.

5. SIGNIFICANT UNMITIGATED IMPACTS

In spite of the Mitigation Measures adopted above, the loss of productive agricultural land cannot be mitigated to a level below significance.

C. AIR QUALITY

1. SETTING

Regional Climate

The topography and climate of Southern California combine to make the South Coast Air Basin (SCAB), an area with a high potential for air pollution, which constrains efforts to achieve clean air. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions which produce ozone, and this region experiences more days of sunlight than many other major urban areas in the nation. (2003 Air Quality Management Plan, South Coast Air Quality Management District, August 2003, page 1-3.)

The climate in the Mojave Desert Air Basin (MDAB) is arid with perennially and seasonal windy conditions. The cool moist coastal air from the South Coast Air Basin is blocked by the San Gabriel and San Bernardino mountain ranges. The area is characterized by hot, dry summers and mild winters with annual rainfall averaging two to five inches per year. Meteorology tends to be influenced by a moderately intense anticyclonic circulation except during storm activity in the winter. During the winter there are an average 20-30 winter storms. In the summer, the MDAB is usually influenced by a Pacific Subtropical High cell that remains for long periods off the coast of California. The prevailing winds are out of the west and south, resulting in a general west to east flow across the MDAB. Prevailing winds are a major contributor to air quality conditions in the Desert Region. (MDAQMD List and Implementation Schedule for District Measures to Reduce PM Pursuant to Health and Safety Code Section 39614(d), June 2005, page 2)

Ambient Air Quality Standards

Health-based air quality standards have been established by California and the federal government for the following pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in size (PM_{10}), particulate matter less than 2.5 microns in size ($PM_{2.5}$), lead, oxides of sulfur (SO_x), visibility-reducing particles, hydrogen sulfide, and vinyl chloride. These standards were established to protect sensitive receptors from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards. The State and Federal Ambient Air Quality Standards (NAAQS) for each of these pollutants and their effects on health are summarized in Table IV-C-1.

Federal Clean Air Act

The 1970 Clean Air Act (CAA) authorized the establishment of the NAAQS, and set deadlines for their attainment. The federal CAA made major changes in deadlines for attaining NAAQS and in the actions required of areas of the nation that exceeded these standards. In November 1990, Congress enacted a series of amendments to the CAA intended to intensify air pollution control efforts across the nation. One of the primary goals of the 1990 CAA amendments was an overhaul of the planning provisions for those areas not currently meeting NAAQS. The CAA identifies specific emission reduction goals, requires

both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to attain or to meet interim milestones.

California Clean Air Act

The 1988 California Clean Air Act (CCAA) requires that all air districts in the state endeavor to achieve and maintain health-based California Ambient Air Quality Standards (CAAQS) for O_3, CO, SO_x, and NO_x by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing emissions from mobile and area-wide sources, and gives districts new authority to regulate indirect sources. Each district must achieve a 5% annual reduction (averaged over consecutive three-year periods) in district-wide emissions of each non-attainment pollutant or its precursors. The CCAA requires that each air quality management district demonstrate the overall effectiveness of its air quality program in achieving emission reductions.

Air Quality Planning and Pollution Control

The County of San Bernardino is located within the jurisdiction of two air quality management districts: the South Coast Air Quality Management District (SCAQMD) and the Mojave Desert Air Quality Management District (MDAQMD). Both of these agencies are responsible for developing and enforcing air pollution control rules and regulations, thereby affecting the future general planning and development in the County. Figure IV-C-1 shows the pertinent counties within the jurisdiction of these two air districts.

South Coast Air Quality Management District (SCAQMD)

The SCAQMD has jurisdiction over Orange County, the non-desert portions of Los Angeles, Riverside and San Bernardino counties, the Riverside County portions of the Salton Sea Air Basin (SSAB), and Mojave Desert Air Basin (MDAB). The South Coast Air Basin (Basin) is a subregion of the SCAQMD's jurisdiction.

Attainment Status – The South Coast Air Basin is formally designated as being in attainment for all federal and state ambient air quality standards for SO_x, NO_x and lead. The Basin has met the criteria for redesignation, but has not been formally redesignated as in attainment for CO as of the writing of this document. The federal and state ambient air quality standards for PM_{10} are exceeded in the Basin, and as a result do not meet the criteria for attainment.

Mojave Desert Air Quality Management District

The MDAQMD has jurisdiction over the desert portion of San Bernardino County. A portion of the Mojave Desert Air Basin is a subregion of the MDAQMD.

Attainment Status – The U.S. Environmental Protection Agency (EPA) designated a portion of the southwestern desert part of San Bernardino County as non-attainment and classified it as Severe-17 for ozone as part of the Southeast Desert Modified Air Quality Management Area (SDMAQMA). Severe-17 classification requires attainment of the one-hour ozone NAAQS by the end of 2007, 17 years after the adoption of the CAA Amendments in 1990.

The entire MDAB has been designated by the California Air Resources Board (CARB) as non-attainment of the ozone CAAQS. The entire MDAQMD is located within the MDAB. The MDAB includes a portion of Kern County, Los Angeles County, Riverside County and

San Bernardino County. The SDMAQMA covers the Victor Valley/ Barstow region in San Bernardino County (Mojave Desert), the Coachella Valley/San Jacinto region in Riverside County (Coachella), and the Antelope Valley region in Los Angeles County (Antelope Valley). The portion of the MDAQMD designated as a federal non-attainment area will be in attainment of the NAAQS for ozone by the required year, 2007. The entire MDAQMD will show significant progress towards attainment of the ozone CAAQS by that year.

Statewide Emissions Inventory

Table IV-C-2 represents a summary of the emissions inventory statewide for the year 2004 by major source category. The emissions are presented on an annual average in tons per day.

Emissions Inventory by Air Basin

California is divided geographically into air basins for the purpose of managing the air resources of the state on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The state is currently divided into 15 air basins. The County of San Bernardino is located within two air basins, the SCAB and the MDAB.

South Coast Air Basin

Table IV-C-3 represents the 2003 estimated annual average emissions in the SCAB by major source category in tons per day.

Mojave Desert Air Basin

Table IV-C-4 represents the 2004 estimated annual average emissions in the MDAB by major source category in tons per day.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Air Quality, if the project would cause any of the following effects:

- *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.*
- *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 standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).*
- *Expose sensitive receptors to substantial pollutant concentrations.*
- *Create objectionable odors affecting a substantial number of people.*

3. IMPACT ANALYSIS

Impact AQ-1

New residential, commercial and industrial development will occur as a result of the update of the 2006 General Plan resulting in the creation of more air pollutants that will impact the

existing poor air quality in the county. New residential development will also expose more county residents to the County's air pollution.

Air quality within a region is impacted by the amount of air pollution generated from stationary, mobile, area, and natural sources located within that region. Examples of stationary sources are factories, industrial facilities, and power plants. Mobile sources include cars, trucks, airplanes, and off-road vehicles including trains, construction equipment, and recreational vehicles. Area-wide sources are small emission sources such as dry cleaners, restaurants, aerosol consumer products, residential water heaters, and automotive shops located in a general vicinity of each other. Natural sources include forest fires, pollens, and windblown dust. In addition, air pollution is transported from adjacent air basins during certain meteorological conditions and contributes to air pollution problems for neighboring basins. For example, O_3 pollutants originating within the SCAB region are transported over the San Gabriel and San Bernardino Mountains into San Bernardino County and similarly, air pollution from the San Joaquin Air Basin is transported through the Tehachapi Mountains into San Bernardino County. Hence, Air Quality Management District or Air Pollution Control District governing the areas of origin of transported air pollutants are required to include sufficient emission control measures in their attainment plans for ozone to mitigate the impact of pollution sources within their jurisdictions on O_3 concentrations in downwind areas.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact AQ-2
The growth allowed by the update of the General Plan will either create emissions 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 illnesses and the older population).

The air pollutants of greatest concern in San Bernardino County are O_3 and PM_{10} because of the current non-attainment status with the Ambient Air Quality Standards (AAQS). O_3 is not emitted directly, but is formed in the atmosphere through complex chemical reactions between nitrogen oxides and hydrocarbons in the presence of sunlight. These are considered as ozone precursors. Hydrocarbon is a general term to describe compounds comprised of hydrogen and carbon atoms. Hydrocarbons are classified by how photochemically reactive they are: relatively reactive or relatively non-reactive. Relatively reactive hydrocarbons, also known as ROG, are VOCs that react photochemically and contribute to the formation of O_3, as well as PM_{10} and $PM_{2.5}$, and are the primary pollutants of concern. Motor vehicle emissions and evaporation of various VOCs (i.e., solvents, fuels, etc.) are major contributors to regional O_3 problems. Pesticide use, industrial process operations, and non-highway mobile sources (i.e., off-road vehicle use and aircraft operations) are other contributors to regional O_3 problems. PM_{10} emissions come from a broad range of sources, with on-road mobile sources (i.e., re-entrained road dust, direct emissions, and secondary emission effects), and natural windblown dust generated from occasional moderate to high-wind episodes over a large region that encompasses multi-district and interstates (i.e., local and distant transport of PM_{10}) being the most prominent.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact AQ-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.

Diesel exhaust is a growing concern in the South Coast Air Basin and throughout California. The CARB in 1998 identified diesel engine particulate matter as a toxic air contaminant. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Many of these toxic compounds adhere to the particles, and because diesel particles are very small, they penetrate deeply into the lungs. Diesel engine particulate matter has been identified as a human carcinogen. Mobile sources (including trucks, buses, automobiles, trains, ships and farm equipment) are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

4. MITIGATION MEASURES

Mitigation AQ-1
Because development during construction would be subjected to wind hazards (due to increased dust, the removal of wind breaks, and other factors), the County shall require either as mitigation measures in the appropriate environmental analysis required by the County for the development 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:

- Grading restrictions and/or controls on the basis of soil types, topography or season;
- Landscaping methods, plant varieties, and scheduling to maximize successful revegetation; and
- Dust-control measures during grading, heavy truck travel, and other dust generating activities.

Mitigation AQ-2
The County shall establish incentives and/or regulations to eliminate work trips including such actions as:

- Implementing staggered, flexible and compressed work schedules in public agencies; and
- Requiring work schedule flexibility programs for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage.

Mitigation AQ-3
The County shall locate and design new development in a manner that will minimize direct and indirect emissions of air contaminants through such means as:

- Promoting mixed-use development to reduce the length and frequency of vehicle trips;
- Providing for increased intensity of development along existing and proposed transit corridors; and
- Providing for the location of ancillary employee services (including but not limited to child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.

Mitigation AQ-4
The County shall provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).

Mitigation AQ-5
The County shall replace existing vehicles in the County fleet with the cleanest vehicles commercially available that are cost-effective and meet the vehicle use needs.

Mitigation AQ-6
The County shall manage the County's transportation fleet fueling standards to improve the number of alternative fuel vehicles in the County fleet.

Mitigation AQ-7
The County shall establish programs for priority or free parking on County streets or in County parking lots for alternative fuel vehicles.

Mitigation AQ-8
The County shall require the use of building materials and coatings that minimize air pollution consistent with the requirements of the AQMD.

Mitigation AQ-9

The County shall provide incentives to promote siting or use of clean air technologies (e.g., fuel cell technologies, renewable energy sources, UV coatings, and hydrogen fuel).

5. SIGNIFICANT UNMITIGATED IMPACTS

In spite of the Mitigation Measures adopted above, the 2006 General Plan's impacts to Air Quality cannot be mitigated to a level below significance.

The San Bernardino General Plan contains objectives and policies to moderate effects on air quality, but also calls for an increase in densities on certain parcels, mixed land uses, and a refocus on existing neighborhoods. These policies work to reduce dependence on the private automobile and to reduce vehicle miles traveled. Although these measures will result in positive air quality effects, they will not offset effects caused by increased population.

All future development in the County of San Bernardino will undergo a specific CEQA analysis which will evaluate both operational and construction emissions, as well as potential cumulative impacts. These project-specific documents, and analyses, will develop mitigation measures, where feasible, which will assist the county and state meet air quality attainment goals.

Table IV-C-1. State and Federal Ambient Air Quality Standards

AIR POLLUTANT	STATE STANDARD	FEDERAL PRIMARY STANDARD	MOST RELEVANT EFFECTS
	CONCENTRATION, AVERAGING TIME		
CO	>20 ppm, 1-hour average >9.0 ppm, 8-hour average	>35 ppm, 1-hour average ≥9.0 ppm, 8-hour average	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and, (d) Possible increased risk to fetuses.
O_3	>0.09 ppm, 1-hour average >0.070 ppm, 8-hour average	>0.08 ppm, 8-hour average	(a) Short-term exposures: 1) Pulmonary function decrements and localized lung edema in humans and animals; and, 2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; and (d) Property damage.
NO_2	>0.25 ppm, 1-hour average	>0.053 ppm, AAM	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
SO_2	>0.25 ppm, 1-hour average >0.04 ppm, 24-hour average	>0.030 ppm, AAM >0.14 ppm, 24-hour average	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.

	STATE STANDARD	FEDERAL PRIMARY STANDARD	
PM_{10}	>20 µg/m^3, AAM >50 µg/m^3, 24-hour average	>50 µg/m^3, AAM >150 µg/m^3, 24-hour average	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; and (b) Excess seasonal declines in pulmonary function, especially in children.
$PM_{2.5}$	>12 µg/m^3, AAM	>15 µg/m^3, AAM >65 µg/m^3, 24-hour average	(a) Increased hospital admissions and emergency room visits for heart and lung disease; (b) Increased respiratory symptoms and disease; and, (c) Decreased lung functions and premature death.
Lead	1.5 µg/m^3, 30-day average	1.5 µg/m^3, calendar quarterly average	(a) Increased body burden; and, (b) Impairment of blood formation and nerve conduction.
Sulfates	25 µg/m^3, 24-hour average	No federal standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage.
Visibility-Reducing Particles	In sufficient amount to give an extinction coefficient 0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average	No federal standards	Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70%.
Hydrogen Sulfide	0.03 ppm, 1-hour average	No federal standards	Odor annoyance.
Vinyl Chloride	0.010 ppm, 24-hour average	No federal standards	Known carcinogen.

KEY:
ppm = parts per million parts of air, by volumeAAM = Annual Arithmetic Mean
µg/m^3 = micrograms per cubic meter

Table IV-C-2. 2004 Statewide Emissions Inventory

Source Category	ROG	CO	NOx	SOx	PM_{10}
Stationary Sources	505	405	506	134	131
Fuel combustion	45	341	395	41	41
Waste disposal	22	2	3	0	1
Cleaning and surface coatings	222	1	0	0	0
Petroleum Production and Marketing	155	10	11	62	2
Industrial Processes	61	61	97	31	87
Area-wide Sources	707	2138	93	5	1835
Solvent Evaporation	449	----	----	----	0
Miscellaneous Processes	258	2138	93	5	1835
Mobile Sources	1299	11259	2527	74	119
On-Road Motor Vehicles	824	8172	1589	12	49
Other Mobile Sources	476	3087	938	62	70
Total Emissions Statewide – All Sources	2512	13802	3126	213	2086

[1] ROG – Reactive Organic Gases
Source: CARB Almanac, 2005, Chapter 2, page 48.

Table IV-C-3. 2003 South Coast Air Basin Emissions Inventory

Source Category	ROG	CO	NO_x	SO_x	PM_{10}
Stationary Sources	150.9	73.1	71.8	24.9	15.5
Fuel combustion	22.8	61.4	55.9	9	7.7
Waste disposal	4.7	1	1.8	0.2	0.4
Cleaning and surface coatings	68.4	0.2	0.2	0.1	0.2
Petroleum Production and Marketing	34.9	6.4	3.9	12	1.2
Industrial Processes	20.1	4.1	10	3.7	6.1
Area-wide Sources	173.8	156.1	31.8	0.4	235.1
Solvent Evaporation	150.2	----	----	----	0
Miscellaneous Processes	23.5	156.1	31.8	0.4	235
Mobile Sources	479.6	4217.9	941.3	37.6	39.9
On-Road Motor Vehicles	318.1	3160	641.8	4.5	18.8
Other Mobile Sources	161.5	1057.9	299.5	33.2	21
Total Emissions Statewide – All Sources	1608.5	5765.8	2079.9	105.21	327.46

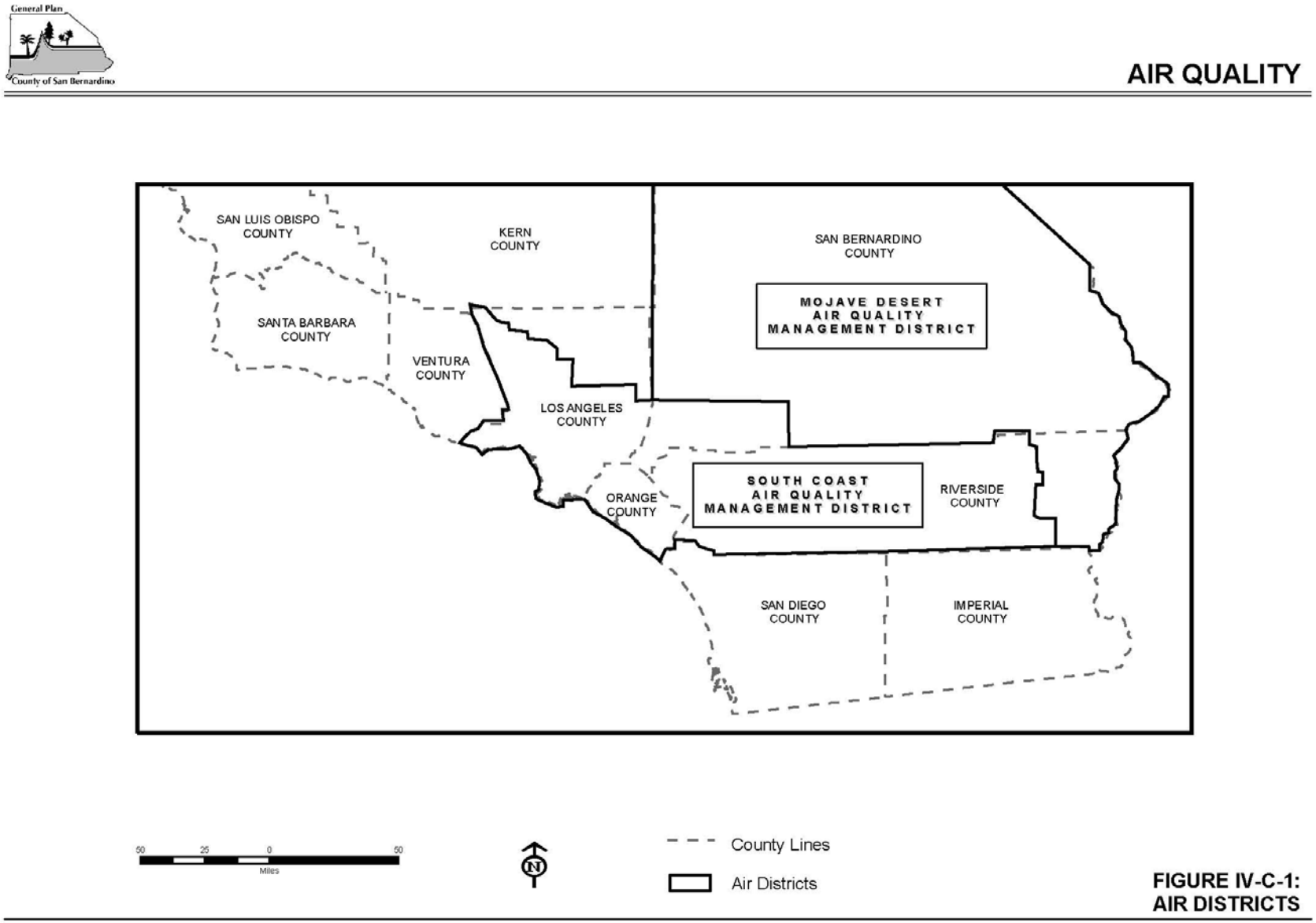
Source: CARB website, www.arb.ca.gov.

Table IV-C-4. 2004 Mojave Desert Air Basin Emissions Inventory

Source Category	ROG	CO	NO_x	SO_x	PM_{10}
Stationary Sources	16.3	34.9	118.8	7.3	24.1
Fuel combustion	2.5	18.4	66.8	1.7	8.1
Waste disposal	0.4	0.1	0.1	0	0
Cleaning and surface coatings	8.6	0	0	0	0
Petroleum Production and Marketing	2.8	0	0	0	0
Industrial Processes	2.0	16.4	51.8	5.5	15.9
Area-wide Sources	15.1	20.9	1.8	0	133.7
Solvent Evaporation	11.6	----	----	----	0
Miscellaneous Processes	3.5	20.9	1.8	0	133.7
Mobile Sources	41.5	374.7	108.4	4.8	7.2
On-Road Motor Vehicles	23.2	278.4	42.1	0.2	1.3
Other Mobile Sources	18.3	96.4	66.3	4.6	5.9
Total Emissions Statewide – All Sources	72.9	430.5	229	12.1	165

Source: CARB website, www.arb.ca.gov.

Figure IV-C-1. Air Districts



D. BIOLOGICAL RESOURCES

1. SETTING

The San Bernardino County has been divided into three sub-regions for planning purposes. The three sub-regions include the Valley Region, Mountain Region, and Desert Region. These regions have distinctly different climates and geography which in turn produce differing biological environments. The following assessment of existing conditions, impacts and mitigation for impacts to biological resources are assessed separately for each of the three sub-regions.

a) Valley Region

The elevation of the Valley Region of San Bernardino County generally ranges from 500 to 1,700 feet above sea level. The Yucaipa Hills, however, includes land with elevation of 5,400 feet. Soils include predominantly alluvial deposits with areas of dune sand. This Region is urbanized with few existing natural open space areas. The predominant vegetation communities within the undeveloped areas of the valley are chaparral, coastal sage scrub, deciduous woodlands, grasslands, and wetlands. Vegetation in urbanized areas consists primarily of introduced landscape species. Table IV-D-1 shows native vegetation types associated with the various plant communities in the Valley Region. The Conservation Background Report (Appendix H) lists the state and federal sensitive or protected plant and animal species that have the potential to occur in the Valley Region. Many of these species may also range, occupy overlapping habitat, or migrate to the other planning Regions of the County as indicated.

Table IV-D-1. Native Vegetation Types and Plant Communities within the Valley Region

Plant Communities	Vegetation Type
Shrub	
Chaparral	Chamise chaparral
	Semi-desert chaparral
	Mixed montane chaparral
	Ceanothus chaparral
	Scrub oak chaparral
Sage scrub	Riversidean alluvial fan sage scrub
	Riversidean Sage Scrub
Woodlands	
Riparian forest	Walnut woodland
	Willow riparian forest
	Cottonwood – willow riparian forest
	White alder riparian forest
Cismontane woodland	Black oak woodland
	Interior live oak woodland
	Coast live oak woodland
Wetlands	
Meadow and seep	Freshwater seep
Marsh and swamp	Freshwater marsh
Riparian forest	Cottonwood – Willow riparian forest
	Willow riparian forest
	White alder riparian forest
Riparian scrub	Mule fat scrub
	Southern willow scrub

The most sensitive vegetation types found within the study area are wetlands, including riparian woodland, riparian scrub, and freshwater marsh. Wetlands are considered a valuable but declining resource both locally and statewide. Therefore, the few wetland areas remaining in the County should be preserved in conservation areas. The largest and most well known example of riparian woodland in the Valley Region of the County is within Federal and state protected areas. Species associated with willow woodlands and mature riparian woodland communities, such as at Prado Basin, include the southwestern willow flycatcher, least Bell's vireo, and western yellow-billed cuckoo.

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 (2002) identifies several of these riverine resources as "Essential Resource Conservation Areas" within the County. Invasive species such as Giant Reed (*Arundo donax*) and tamarisk (*Tamarix* sp.) are a problem for native flora and fauna in the drainages.

Other areas are important biologically because they support flora or fauna that are limited in their distribution or require or tolerate unusual conditions that occur there. For example, the alluvial sage scrub habitat in the Santa Ana River, Lytle Creek, and Cajon washes has adapted to frequent flooding and therefore supports a unique diversity of plant species. Another sensitive plant community is the Riversidian alluvial fan sage scrub found on the alluvial fans at the base foothills of the San Bernardino Mountains which has adapted to episodic flood. This habitat supports several sensitive species including San Bernardino kangaroo rat, San Diego horned lizard, Los Angeles pocket mouse, and California bedstraw.

The following preserves are found within the Valley Region:

- North Etiwanda Preserve, Vulcan Materials Delhi Sands Mitigation Bank encompasses 700-pus acres of primarily alluvial fan sage scrub habitat that also contains a water marsh. This area was acquired by SANBAG in approximately 1997 as mitigation for the I-210 Freeway extension. It was later assigned to San Bernardino County for management in conjunction with the California Department of Fish and Game and a several member advisory committee.
- Vulcan Materials Alluvial Fan Sage Scrub Mitigation Bank. Vulcan Materials has put together a 1,378-acre habitat conservation management area along a six-mile stretch of Cajon Creek. Enclosed within this sage and scrub community are 24 sensitive species, including numerous wildflowers and the coastal California gnatcatcher and the endangered San Bernardino kangaroo rat.
- Chino Hills State Park. Chino Hills State Park is an open-space area in the hills of Santa Ana Canyon near Riverside, is a critical link in the Puente-Chino Hills biological corridor. It encompasses stands of oaks, sycamores and rolling, Riversidean sage scrub, and grassy hills that stretch nearly 31 miles, from the Santa Ana Mountains to the Whittier Hills. The Riversidean sage scrub community supports a sensitive bird species, the coastal California gnatcatcher.

- Prado Basin Mitigation Area. An agreement in 1995 between OCWD, the U.S. Army Corps of Engineers (Corps), and the U.S. Fish and Wildlife Service, resulted in the water conservation level behind Prado Dam to be raised, nearly doubling the amount of valuable water that can be stored behind the Dam. The agreement between the agencies was the culmination of years of cooperative efforts to enhance the water conservation and environmental values of Prado Basin, breeding grounds of the endangered least Bell's vireo. The Orange County Water District owns 2,150 acres behind Prado Dam in Riverside County, California. Within OCWD property and adjacent lands are nearly 465 acres of constructed wetlands, which have effectively demonstrated the ability to reduce nitrogen levels in Santa Ana River water.
- Santa Ana Wooly Star and Slender-horned Spine Flower mitigation lands in the upper Santa Ana Wash. The 760 acre Wooly Star preserve was established by the US Army Corps of Engineers along the Santa Ana River Wash as mitigation for the Seven Oaks Dam project.

b) Mountain Region

The Mountain Region of San Bernardino County lies in the southwestern portion of the County and contains the San Bernardino Mountains and the eastern end of the San Gabriel Mountains. Both are elements of the Transverse Mountain Range of southern California. The San Bernardino Mountains cover approximately 652,000 acres of which more than 248,000 acres are above 6,000 feet in elevation (U.S. Department of Agriculture [USDA], 1999). Elevations within the Mountain Region range from 2,000 feet in the foothills to 11,502 feet at the summit of Mount San Gorgonio. Soils vary within the Mountain Region and are geologically active with faults and uplifting. Most of the Region contains shallow soils consisting primarily of decomposed granite and sandy loam.

The major Mountain vegetation communities include shrubs, woodlands, wetlands (including woodlands, scrub, marsh, and meadows), and the relic pavement plains. The County coordinates with the federal and state management plans in this Region as most of the Mountain Region is under the jurisdiction of federal or state agencies. Approximately 61% of the Mountain Region is managed by the USFS, while the BLM manages 10%; the state owns 1% and 4% is Native American tribal land. Table IV-D-2 shows vegetation types associated with the various communities in the Mountain Region. The Conservation Background Report (Appendix H) lists the state and federal sensitive or protected plant and animal species that have the potential to occur in the Mountain Region. Many of these species may also range, occupy overlapping habitat, or migrate to the other planning Regions of the County as indicated.

The California Department of Fish and Game (CDFG) recognizes 14 Areas of Special Biological Importance (ASBIs) within the Mountain Region of the County. Among the ASBIs are identified key areas that support herds of both resident and seasonally migratory mule deer (*Odocoileus hemionus*). These areas satisfy the year-round life requirements of resident deer herds and occur southwest of Luna Mountain, at Cleghorn Mountain, and east of Harrison Mountain. Good deer fawning areas, generally located near wet meadows and riparian thickets, occur from Manzanita Flat to Plunge Creek in the Alder Creek area and near Keller Meadows and the forks of Plunge Creek, east of Harrison Mountain. Deer winter ranges occur north of Barton Flats and summer ranges occur northwest of Delamar Mountain.

Nelson bighorn sheep (*Ovis canadensis nelsoni*) habitat occurs throughout much of the Cucamonga Wilderness area and the North Slope of the San Bernardino Mountains, easterly of Deep Creek.

Table IV-D-2. Native Vegetation Types and Plant Communities within the Mountain Region

Plant Communities	Vegetation Type
Shrubs	
Chaparral	Chamise chaparral
	Semi-desert chaparral
	Mixed montane chaparral
	Ceanothus chaparral
	Scrub oak chaparral
Sage scrub	Riversidean alluvial fan sage scrub
	Riversidean sage scrub
Woodlands	
Riparian forest	Sycamore – Oak riparian forest
Cismontane woodland	Black oak woodland
	Interior live oak woodland
	Coast live oak woodland
Conifer woodland	
Interior closed-cone coniferous forest	Knobcone pine forest
Lower montane coniferous forest	Coulter pine forest
	Ponderosa pine forest
Upper montane coniferous forest	Jeffrey pine forest
	Jeffrey pine – fir forest
	White fir forest
	Lodgepole pine forest
Subalpine coniferous forest	Subalpine forest
Wetlands	
Meadow and seep	Montane meadow
	Freshwater seep
Marsh and swamp	Freshwater marsh
Riparian forest	Coast live oak riparian forest
	Willow riparian forest
	Cottonwood – willow riparian forest
	White alder riparian forest
Riparian scrub	Mule fat scrub
	Southern willow scrub
Pebble or pavement plain	
Pavement plain community	Pavement plain
	Pebble plain

However, the best habitat occurs within the San Gorgonio Mountain area. The CDFG also recognizes principal wintering area for waterfowl migrating along the Pacific Flyway. Within the Mountain Region, waterfowl have been observed at Baldwin Lake and Big Bear Lake. The lake areas also provide wintering habitat for the bald eagle, and both Lake Arrowhead and Lake Big Bear are therefore recognized by the CDFG as ASBIs.

Also within the Mountain Region, the USFS manages both the Cucamonga Wilderness Area (8,580 acres) and the San Gorgonio Wilderness Area (56,749 acres). The latter is the largest established wilderness area in southern California and one of the most publicly used within the nation (USDA 1999). Aside from ASBIs, the

CDFG has an established ecological preserve at Baldwin Lake that totals 125 acres, and the Nature Conservancy has four preserves in the Mountain Region — Baldwin Lake Preserve, Castle Glen Bald Eagle Sanctuary, the Sugarloaf Biota Bank, and the Big Bear Valley Preserve. In addition to these designated acreages, other areas also recognized for the value of their resources, occur within the mountains and remain important areas to be preserved. These include alkali wet meadow, pebble plains, limestone substrate, and wetlands.

The Mountain Region of the County includes the headwater, upper reaches of the Santa Ana River watershed. Examples of intact, riverine resources are the South Fork of the Santa Ana River, a permanently flooded riverine wetland, and Vivian Creek, a permanently flooded montane wetland (Ferren et al., 1996). Deep Creek and Bear Creek are CDFG-designated wild trout streams, and contain high quality riparian resources. A broad overview of biological resources found within this Region is provided in Stephenson and Calcarone (1999) and Faber et al. (1989). Low-elevation riparian resources include cottonwood-willow, sycamore/coast live oak, and white alder communities. Locally rare riparian resources include the aspen groves in the San Bernardino Mountains. Invasive plant species are a problem in this area as well, and include giant reed (*Arundo donax*) and tamarisk (*Tamarix* sp.). Wildfires have occurred over the last 10 years that currently, and will continue to, affect riparian resources in this Region. Recent major fires include the Willows Fire (1999) around Deep Creek and the recent fires, Grand Prix and Old Fires that burned almost the entire south facing slopes of the San Bernardino Mountains and the easterly portion of the San Gabriel Mountains (2003).

c) Desert Region

Encompassing the great majority of San Bernardino County, approximately 93% of the County land area, the Desert Region includes a great diversity of biological resources in one of the most fragile ecosystems in the Country. The Desert Region includes land at elevations ranging from near sea level to desert valleys between 1000 and 4000 feet and mountain ranges exceeding 8,000 feet above sea level. Soils are predominantly sandy gravel with high runoff coefficients and fast percolation. The mountain ranges support exposed bedrock, mineral deposits in granite rock. Unique soil types include major dune formation, desert pavement, and dry alkaline lake beds. The entire Region is crossed by expansive alluvial wash deposits. The dominant habitat is Desert Scrub, but discrete areas of other habitat types also occur within this Region. Table IV-D-3 shows vegetation types associated with the various communities in the Desert Region. The general reference to the desert within the County can be divided into three main deserts including the Mojave, Great Basin, and Colorado and are differentiated by the respective biomes, rainfall patterns and elevations. The Conservation Background Report (Appendix H) lists the state and federal sensitive or protected plant and animal species that have the potential to occur in the Desert Region. Many of these species may also range, occupy overlapping habitat, or migrate to the other planning Regions of the County as indicated.

Table IV-D-3. Native Vegetation Types and Plant Communities within the Desert Region

Plant Communities	Vegetation Type
Shrubs	
Sage scrub	
Sage scrub	Riversidean sage scrub
	Riversidean alluvial fan sage scrub
Mojave Desert scrub	
Mojavean Desert scrub	Mojave creosote bush scrub
	Mojave mixed scrub
	Blackbush scrub
Saltbush scrub	
Chenopod scrub	Saltbush scrub
	Sink scrub
	Shadscale scrub
Woodlands	
White Fir woodland	
Pinyon and juniper woodland	
Mojavean and juniper woodland	Mojavean pinyon woodland
	Mojavean juniper woodland and scrub
Joshua tree woodland	
Wetlands	
Meadow and seep	Freshwater seep
Marsh and swamp	Freshwater marsh
Riparian forest	Willow riparian forest
	Cottonwood – willow riparian forest
	White alder riparian forest
Riparian scrub	Mule fat scrub
	Southern willow scrub
Riparian woodland	Desert fan palm oasis woodland
	Southern riparian woodland
Alkali Sink	
Alkali meadows and seeps	Alkali playa
	Alkali playa
Sand Dune	
Desert dunes	Stabilized/partially stabilized dunes
	Sand fields

Most of the San Bernardino County Desert Region includes land managed by the BLM and other federal agencies including the National Park Service for the Mojave National Preserve and Joshua Tree National Park, as well as the U.S. military for Ft. Irwin and other bases. The BLM, National Park Service, and CDFG recognize ASBI, Critical Habitat, and Desert Wildlife Management Areas (DWMA) within the Region. The management of these areas is under the jurisdiction of the respective federal agencies.

The National Park Service (NPS) controls two sites within the Desert Region of the San Bernardino County. These include:

- Joshua Tree National Park. In 1994 the Desert Protection Act designated 825,000 acres as a National Park. **T**wo deserts, two large ecosystems whose characteristics are determined primarily by elevation, come together at Joshua Tree National Park. Below 3,000 feet, the Colorado Desert encompasses the eastern part of the park and features natural gardens of creosote bush, ocotillo, and cholla cactus. The higher, moister, and slightly cooler Mojave Desert is the special habitat of the Joshua tree. In addition to Joshua tree forests, the western part of the park also includes some of the

most interesting geologic displays found in California's deserts. Five fan palm oases also dot the park, indicating those few areas where water occurs naturally.

- Mojave National Preserve. The Desert Protection Act created the 1.4 million acre Mojave National Preserve in the heart of the Mojave Desert. This act transferred the lands known as the East Mojave National Scenic Area from the Bureau of Land Management to the National Park Service. The desert in the Mojave National Preserve ranges in elevation from less than 1000 feet to almost 8000 feet. Wildlife is abundant and over 300 different species of animals including desert bighorn sheep, mule deer, coyotes and desert tortoises roam the area. Desert plants are especially adapted to living in this arid climate. Many have small leaves with waxy coverings to minimize moisture loss, while cacti store large volumes of water. Other plants, such as the creosote, have developed extensive or deep root systems that enable them to gather the precious water. Common plants include yucca, creosote and the Joshua tree.
- The BLM has designated locations within three desert biomes as Area of Critical Environmental Concern (ACEC) and Special Areas. By designating areas as ACEC the BLM can develop special management programs for specific resources. These management programs are site-specific and include patrolling, fencing, and signage implemented by the BLM. The programs also recommend actions that the BLM does not have direct authority to implement. There are 13 designated biological ACECs in the Desert Region of San Bernardino County. These include:
    - Fort Piute;
    - New York Mountain;
    - Dark Mountain;
    - Amargosa River;
    - Salt Creek;
    - Cronese Lake;
    - Fort Soda;
    - Upper Johnson Valley;
    - Soggy Dry Lake;
    - North Harper Dry Lake;
    - South Harper Dry Lake;
    - Afton Canyon; and
    - Big Morongo Canyon.

Other areas that possess rare, unique, or unusual qualities of scientific, educational, cultural, or recreational significance may be designated as a Special Area. The goals of the Special Areas are to formally recognize significant natural areas on BLM lands, allow uses within the Special Areas compatible with the protection and enhancement of natural resources, and monitor the quality of the natural resources in relationship to allowed uses. The three Special Areas designated within the Desert Region are the Kelso Dunes, designated as a National Natural Landmark; The Granite Mountains, a Research Natural Area; and the East Mojave, designated as a National Scenic Area.

The CDFG recognizes numerous ASBIs within the Desert Region of San Bernardino County that support various important biological resources. These include, but are not limited to, areas of deer, bighorn sheep, and desert tortoise habitat. The Nature Conservancy also recognizes areas for protection and has designated the Morongo Valley area as the Big Morongo Canyon Preserve.

The Desert Region supports a high number of sensitive plant species presented in the Conservation background report. Other sensitive wildlife occurring within the Desert Region includes locally sensitive populations of several species, burrowing owl, and Mojave ground squirrel.

San Bernardino County contains a large area in which Desert Southwest Playas are expected to occur. The following is a list of wetlands and riparian habitats found in the Desert Region:

- Alkali Seeps, Springs and Meadows;
- Wetland and Riparian Plant Communities;
- Wetland and Riparian Wildlife;
- Mojave River – Wild and Scenic River Eligibility; and
- Invasive Plant Species.

More details on biological resources within the County are provided in the Conservation Background Report prepared as part of the General Plan Update Program.

The Open Space Plan Diagram that is incorporated in the Open Space Background Report identifies recognized wildlife corridors in the County.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Biological Resources, if the project would cause any of the following effects:

- *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.*
- *Have a substantial adverse effect on any 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 Clean Water Act (including, but limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
- *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.*
- *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
- *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

3. IMPACT ANALYSIS

Impact BIO-1

The General Plan implementation will have the potential to adversely affect, directly and indirectly, candidate, sensitive, or special-status plant and animal species that may occur within the Valley Region of San Bernardino County. Planned development of existing incorporated and unincorporated areas support species that are federal or state protected, or

candidate for protection, including the Delhi Sands flower-loving fly and San Bernardino kangaroo rat. Conversion of vacant land (designated for development) that affects Riversidian sage scrub, Delhi sand, alluvial fan sage scrub or other remnant habitat supporting native species may directly affect occupied habitat. Consequently, this development of vacant land may cause the take or harm of individual species as listed by the federal and/or state agencies, or cause indirect affect through the loss of foraging and breeding habitat. Development will directly and indirectly affect other plant and wildlife that would result in loss of prey, species diversity, or other resources that resident or migratory species may use. Additional indirect effects to species outside of the County may result from the relocation of agricultural or industrial facilities to other areas.

Within the Mountain Region, the majority of the land is under jurisdiction of the USFS where the federal lands serve as primary refugia for most sensitive montane species. However, a few species, such as the southern rubber boa and many of the pebble plain species have considerable habitat on land that is privately owned and subject to the land use jurisdiction of the County. The General Plan policy areas identified in the Open Space Diagram that will be retained in the Update will help minimize adverse effects to most wildlife and plant species and associated native habitats that occur on private land and adjoining federal or state lands. However, development on private lands that contain suitable or occupied habitat will continue to be impacted as buildout of the General Plan occurs.

Within the Desert Region of the County, planned development of existing incorporated and unincorporated areas support species that are federal or state protected or candidate for protection including the desert tortoise and Mojave ground squirrel. Additional conversion of open space that affects desert scrub, alkali scrub, desert pavement or other habitat supporting native species may directly affect occupied habitat, cause, take or harm of individual species as defined by federal and state agencies, or cause indirect effect through the loss of foraging and breeding habitat. Development called for by the proposed update of the General Plan will directly and indirectly affect other plant and wildlife that would result in loss of prey, species diversity, or other resources that resident or migratory species may use. Development of lands around existing desert communities will adversely affect native resident and migratory species. Growth inducing actions will require additional water be taken from other areas possibly outside of the County, development of additional roads and expansion of existing roads, additional landfill, and a significant increase to the area affected by the community. Increases in population are expected to result in additional effects to the buffer habitat between the urban and open space. Consequential to the development, additional direct and indirect impacts to protected species may result from increased populations of domestic and resulting feral populations of dogs and cats.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact BIO-2

The General Plan implementation within the Valley Region will have the potential to adversely affect directly and indirectly riparian habitat or other sensitive natural communities as identified by state and federal agencies. Most of the watershed within the Valley Region has been channelized or previously disturbed through agricultural practices, flood control effort, and introduction of non-native vegetation. Further degradation including the installation of concrete bed and banks would directly affect remnant riparian habitat within this County planning area. Additionally, loss of sediment or artificial increased deposition of sediment and alteration of the natural flood cycle will affect downstream riparian habitat.

The Valley Region supports critical habitat as identified by the U. S. Fish and Wildlife Service (USFWS) for San Bernardino kangaroo rat, least Bell's vireo, and southwestern willow flycatcher. These habitats may be directly affected by ongoing development or indirectly affected by development of adjacent buffer habitat and public use and access.

General Plan implementation within the Mountain Region will have the potential to adversely effect directly and indirectly, riparian habitat or other sensitive natural communities as identified by state and federal agencies. While the majority of the land within the Mountain Region is under jurisdiction of the USFS, several specified habitats occur on private land that is subject to the County General Plan. The General Plan Update retains a number of policies that apply at the interface between federal or state lands. These policies will minimize the adverse effects on riparian and other sensitive habitats. Loss of sediment or artificial increased deposition of sediment and alteration of the natural flood cycle will affect downstream riparian habitat. The General Plan will continue to implement state and federal protections to minimize adverse effects to water quality that would affect downstream riparian and other sensitive habitat. Several wildlife corridors and special policy areas are recognized on the Open Space Diagram. These areas require special review for impacts to biological resources on a project-by-project basis.

General Plan implementation within the Desert Region will have the potential to adversely affect directly and indirectly riparian habitat or other sensitive natural communities as identified by state and federal agencies. These habitats may be directly affected by ongoing development or indirectly affected by development of adjacent buffer habitat and public use and access. Additional regional growth may affect riparian habitat that is a very limited resource in the Desert Region. Continued water withdrawals along the Mojave River and other locations will contribute to continued loss of riparian resources. Land grading and development, along with infrastructure extension, will adversely affect limited desert riparian habitat. Because of the environmental conditions that create the desert habitats, impacts have a more significant consequence and recovery from temporary effects and take substantially longer than in areas receiving more rainfall.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact BIO-3

The General Plan implementation within the Valley Region will have the potential to adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act. The development of the Valley Region will also affect native habitat downstream of the project limits. Loss of sediment or excess deposition of upland material will affect downstream wetlands, estuary, and ocean habitats. Natural sediment deposition, flood control management, and downstream affects are Regional issues that are not within the scope of the General Plan. It is not determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits.

General Plan implementation within the Mountain Region will not adversely affect directly federal protected wetlands as defined by Section 404 of the Clean Water Act. Indirect effects to downstream wetlands and other natural habitats may occur from loss of sediment, natural sediment deposition, flood control management, and downstream effects are Regional issues that are not within the scope of the General Plan. It is not determined whether the proposed

mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits.

General Plan implementation within the Desert Region will not adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act. The Desert Region supports primarily isolated wetlands and is not within the jurisdiction of agencies regulating compliance with the Clean Water Act. However, natural sediment deposition, flood control management, and downstream effects are Regional issues that are not within the scope of the General Plan. It has not been determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits. Development may adversely affect other water resources within the Desert Region. The General Plan includes policy to require preparation of a biological assessment of a parcel prior to alteration to determine permitting requirements and impact assessment for these resources. This should identify water resources and relevant measures to minimize adverse affects to less than significant.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact BIO-4
The General Plan implementation within the Valley Region may affect, but is not likely to adversely affect, movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites. The Valley Region has been affected by land use conversion during the past century. Much of the land has been altered by agriculture activity and residential and commercial development. The existing open space, Santa Ana River, and existing reservoirs provide wildlife nursery sites and foraging and resting opportunities to migratory species. The foothill Region provides winter refuge for species that move seasonally between the foothill valley area and mountains. The preservation of open space within one-mile of National Forest boundaries (Policy CO1.2) will provide seasonal range movement areas for resident species. Development of aquatic or riparian areas may indirectly affect migratory species. Existing parks and open space will be conserved, which is expected to offset effects to less than significant for this environmental threshold.

General Plan implementation within the Mountain Region may adversely affect movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites. The existing open space, USFS property, and existing reservoirs provide wildlife nursery sites and foraging and resting opportunities to migratory species. The Mountain Region provides winter refuge for resident and migratory species. Additionally, the Mountain Region provides refuge to wildlife that temporarily relocate due to natural and man-made wild fires that are part of the natural burn cycle of the chaparral and forest habitats. Low density development to buffer and maintain compatibility with natural habitat within one-mile of National Forest boundaries (Policy CO1.2) will provide seasonal range movement areas for resident species. Additionally, the wildlife corridors identified on the Open Space Diagram will receive evaluation and mitigation under the requirements of the Biological Resource Overlay District.

General Plan implementation within the Desert Region may adversely affect movement of native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife fawning, and landbanking sites. The preservation of open

space within one-mile of National Forest boundaries (Policy CO1.2) will provide only minimal range movement preservation. Desert species spatially range within their habitat based on periodic rain cycles. The establishment and protection provided by National Monuments and parks provide protection for desert habitat, but does not provide protection of the entire Desert Region. Development of the Victorville area, expansion of exiting freeways, state routes, and County roads, and increased population will adversely affect the ability of wildlife to move through the Region. Habitat fragmentation is expected to occur as a result of planned development within the Desert Region. The buffer areas around the developments will add significant effect to native habitat and species. Use of limited resources and introduction or propagation of predatory species will further affect desert species.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-5
The General Plan implementation within the Valley Region will not adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policy or ordinance. The General Plan implementation relies on the development of Habitat Conservation Plans and Mitigation Sites that the County may participate in to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4).

General Plan implementation within the Mountain and Desert Regions will not adversely affect or conflict with local policies or ordinances protecting biological resources such as native plant protection policy or ordinance. The General Plan implementation relies on the County's Plant Protection Ordinance as contained in the Resource Management and conservation division of the County Development Code to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-6
The General Plan implementation within the Valley Region will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local Regional or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). San Bernardino County has participated in the following three local conservation plans: (1) City of Rialto HCP for the Delhi sands flower loving fly; (2) Upper Santa Ana Wash Land Management and Conservation Plan; and (3) Glen Helen Specific Plan Natural Resource Management Plan. The General Plan does not include any specific Habitat Conservation Plan policies, or ordinances for any wildlife or plant species or habitat.

General Plan implementation within the Mountain Region will not conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local Regional or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat. No formal HCPs exist in

the Mountain Region although the County is party to the Carbonate Habitat Management Strategy (CHMS). The CHMS is intended to provide for conservation of the federally listed carbonate endemic plants, while providing for continued mining of calcium carbonate minerals on the North Slope of the San Bernardino Mountains.

General Plan implementation within the Desert Region will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat. San Bernardino County participates in Regional Conservation Programs. Natural Community Conservation Plans and Habitat Conservation Plans are rapidly becoming the preferred regulatory replacement for project-by-project environmental review and permitting. The programs are essentially streamlined endangered species take permitting processes, but they do allow for a landscape-scale, ecosystem perspective to conservation planning. Specifically, San Bernardino County is participating in the West Mojave Plan and intends to proceed with obtaining a local government Habitat Conservation Plan to obtain Section 10a and 2081 permits. The West Mojave Plan consists of two components: a Federal component that will amend the existing 1980 California Desert Conservation Area Plan, and a Habitat Conservation Plan that will cover development on private lands. The BLM and 27 other federal and state agencies, cities and counties (including San Bernardino County) are planning to address the management of the desert tortoise and a number of other special status plants and animals found within the 9.4 million acre West Mojave Planning Area in the proposed West Mojave HCP.

Continued urban expansion primarily in the Valley Region, where the bulk of the County population currently resides, is resulting in conversion of agricultural uses due to economic pressure. The Chino Dairy Preserve is a case-in-point for conversion to urban development. In the last five years over 12,000 acres of dairy lands have been annexed to municipalities in the Valley Region. The City of Ontario has annexed approximately 8,000 acres and the City of Chino has annexed approximate 4,000 acres of unincorporated dairy lands for the purpose of developing master planned communities. Much of the existing urban development in the valley is located in areas formerly utilized for agricultural purposes (e.g., extensive citrus groves).

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-7

The General Plan implementation will have the potential to effect but will not adversely affect directly or indirectly, candidate, sensitive or special status plant and animal species that may occur within the Mountain Region of San Bernardino County. The majority of the land within the Mountain Region is under jurisdiction of the USFS. The General Plan policy areas identified in the Open Space Diagram that will be retained in the Update will help minimize adverse effects to most wildlife and plant species and associated native habitats that occur on federal or state lands. However, development on private lands that contain suitable or occupied habitat will continue to be impacted as buildout of the General Plan occurs.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-8
The General Plan implementation within the Mountain Region will have the potential to adversely effect directly and indirectly, riparian habitat or other sensitive natural communities as identified by state and federal agencies. While the majority of the land within the Mountain Region is under jurisdiction of the USFS, several specified habitats occur on private land that is subject to the County General Plan. The General Plan Update retains a number of policies at the interface between federal or state lands will provide minimum adverse effects on riparian and other sensitive habitats. Loss of sediment or artificial increased deposition of sediment and alteration of the natural flood cycle will affect downstream riparian habitat. The General Plan will continue to implement state and federal protections to minimize adverse effects to water quality that would affect downstream riparian and other sensitive habitat. Several wildlife corridors and special policy areas are recognized on the Open Space Diagram. These areas require special review for impacts to biological resources on a project-by-project basis.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact BIO-9
The General Plan implementation within the Mountain Region will not adversely affect directly federal protected wetlands as defined by Section 404 of the Clean Water Act. Indirect effects to downstream wetlands and other natural habitats may occur from loss of sediment, natural sediment deposition, flood control management, and downstream effects are Regional issues that are not within the scope of the General Plan. It is not determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact BIO-10
The General Plan implementation within the Mountain Region may adversely affect movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites. The existing open space, USFS property, and existing reservoirs provide wildlife nursery sites and foraging and resting opportunities to migratory species. The Mountain Region provides winter refuge for resident and migratory species. Additionally, the Mountain Region provides refuge to wildlife that temporarily relocate due to natural and man-made wild fires that are part of the natural burn cycle of the chaparral and forest habitats. Low density development to buffer and maintain compatibility with natural habitat within one-mile of National Forest boundaries (Policy CO1.2) will provide seasonal range movement areas for resident species. Additionally, the wildlife corridors identified on the Open Space Diagram will receive evaluation and mitigation under the requirements of the Biological Resource Overlay District.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-11
The General Plan implementation within the Mountain Region will not adversely affect or conflict with local policies or ordinances protecting biological resources such as tree

preservation policy or ordinance. The General Plan implementation relies on the County's Plant Protection Ordinance as contained in the Resource Management and conservation division of the County Development Code to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-12
The General Plan implementation within the Mountain Region will not conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local Regional or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat. No formal HCPs exist in the Mountain Region although the County is party to the Carbonate Habitat Management Strategy (CHMS). The CHMS is intended to provide for conservation of the federally listed carbonate endemic plants while providing for continued mining of calcium carbonate minerals on the North Slope of the San Bernardino Mountains.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-13
The General Plan implementation will have the potential to adversely affect, directly and indirectly, candidate, sensitive or special status plant and animal species that may occur within the Desert Region of San Bernardino County. Planned development of existing incorporated and unincorporated areas support species that are federal or state protected or candidate for protection including the desert tortoise and Mojave ground squirrel. Additional conversion of open space that affects desert scrub, alkali scrub, desert pavement or other habitat supporting native species may directly affect occupied habitat, cause, take or harm of individual species as defined by federal and state agencies, or cause indirect effect through the loss of foraging and breeding habitat. Development called for by the proposed update of the General Plan will directly and indirectly affect other plant and wildlife that would result in loss of prey, species diversity, or other resources that resident or migratory species may use. Development of lands around existing desert communities will adversely affect native resident and migratory species. Growth inducing actions will require additional water be taken from other areas possibly outside of the County, development of additional roads and expansion of existing roads, additional landfill, and a significant increase to the area affected by the community. Increases in population are expected to result in additional effects to the buffer habitat between the urban and open space. Consequential to the development, additional direct and indirect impacts to protected species may result from increased populations of domestic and resulting feral populations of dogs and cats.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact BIO-14
The General Plan implementation within the Desert Region will have the potential to adversely affect directly and indirectly riparian habitat or other sensitive natural communities

as identified by state and federal agencies. These habitats may be directly affected by ongoing development or indirectly affected by development of adjacent buffer habitat and public use and access. Additional Regional growth may affect riparian habitat that is a very limited resource in the Desert Region. Because of the environmental conditions that create the desert habitats, impacts have a more significant consequence and recovery from temporary effects and take substantially longer than in areas receiving more rainfall.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact BIO-15
The General Plan implementation within the Desert Region will not adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act. The Desert Region supports primarily isolated wetlands and is not within the jurisdiction of agencies regulating compliance with the Clean Water Act. However, natural sediment deposition, flood control management, and downstream effects are Regional issues that are not within the scope of the General Plan. It has not been determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits. Development may adversely affect other water resources within the Desert Region. The General Plan includes policy to require preparation of a biological assessment of a parcel prior to alteration to determine permitting requirements and impact assessment for these resources. This should identify water resources and relevant measures to minimize adverse affects to less than significant.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-16
The General Plan implementation within the Desert Region may adversely affect movement of native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife fawning, and landbanking sites. The preservation of open space within one-mile of National Forest boundaries (Policy CO1.2) will provide only minimal range movement preservation. Desert species spatially range within their habitat based on periodic rain cycles. The establishment and protection provided by National Monuments and parks provide protection for desert habitat, but does not provide protection of the entire Desert Region. Development of the Victorville area, expansion of exiting freeways, state routes, and County roads, and increased population will adversely affect the ability of wildlife to move through the Region. Habitat fragmentation is expected to occur as a result of planned development within the Desert Region. The buffer areas around the developments will add significant effect to native habitat and species. Use of limited resources and introduction or propagation of predatory species will further affect desert species.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact BIO-17
The General Plan implementation within the Desert Region will not adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policy or ordinance. The General Plan implementation relies on the

development of Habitat Conservation Plans and Mitigation Sites by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-18
The General Plan implementation within the Desert Region will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat. San Bernardino County participates in Regional Conservation Programs. Natural Community Conservation Plans and Habitat Conservation Plans are rapidly becoming the preferred regulatory replacement for project-by-project environmental review and permitting. The programs are essentially streamlined endangered species take permitting processes, but they do allow for a landscape-scale, ecosystem perspective to conservation planning. Specifically, San Bernardino County is participating in the West Mojave Plan and intends to proceed with obtaining a local government Habitat Conservation Plan to obtain Section 10a and 2081 permits. The West Mojave Plan consists of two components: a Federal component that will amend the existing 1980 California Desert Conservation Area Plan, and a Habitat Conservation Plan that will cover development on private lands. The BLM and 27 other federal and state agencies, cities and counties (including San Bernardino County) are planning to address the management of the desert tortoise and a number of other special status plants and animals found within the 9.4 million acre West Mojave Planning Area in the proposed West Mojave HCP.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

The following mitigation measures are added to the proposed project to reduce the project effects on biological resources.

Mitigation BIO -1
The County shall coordinate with local, state, and federal agencies prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and upland habitat within the County.

Mitigation BIO -2
The County shall coordinate with state and federal agencies for the creation of buffers and mitigation banks for sensitive species within the Valley, Mountain, and Desert Regions that are greater than one-mile from state or federal lands addressed by Goals and Policy CO 1.2. The County shall work with local governments to conserve critical habitat and minimize recreational use in sensitive areas supporting protected or sensitive species. As feasible, the County shall work with USFWS to establish mitigation banks or other conservation

easements for unincorporated areas supporting sensitive species. Because of the unique habitat qualities, replacement compensation and restoration mitigation are not adequate mitigation for some habitat loss to reduce the impact to less than significant.

Mitigation BIO -3
The County shall fund a position with the San Bernardino County Museum (Museum) to review submitted Biological Assessments for accuracy and relevance. The museum will provide report guidelines and format requirements to project proponents to streamline and standardize the reporting process. The Museum will maintain a database of completed biological assessments and facilitate disclosure of cumulative impacts for reviewed projects. The County planning office will provide the Museum with an annual list of potential land use conversion projects or other projects that may affect protected species for cumulative impact.

Mitigation BIO -4
The County shall require the preservation of at least 75% of each existing natural water resource that includes ephemeral streams and rivers. The remaining 25% of each water resource will be permitted by local, state, or federal agencies and permanent loss mitigated by habitat enhancement of conserved areas.

Mitigation BIO -5
The County shall participate with Regional plans to improve water quality and habitat that are downstream but may be beyond County limits. The County shall coordinate with Regional plans to minimize degradation of water quality within the County that affects downstream resources and habitats.

Mitigation BIO -6
The County shall not permit land conversion in the Desert Region until adequate mitigation is provided to reduce impacts to less than significant. Growth inducing actions will have a significant adverse impact to desert species that may not be adequately mitigated by habitat restoration or conservation easements. Desert habitat does not recover from temporary impact within reasonable timeframe to support wildlife and plants comparable to predisturbance conditions. Conversion of desert land is not mitigated by a 1 to 1 replacement as it is a finite resource and is not considered completely recoverable. Additionally, mitigation will be required for adverse impact to the buffer area around the area of residential or commercial land conversion.

Mitigation BIO -7
The County shall work with local communities to improve trash collection, recycling programs, and reduce illegal dumping in unincorporated areas. The County shall sponsor mitigation efforts that minimize landfill growth, reduce trash haul routes that spread litter and increase predator species numbers (i.e., raven or crow in the Desert Region), and reduce illegal dumping of large bulk items (e.g., furniture, appliances, tires, batteries). Residential impact from additional waste production will be fully mitigated to less than significant prior to permitting land use conversion.

Mitigation BIO -8
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 area 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.

Mitigation BIO -9
The County shall require all new roadway, roadway expansion, and utility installation to include wildlife crossing for respective area 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 crossing including culverts, overcrossings, undercrossings, and fencing.

Mitigation BIO -10
The County shall 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.

Mitigation BIO -11
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.

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.

Mitigation BIO -12
In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County's role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights.

Mitigation BIO -13
Within the County's Development Code, one of the overlay districts that is part of the Update program relates specifically to preserving biological resources within the County. These areas are designated "BR" or Biotic Resources Overlay District. The intent of the District is to protect and conserve beneficial, rare and endangered plants and animal resources and their habitats, which have been identified within unincorporated areas of the County.

82.13.020 – Location Requirements

The BR overlay district shall be applied to areas that have been identified by a county, state or federal agency as habitat for species of unique, rare, threatened or endangered plants or animals or their habitats as listed in the General Plan. The overlay applies to policy areas identified on the Open Space Diagram.

82.13.030 – Application Requirements

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 district, the land use application shall include a biotic resources report prepared as follows, except where the Director finds that prior environmental studies approved by the County have determined that the site does not contain viable habitat.

(a) Report content. The biotic resources report shall identify all biotic resources located on the site and those on adjacent parcels that could be impacted by the proposed development, and shall also identify mitigation measures designed to reduce or eliminate impacts to the identified resources, and shall be submitted along with the application for the proposed development.

(b) Report preparation. The biotic resources report shall be prepared by an appropriate expert such as a qualified biologist, botanist, herpetologist, or other professional "life scientist"

82.13.040 – Development Standards

The conditions of approval of any land use application approved with the BR overlay district shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.

5. SIGNIFICANT UNMITIGATED IMPACTS

The expected increase in population addressed in the General Plan will cause a significant unmitigated irreversible impact to biological resources. The increase in population will require the loss of resources and habitat that currently support native plants, animals, and habitat within the County and in areas that provide the County with resources such as electricity, water, and fuel.

E. CULTURAL AND PALEONTOLOGICAL RESOURCES

1. SETTING

Cultural Resources

The material or physical remains of past human activity are referred to as "cultural resources." Cultural resources include both archaeological and historical resources. Archaeological resources, in turn, may be either prehistoric or historic. These resources can encompass a wide range of physical objects, sites, structures, and even landscapes that are the direct result of intentional or inadvertent human actions. Cultural resources can contribute to our understanding of past human activities, including Native American history, local and regional European, African and Asian settlement in North America, urban development, historic engineering activities, cross-cultural influences, and human adaptations to the environment. Cultural resources, like many natural resources found on our planet, are non-renewable. Unquestionably, once they have been destroyed, by whatever means, a fragment of our collective history permanently disappears.

Prehistoric, the period before European arrival in the New World, archaeological sites may include the remains of villages and campsites, food processing locations, areas for exploiting local floral and faunal resources, lithic resource procurement and stone tool production locations, and burial and cremation areas. They may also consist of trails, rock art and ground figures (geoglyphs), isolated artifacts, and sacred locations. Historic archaeological resources, on the other hand, derive from various periods after initial European contact, during which written European histories, to varying extents, occurred. Resources from this period include refuse deposits such as can and bottle dumps, filled-in privy pits and cisterns, melted adobe walls and foundations, collapsed structures and associated features, and roads and trails. They may be related to mission activities, travel and exploration, early settlement, homestead activities, cattle herding, lumbering, and mining, among other themes. In San Bernardino County, historic archaeological resources date from the earliest Spanish mission activities (Ca. 1770) to the mid 20th Century (AD. 1950). This class of resources, often related to a historic archaeological resource, includes structures of any type that are 50 years or more in age. This resource category often referred to as the "built environment," comprises houses or other structures, irrigation works, bridges, dams, and other 'built' historic engineering features.

As the largest County in the lower 48 states, San Bernardino County comprises three main ecological zones: valley, mountain, and desert. These differing zones are responsible for the many unique prehistoric and historic cultures that have developed over the past approximate 10,000 years of human occupation within the County. Californian archaeologists have generally divided the prehistoric occupation of southern California into three broad categories:

- The Paleo-Indian Period: the earliest inhabitants within the County and dating from approximately 10,000 years before present to 8,000 before present Within this tradition, there may have developed two sub-cultures: Pluvial Lake, where interior lake eco-systems were exploited (this area is now the Mojave Desert), and Coastal, where people relied extensively on the littoral ecozone;
- The Archaic Period: is distinguished by a dramatic change in the climate (also defined as the division between Pleistocene to Holocene geologic periods) where the

western pluvial lakes dried, possibly resulted in an increased population along the littoral zone from approximately 8,000 years before present to 4000 years before present; and

- The Late Prehistoric: is characterized by semi-nomadism, the development of small village complexes and the early advent of agriculture from approximately 4,000 years before present to European contact (18th century).

Protohistoric, the period just before European contact, information on the occupants of San Bernardino County is largely based on ethnographic writings of Spanish missionaries, who sought to establish groupings of people more for their own purposes of converting Native Americans to Catholicism. Trending from the Pacific Ocean to the Colorado River, these Native American groups comprise the Gabrielino, Luiseno, Kitanemuk, Cahuilla, Serrano, Vanume, Kawaiisu, Panamint Shoshone, Southern Paiute, Mojave, and Haichidhoma. This information. The ethnographic inhabitants of San Bernardino County were Numic- and Takic-speaking populations. Exceptions are the Mojave and Haichidhoma people along the Colorado River who are Yuman-speaking.

The historic period in San Bernardino County began with the Spanish occupation and construction of the Mission San Gabriel Arcangel, located northeast of present day Los Angeles. The Mexican Period (A.D. 1821 to 1848), the period marked by the Mexican-American independence from Spain, follows the Spanish Period. In 1846, the United States declared war on Mexico. After two years, Mexico signed the Treaty of Guadalupe Hidalgo thereby relinquishing the area that would become the modern southwestern states of Texas, New Mexico, Arizona, and California. The American Period began in 1848 and continues to the present.

Each of these cultural periods has produced rich material inventories and complex social organizations that have left behind important and non-replaceable cultural resources. These resources are represented in the cultural resources files stored at the San Bernardino Archaeological Information Center (AIC), the California Historical Resources System for the County of San Bernardino. Currently, the AIC has information on more than 12,000 prehistoric and historic archaeological sites and 4,700 isolates (archaeological sites with three or fewer artifacts). Approximately 5,000 historic buildings or structures in the County are eligible or already listed in the California Register of Historical Resources. There are an additional 40 California Historical Landmarks located within the County and 53 properties listed in the National Register of Historic Places.

In addition to the traditional cultural resources associated with archaeological sites and historic buildings and structures, traditional cultural properties (TCPs) must also be taken into consideration. TCPs are "a traditional cultural property…that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community." Typically, TCPs are associated with the Native American community because of their spiritual relationship with landscapes. However, because TCPs are viewed as sacrosanct, many tribal elders and community leaders tend to not release the location of these properties.

The AIC has 4,566 cultural resources technical reports on file and has mapped only 4,000 of these surveys and another 1,000 surveys are pending review. Based on these surveys, approximately only 25% of the County has been surveyed for cultural resources; however, many of these surveys were conducted prior to current professional standards established for

cultural resources surveys and thus need to be re-surveyed (Robin Laska, AIC, personal communication December 15, 2005). The figures for known sites and previous surveys are constantly changing as new data and results from technical studies arrive, and as California Register of Historical Resources and National Register of Historic Places paperwork is processed. The preponderance of both prehistoric and historic sites throughout the County, and the vast areas that have yet to be systematically surveyed for cultural resources, indicate that an equal amount of cultural resources, as yet unidentified, are present. Given the rapid development within the County, numerous cultural resource sites will be impacted by development.

Paleontological Resources

Paleontological resources are the evidence of ancient life forms that through time, the remains of these ancient life forms become fossils. A process in which the remains (usually bone) is mineralized. Paleontological resource consists of fossils and trace fossils (outlines or imprints of ancient life forms) preserved in sedimentary rock units, particularly fine-to-medium-grained marine, lake, and stream deposits such as limestone, siltstone, sandstone, or shale, and in ancient soils (paleosols). They are also found in coarse-grained sediments such as conglomerates or coarse alluvium. Though it is rare for fossils to occur in igneous or metamorphic rock units, these occurrences are known to occur in San Bernardino County.

Fossils may occur throughout a sedimentary unit, and in fact are more likely to be preserved in the subsurface, where they have not been damaged or destroyed by previous ground disturbance, amateur collecting, or natural causes such as erosion. In contrast, cultural resources are often recognized by surface evidence of their presence. A field survey for paleontologic resources can indicate that sediments likely to contain fossils are present, even if fossils are not observed on the surface. However, excavation is often the only way in which fossils are discovered.

San Bernardino County has more than 3,000 paleontological localities recorded in the Regional Paleontologic Locality Inventory at the San Bernardino County Museum. Many of these known localities occur on private land, which is subject to development. Others occur on federal lands and their resources are protected by federal agencies such as the BLM and the USFS. Table 1 provides an overview of the paleontological history of San Bernardino County as well as types of fossils exhibited within the county.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Cultural Resource, if the project would cause any of the following effects:

- *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.*
- *Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.*
- *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.*
- *Disturb any human remains, including those interred outside of formal cemeteries.*

3. IMPACT ANALYSIS

Impact CR – 1
Future projects to be developed in the County may take place in an area with a Cultural Resources Overlay Designation or in an area that has not been disturbed by prior development activities. Therefore, it is possible that a future development may disturb known and unknown archaeological sites, historic buildings or structures, or paleontological resources. The development review process will need to address impacts to these resources.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

Mitigation CR-1
The County shall identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.

Mitigation CR-2
The County shall require a cultural resources field survey and evaluation prepared by a qualified professional for projects located within the mapped cultural resource overlay area.

Mitigation CR-3
Mitigation of impacts to important cultural resources shall follow the standards established in Section 15064.5 of the California Environmental Quality Act Guidelines, as amended to date. For historic resources this includes the Secretary of Interior Standards for the Treatment of Historic Properties with Guidelines for Previously Rehabitating, Restoring and Reconstructing Historic Buildings according to CEQA Section 15126.4 (b)(1).

Mitigation CR-4
The County shall 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.

Mitigation CR-5
The County shall comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

Mitigation CR-6
Site record forms and reports of surveys, test excavations, and data recovery programs shall be filed with the Archaeological Information Center at the San Bernardino County Museum, and shall be reviewed and approved in consultation with that office. Preliminary reports verifying that all necessary archaeological or historical fieldwork has been completed shall be required prior to project grading and/or building permits; and Final reports shall be submitted and approved prior to project occupancy permits.

Mitigation CR-7
Any artifacts collected or recovered as a result of cultural resource investigations shall be catalogued per San Bernardino County Museum guidelines and adequately curated in an institution with appropriate staff and facilities for their scientific information potential to be

preserved. This shall not preclude the local tribes from seeking the return of certain artifacts as agreed to in a consultation process with the developer/project archaeologist.

Mitigation CR-8
When avoidance or preservation of an archaeological site or historic structure is proposed as a form of mitigation, a program detailing how such long-term avoidance or preservation is assured shall be developed and approved prior to conditional approval.

Mitigation CR-9
In areas of potential but unknown sensitivity, field surveys prior to grading shall be required to establish the need for paleontologic monitoring.

Mitigation CR-10
Projects requiring grading plans that are located in areas of known fossil occurrences or demonstrated in a field survey to have fossils present, shall have all rough grading (cuts greater than three feet) monitored by trained paleontologic crews working under the direction of a qualified professional, in order that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils; the latter recovered by screen washing of bulk samples.

Mitigation CR-11
All recovered specimens shall be prepared to the point of identification and adequately curated into retrievable collections of the San Bernardino County Museum for their scientific information potential to be preserved.

Mitigation CR-12
A report of findings with an itemized accession inventory shall be prepared as evidence that monitoring has been successfully completed. A preliminary report shall be submitted and approved prior to granting of building permits, and a final report shall be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports shall be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

Mitigation CR-13
Consistent with Senate Bill 18, as well as possible mitigation measures identified through the CEQA process, the County shall work and consult with local tribes to identify, protect and preserve TCPs. TCPs include man-made sites and resources, as well as natural landscapes, which contribute to the cultural significance of areas.

Mitigation CR-14
The County shall protect confidential information concerning Native American cultural resources with internal procedures, such as keeping confidential archaeological reports away from public view or discussion in public meetings. Information provided by tribes to the County shall be considered confidential or sacred.

Mitigation CR-15
The County shall work in good faith with the local tribes, developers/applicants and other parties should the local affected tribe request the return of certain Native American artifacts from private development projects. The developer is expected to act in good faith when considering the local tribe's request for artifacts. Artifacts not desired by the local tribe shall

be placed in a qualified repository as established by the California State Historical Resources Commission. If no facility is available, then all artifacts shall be donated to the local tribe.

Mitigation CR-16
The County shall work with the developer of any "gated community" to ensure that the Native Americans are allowed future access, under reasonable conditions, to view and/or visit known sites with the "gated community." If a site is identified within a gated community project, and preferable preserved as open space, the development shall be conditioned by the County allow future access to Native Americans to view and/or visit that site.

Mitigation CR-17
Because contemporary Native Americans have expressed concern over the handling of the remains of their ancestors, particularly with respect to archaeological sites containing human burials or cremations, artifacts of ceremonial or spiritual significance, and rock art, the following actions shall be taken when decisions are made regarding the disposition of archaeological sites that are the result of prehistoric or historic Native American cultural activity:

- The Native American Heritage Commission and local reservation, museum, and other concerned Native American leaders shall be notified in writing of any proposed evaluation or mitigation activities that involve excavation of Native American archaeological sites, and their comments and concerns solicited.
- The concerns of the Native American community shall be fully considered in the planning process.
- If human remains are encountered during grading and other construction excavation, work in the immediate vicinity shall cease and the County Coroner shall be contacted pursuant to the state Health and Safety Code.
- In the event that Native American cultural resources are discovered during project development and/or construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting U.S. Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.
- If Native American cultural resources are discovered, the County shall contact the local Tribe. If requested by the Tribe, the County shall, in good faith, consult on the discovery and its disposition with the Tribe.

Mitigation CR-18
Within the County's Development Code, two overlay districts have been established relating specifically to preserving cultural resources within the County. These areas are designated Cultural Resources Preservation "CP" Overlay District and Paleontological Resources "PR" Overlay District.

The intent of the "CP" District is to identify and preserve important archeological and historic resources. The intent of the "PR District is to identify and preserve significant paleontological resources since they are unique and non-renewable, thus promoting County identity and conserving scientific amenities for the benefit of future generations. These Districts work as described below.

82.14.020 – CP Overlay District Location Requirements

The CP overlay district may be applied to areas where archaeological and historic sites that warrant preservation are known or are likely to be present. Specific identification of known cultural resources is indicated by listing in one or more of the following inventories:

(a) California Archaeological Inventory;

(b) California Historic Resources Inventory;

(c) California Historical Landmarks;

(d) California Points of Historic Interest; and/or

(e) National Register of Historic Places.

82.14.030 – Application Requirements

The application for a project proposed within the CP overlay district shall include a report prepared by a qualified professional that determines through appropriate investigation the presence or absence of archaeological and/or historical resources on the project site and within the project area, and recommends appropriate data recovery or protection measures. The measures may include:

(a) Site recordation:

(b) Mapping and surface collection of artifacts, with appropriate analysis and curation;

(c) Excavation of sub-surface deposits when present, along with appropriate analysis and artifact curation; and/or

(d) Preservation in an open space easement and/or dedication to an appropriate institution with provision for any necessary maintenance and protection.

82.14.040 – Development Standards

(a) The proposed project shall incorporate all measures recommended in the report required by Section 82.14.030 (Application Requirements).

(b) Archaeological and historical resources determined by qualified professionals to be extremely important should be preserved as open space or dedicated to a public institution when possible.

82.21.020 – PR Overlay District Location Requirements

The Paleontologic Resources (PR) Overlay District may be applied to those areas where paleontologic resources are known to occur or are likely to be present. Specific identification of known fossil occurrences or potential paleontologic sensitivity is indicated by listing in the locality files of one or more of the following institutions:

(a) San Bernardino County Museum;

(b) University of California; and

(c) Los Angeles County Museum.

82.21.030 – Development Standards

When a land use is proposed within a PR overlay district, the following criteria shall be used to evaluate the project's compliance with the intent of the overlay.

(a) Field survey before grading. In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.

(b) Monitoring during grading. A project that requires grading plans and is located in an area of known fossil occurrence within the overlay district, or that has been demonstrated to have fossils present in a field survey, shall have all mass grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils; the latter recovered by screen washing of bulk samples.

(c) Disposition of specimens. All recovered specimens shall be prepared to the point of identification and adequately curated into retrievable collections of an institution with appropriate staff and facilities for their scientific information potential to be preserved.

(d) Report of findings. A report of findings with an itemized accession inventory shall be prepared as evidence that monitoring has been successfully completed. A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The adequacy of paleontologic reports shall be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

(e) Mitigation financial limits. In no event shall the County require the applicant to pay more for mitigation as required by Subsections B., C., and D., above within the site of the project than the following amounts:

(1) One-half of one percent of the projected cost of the project, if the project is a commercial or industrial project;

(2) Three-fourths of one percent of the projected cost of the project for a housing project consisting of one unit; and

(3) If a housing project consists of more than one unit, three-fourths of one percent of the projected cost of the first unit plus the sum of the following:

(A) $200 per unit for any of the next 99 units;
(B) $150 per unit for any of the next 400 units; and
(C) $100 per unit for units in excess of 500.

5. SIGNIFICANT UNMITIGATED IMPACTS

There are no impacts to cultural and paleontological resources that can not be mitigated to below a level of significance. Although there are thousands of cultural and paleontological resources within the County, potentially significant impacts to undiscovered specific resources through the actions proposed in this DEIR may occur. However, through implementation of the mitigation measures cited above and imposed through the regulations of the County Development Code, all impacts to the important cultural and paleontological resources from future development are capable being mitigated to below a level of significance.

Table IV-E-1. Paleontological History of San Bernardino County

ERA	Traits	San Bernardino County Fossil Occurrences
Precambrian Era (4.6 billion to 550 million years ago)	Single-celled organisms	San Bernardino County in the Beck Springs Formation. These unique 1.3 billion year old life forms are the world's oldest known mitosing cells.
Paleozoic Era (550 to 245 million years ago):	Invertebrates	San Bernardino County Trilobites, a class of arthropods, occur in shales in the Marble Mountains and in the limestones of the Providence Mountains. Limestones at Clark Mountain and in the Victorville and Oro Grande areas contain abundant remains of invertebrate corals, brachiopods, and gastropods.
Mesozoic Era (245 to 65 million years ago)	Dinosaurs	The only known tracks of dinosaurs in California are found in San Bernardino County. They are approximately 180 million years old. Cajon Pass contains the fossil remains of mososaurs and elasmosaurs, giant marine reptiles that lived during the Cretaceous Period at the end of the Mesozoic Era.
Cenozoic Era (65 million years to Present):	Mammals	Many vertebrate fossils are known from the Cenozoic Era in San Bernardino County. They are particularly important in that they give information about the timing of faults, which relate directly to today's landforms
Tertiary Period (65 to 2 million years)		
Oligocene (34 million years to 24 million years)		The Cady Mountains in San Bernardino County contain the earliest Tertiary vertebrate fossils known in the Mojave Desert, at 26 million years old.
Miocene (24 million years to 5 million years)		This is the type locality of the Barstovian Land Mammal Age from 17 to 13 million years old. This formation extends to the Yermo (Toomey) Hills and east toward Baker, and fossils are found throughout exposures of the Barstow Formation. These animals include extinct camels, three-toed horses, primitive elephants called "gompotheres", giant bear-dogs, and very important small vertebrate fossils including rodents, which allow precise dating of the rock units.
Quaternary Period (2 million years to Present)		
Plio-Pleistocene (5 million to 10,000 years ago)		Plio-Pleistocene fossils, including extinct elephants and rodents, which allow the dating of activity along the San Jacinto fault and the San Andreas fault at the start of the early Pleistocene.

F. GEOLOGY AND SOILS

1. SETTING

San Bernardino County has very diverse geology, topography and physiography that affect the suitability of a site for various types of existing and potential future land uses. The Safety Background Report (2005) describes the geologic setting and seismic and non-seismic geologic hazards within the County that can impact land use. There are three primary physiographic regions in the County as used throughout this DEIR. The Valley Region consists of the area south of the San Gabriel and San Bernardino Mountains and includes the Upper Santa Ana Valley and Chino Hills. The Mountain Region includes the eastern San Gabriel Mountains and San Bernardino Mountains. The Desert Region is the area east and north of the Mountain Region and includes mountains and valleys within the Mojave Desert, Basin and Range and a portion of the Lower Colorado physiographic provinces. A general discussion of the types of geologic and seismic hazards present within the County is presented below and the reader is referred to Section 7 Safety Background Report (2005), proposed as part of this project, for additional details and maps showing the areas susceptible to potentially significant geologic and seismic hazards.

Soils are surficial geologic materials that form as a result of weathering, erosion and depositional processes at the ground surface and shallow subsurface, and are also a function of the slope of the ground surface and nature and type of underlying geologic materials (e.g., alluvial sand, volcanic rock, etc.). The type of soils that are suitable for agriculture, urban development, and native habitats are described and shown on maps in the Section 6 of the Conservation Background Report (2005). The primary focus of the County's General Plan is to identify, protect and preserve soils suitable for agriculture. Other goals are to minimize land uses which cause wind and water erosion of soils that can impact surface water and air quality. Soil properties are also important for septic systems or other alternative wastewater disposal systems in areas without sanitary sewers.

There are at least 46 active or potentially active faults within or near the County with the potential to create a magnitude earthquake of 3.7 or greater up to approximately magnitude 7.5-8.0 (Table 7-1 in Safety Background Report). There is also an extensive history of large, damaging earthquakes occurring within the County ranging from the 1812 Wrightwood earthquake (7.5 magnitude) to the 1999 Hector Mine earthquake (7.1 magnitude). Paleoseismic studies of several major faults within the County have identified average recurrence intervals for large earthquakes on individual faults or fault segments that range from approximately 105 years on the San Andreas Fault near Wrightwood to several thousand years or more on faults in the Eastern Mojave Desert. In addition to strong ground shaking from earthquakes on faults located within the County, large earthquakes on faults near the County boundaries also have and will impact property within the County. Many of the other potential geologic hazards in the County are associated with earthquake activity including surface fault rupture, flooding due to potential dam failure, soil liquefaction, seismically induced landslides, and the potential for seiches to occur within lakes and reservoirs. Surface fault rupture can directly impact properties traversed by or adjacent to an active fault. The other seismic hazards may be triggered by more remote earthquakes up to several tens of kilometers from a site. Earthquake hazards are greatest in the western portion of the County, but occur throughout all three regions.

Landslides and mudflow hazards exist throughout the County, on steep hillsides and in creek and streambed areas. These can be triggered by earthquakes, heavy rain events, and other

causes. The potential for landslide hazards to impact life and/or property is greatest in the Mountain Region and Chino Hills in the Valley Region of the County. Other less-common non-seismic geologic hazards include volcanic hazards and expansive or collapsible soils.

High wind conditions and stormwater runoff can cause significant soil erosion. Aside from natural wind and water erosion in the County, disturbing desert pavement or topsoil by grading or use of off-road vehicles, and increased stormwater runoff volumes and intensity associated with paved surfaces and areas with less vegetation due to development also cause increased susceptibility of soil to erosion. Areas denuded of vegetation by fires are also highly susceptible to significant increased erosion during subsequent rainstorms until sufficient vegetation is re-established.

a) Valley Region

The high population density compared to the Mountain and Desert regions coupled with the presence of the San Andreas, San Jacinto, and the Cucamonga faults and close proximity to other major faults make the Valley Region of the County have the greatest risk for potential geological hazards.

Artesian groundwater conditions exist along the San Jacinto fault in the Bunker Hill Water Basin where ground water pools up behind the fault and rises towards the surface. These high ground water levels create increased potential for soil liquefaction to occur during an earthquake. Other problems caused by artesian ground water conditions include flooded basements, buckling streets, and damage to concrete-lined flood control channels.

Soils most suitable for agriculture are present in the Valley Region but these soils are also suitable for urban development.

b) Mountain Region

Like the Valley Region, earthquakes are the major geologic hazard for the Mountain Region. Major faults in or directly adjacent to the Mountain Region are the San Andreas, the San Jacinto, the North Frontal, and the Cucamonga faults. Both the San Andreas and San Jacinto faults have generated large (magnitude 6 or greater) earthquakes historically. The Mountain Region has the greatest potential for landslides such as the one that affected homes in the Rimforest community in 1992 as well as water erosion due to the steep slopes and higher precipitation than the Valley or Desert regions. Rock falls are also well known hazards in the Forest Falls area.

c) Desert Region

Prominent active faults in the Desert region include the San Andreas, the Garlock, the Buillon-Lavic Lake Kickapoo (source of the 1999 Hector Mine magnitude 7.1 earthquake), and the Camp Rock-Emerson-Johnson Valley-Landers faults (source of the 1992 Landers magnitude 7.3 earthquake). In addition to strong ground shaking the 1993 and 1999 earthquakes caused significant surface fault rupture. There are several other faults with similar characteristics that could generate similar earthquakes to the 1993 and 1999 events.

Mountainous areas of the Desert region may be susceptible to landslides, particularly associated with large earthquakes. Desert soils are susceptible to erosion where disturbed due to the limited vegetation and low moisture content, and common high winds and infrequent high intensity rainfall events that may occur. Currently, agricultural use of soils in the Desert region is generally limited by available water, and some areas have highly alkaline soils and playas that are unsuitable for agricultural uses.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Geology and Soils, if the project would cause any of the following effects:

- *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:*
    - *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault zoning Map issued by the state Geologist for the area or based on other substantial evidence of a known fault.*
    - *Strong seismic ground shaking.*
    - *Seismic-related ground failure, including liquefaction.*
    - *Landslides.*
- *Result in substantial soil erosion or loss of topsoil.*
- *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- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.*
- *Be located on expansive soil, as defined in Table 18 1-B of the California Building Code (2001), creating substantial risks to life or property.*
- *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.*

3. IMPACT ANALYSIS

Impact GEO-1

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. The presence or absence of other potential hazards and presence of poor or erosion susceptible soil conditions would be assessed on a site-specific basis. Potential hazards associated with landslides (both seismic and non-seismic) are limited to sites situated on and near the crest and base of slopes. Liquefaction susceptible sites are limited to areas of the County underlain by loose, unconsolidated granular soils and shallow groundwater (typically 50 feet or less below ground surface). Grading on slopes and ridgelines results in impacts to the topography and increase the likelihood of erosion.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact GEO-2
For some sites, the existing County Hazard Overlay Maps and General Plan are sufficient to assess whether significant impacts associated with geology or soil conditions are likely or whether additional site-specific study and investigation as warranted. The General Plan Update addresses these issues with current goals and policies. In the proposed project, the Update maps, policies and development requirements, are consistent with newer data, standards of practice, and state regulations.

This impact can be fully mitigated through the adoption of certain measures presented in Section 4, below.

Impact GEO-3
The goals, policies, and programs minimize topographic alteration; however, significant impacts to the topography will occur at locations where grading and filling are allowed as part of a development within the provisions of the General Plan. These would be most significant on hillsides.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

The following mitigation measures will help reduce soil and geology impacts created by the proposed project.

Mitigation GEO-1
The County shall protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

Mitigation GEO-2
Desert playas shall not be used for habitable structures or have large quantities of waters applied to them, except for mining operations or to maintain existing wetlands.

Mitigation GEO-3
Highly alkaline soils present special problems for all plant species and should generally be avoided. In addition to their being unsuitable for building structures, desert playas and lakebeds are not suitable for agricultural uses that involve growing of crops and irrigation.

Mitigation GEO-4
Preservation of prime and statewide important soils types, as well as areas exhibiting viable agricultural operations, as shown on the County's Resource Overlay Maps, shall be considered as an integral portion of the Open Space Element when reviewing development proposals.

Mitigation GEO-5
Within the County's Development Code, one overlay district has been established relating specifically to protect county citizens from geological hazards. These areas are designated Geologic Hazard "GH" Overlay District which identifies areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow, rockfall and liquefaction. This District operates as shown below.

82.17.040 – Development Standards

Development and land uses proposed within the GH overlay district shall comply with the following standards.

(a) A structure used for human occupancy shall be located 50 feet or farther from any active earthquake fault traces. Lesser setbacks may be applicable in certain situations as determined by an appropriate geologic investigation and approved by the County Geologist or other engineering geologist designated by the Building Official.

(b) A structure used for critical facilities shall be located 150 feet or farther from any active earthquake fault trace as indicated by General Plan. Critical facilities shall include dams, reservoirs, fuel storage facilities, power plants, nuclear reactors, police and fire stations, schools, hospitals, rest homes, nursing homes and emergency communication facilities.

(c) Utility lines and streets shall not be placed within the construction setback area of a hazardous fault except for crossing which can be made perpendicular to the fault trace or as recommended by the project geologist and approved by the County Geologist or individual designated by the Building Official.

(d) The use of development restricted areas as recreation and common open spaces is encouraged.

Chapter 83.12 – Hillside Grading Standards

83.12.010 – Purpose

This Chapter establishes regulations for development within hillside areas to:

(b) Ensure that development in the hillside areas is designed to fit the existing landform.

(c) Preserve significant features of the natural topography, including swales, canyons, streams, knolls, ridgelines, and rock outcrops.

(e) Provide alternative approaches to conventional grading practices by achieving development intensities that are consistent with the natural characteristics of hillside areas (e.g., land form, scenic quality, slopes, and vegetation).

5. SIGNIFICANT UNMITIGATED IMPACTS

There are none.

G. HAZARDS AND HAZARDOUS MATERIALS

1. SETTING

Hazards

Aviation Activities

The San Bernardino County Department of Airports provides for the management, maintenance, and operation of six County-owned airports (i.e., Apple Valley, Chino, Barstow-Daggett, Needles, Twentynine Palms, and Baker). The department also assists the County's private and municipal airport operators in the planning, interpretation, and implementation of the Federal Aviation Administration (FAA) general aviation requirements.

Rather than establish an Airport Land Use Commission, the San Bernardino County Board of Supervisors designated the County Planning Department as the agency with the responsibility for airport land use review and the Airport Mediation Board as the dispute mediator. Each airport within the County must prepare land use standards and incorporate them into an Airport Comprehensive Land Use Plan (ACLUP), which would be adopted by the County of San Bernardino and approved by the State Division of Aeronautics.

The following 15 public use airports (see Table IV-G-1) within San Bernardino County have ACLUP documents which may be viewed at the following website: http://www.co.san-bernardino.ca.us/landuseservices/ACLUPs/Default.asp.

Table IV-G-1. Public Use Airports in San Bernardino County

Apple Valley	Needles
Baker	Redlands
Barstow-Daggett	Rialto
Big Bear City	Sun Hill Ranch
Cable	Southern California Logistics
Chino	Twentynine Palms
Hesperia	Yucca Valley
Hi-Desert	

There are four military bases located within San Bernardino County, including a portion of Edwards Air Force Base, Twentynine Palms Marine Corps Air Ground Combat Training Center, Fort Irwin, and a portion of the China Lake Naval Weapons Center. Of these, only Twentynine Palms and Fort Irwin (Bicycle Lake Army Airfield/National Guard) have airfields within the County.

Wildland Fires

There are two distinct components of the fire issue: wildland fires and urban fires. Wildland fires can be naturally caused (e.g., by lightning) or caused by man. Urban fires are almost exclusively a man-made hazard. The urban-wildland interface forms a third, less distinct component, where the natural and urban components merge. Wildland fires are also known

as brush or forest fires. Although wildfires often start in remote areas, wildland fires are capable of causing extensive damage due to extensive urban interface.

The San Bernardino County Fire Department provides the administration and support for 32 fire districts, and serves over 16,000 square miles of unincorporated area and five cities (i.e., Adelanto, Fontana, Grand Terrace, Needles and Yucca Valley). The San Bernardino County Fire Department has 63 fire stations, and provides services through four divisions: Mountain Division, North Desert Division, South Desert Division and Valley Division. The San Bernardino County Fire Department is a full service, regional fire and emergency medical service agency; however, the department has numerous automatic and mutual aid agreements with local, state and federal jurisdictions for use and assignment of resources in the event of major emergencies.

In addition to the San Bernardino County Fire Department stations, there are nearly 50 fire stations including USFS and California Department of Forestry and Fire Protection stations within the County of San Bernardino and within city jurisdictions.

The California Fire Plan is a comprehensive plan for wildland fire protection in the state. The Plan is a cooperative effort between the State Board of Forestry and the California Department of Forestry and Fire Protection.

The basic principles of the Fire Plan are to:

- Involve the Community;
- Assess Community Risk; and
- Develop Solutions and Implement Projects.

As an integral part of the California Fire Plan, prefire management focuses on taking action before fires occur. Projects are designed and implemented to reduce the frequency, severity, and size of wildfires, and associated losses and costs:

- Fuel breaks to stop wildfires;
- Wildfire Protection Zones to buffer communities;
- Forest stewardship for healthy forests;
- Prescribed fire to reduce fire fuels;
- Defensible space for homes and firefighters; and
- Fire safe landscaping.

Hazardous Materials

Definition

A hazardous material is defined as "any material that because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment." Thus, the term hazardous material is a broad term for all substances that may be hazardous, specifically including hazardous substances and hazardous waste. Substances that are flammable, corrosive, reactive, oxidizers, radioactive, combustible, or toxic are considered hazardous.

Key Regulatory Agencies and their Authority

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) administer the requirements of the Clean Water Act (reducing direct pollutant discharges into waterways adversely affecting water quality).

The Department of Toxic Substances Control administers the Resource Conservation and Recovery Act (RCRA) program (defines hazardous waste, enforces requirements on treatment, storage and disposal facilities, and oversees a cradle-to-grave tracking system).

The Hazardous Substances Highway Spill Containment Act gives the California Highway Patrol (CHP) the authority to respond to spills of hazardous materials on the state's highway system.

The San Bernardino County Fire Department – Hazardous Materials Division is the local agency responsible for the enforcement of a variety of hazardous materials management requirements. They are the state designated Certified Unified Program Agency (CUPA) for the County of San Bernardino (excluding the City of Victorville). The purpose of the CUPA program is to provide a comprehensive approach to reduce the overlapping and sometimes conflicting requirements of different governmental agencies. The CUPA provides consolidation and consistency in reporting requirements, permit formats, inspection criteria, enforcement standards, and fees for various hazardous materials programs. The CUPA is required by state law to maintain a list of facilities within the County that are known to use, store, and/or generate hazardous materials/wastes. Facilities that handle hazardous materials or generate hazardous waste must obtain a permit from the CUPA. The San Bernardino County Fire Department manages six hazardous material and hazardous waste programs:

- Hazardous Materials Release Response Plans and Inventory (Business Plan).
- California Accidental Release Program.
- Underground Storage Tanks (USTs).
- Aboveground Petroleum Storage Spill Prevention Control and Countermeasure (SPCC).
- Hazardous Waste Generation and Onsite Treatment.
- Hazardous Materials Management Plans and Inventory Statements under Uniform Fire Code Article 80.

Hazardous Materials – Facility Siting

According to "EnviroFacts" a U.S. EPA database, Table IV-G-2 below, presents a summary of the known hazardous waste facilities in the County of San Bernardino.

Table IV-G-2. Known Hazardous Waste Activities in San Bernardino

Facilities that produce and release air pollutants		206
Facilities that reported toxic releases		249
Facilities that have reported hazardous waste activities		2398
Large quantity generators	291	
Small quantity generators	1780	

Table IV-G-2. Known Hazardous Waste Activities in San Bernardino

Transporters	162
Treatment, Storage and Disposal Facilities	22
Potential hazardous waste sites that are part of Superfund program	55
Sites currently on the Final National Priorities List	4
Sites not on the National Priorities List	51
Facilities that generate hazardous waste from large quantity generators	0

Source: EPA Envirofacts (www.epa.gov/enviro, quick search San Bernardino, CA. Dec 2005)

In San Bernardino County, as of January 1, 2006, there are 55 potential hazardous waste sites that have been listed under the Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund. Within this program, there is a National Priorities List, made up of four hazardous waste sites that have been assigned the highest cleanup priority. These four National Priorities List sites are:

- Marine Corps Logistics Base in Barstow;
- George Air Force Base in Victorville;
- Newmark Groundwater Contamination in San Bernardino; and
- Norton Air Force Base in San Bernardino.

Based on information provided by the San Bernardino County Fire Department, Hazardous Materials Division, as the CUPA for the County they hold approximately 6,500 permits with businesses throughout the County for various hazardous materials and hazardous waste activities. This number is a general figure based on known permit holders and can vary as businesses modify their activities.

Hazardous Materials Transportation

The Hazardous Materials Transportation Act is the federal legislation that regulates transportation of hazardous materials. The primary regulatory authorities are the U.S. Department of Transportation (DOT), the Federal Highway Administration, and the Federal Railroad Administration. The Hazardous Materials Transportation Act requires that carriers report accidental releases of hazardous materials to the DOT at the earliest practical moment (49 Code of Federal Regulations [CFR] Subchapter C). Incidents that must be reported include deaths, injuries requiring hospitalization, and property damage exceeding $50,000. Caltrans sets standards for trucks in California. The regulations are enforced by the CHP.

Common carriers are licensed by the CHP, pursuant to the California Vehicle Code, Section 32000. This section requires licensing of every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of their business in the delivery of hazardous materials.

Under the RCRA, the EPA sets standards for transporters of hazardous waste. In addition, California regulates the transportation of hazardous waste originating or passing through the state; state regulations are contained in the California Code of Regulations (CCR), Title 13. Hazardous waste must be regularly removed from generating sites by licensed hazardous

waste transporters. Transported materials must be accompanied by hazardous waste manifests.

The CHP and Caltrans have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. The CHP enforces materials and hazardous waste labeling and packing regulations that prevent leakage and spills of material in transit and provide detailed information to cleanup crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP. The CHP conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identifications teams at locations throughout the state.

Hazardous Materials Emergency Response

The Office of Emergency Services (OES) coordinates overall state agency response to major disasters in support of local government. The office is responsible for assuring the state's readiness to respond to and recover from natural, manmade, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response, and recovery efforts. During major emergencies, OES may call upon all state agencies to help provide support. Due to their expertise, the California National Guard, CHP, Department of Forestry and Fire Protection, Conservation Corps, Department of Social Services, and the Caltrans are the agencies most often asked to respond and assist in emergency response activities.

In addition, pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985, local agencies are required to develop "area plans" for response to releases of hazardous materials and wastes. These emergency response plans depend to a large extent on the business plans submitted by persons who handle hazardous materials. An area plan must include pre-emergency planning of procedures for emergency response, notification, coordination of affected government agencies and responsible parties, training, and follow-up.

The California Hazardous Materials Incident Reporting System is a post incident reporting system to collect data on incidents involving the accidental release of hazardous materials. Information on accidental releases of hazardous materials are reported to and maintained by OES.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a project could have a significant impact on Hazards and Hazardous Materials, if the project would cause any of the following effects:

- *Create a significant 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 Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.*
- *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.*
- *For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.*
- *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.*
- *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.*

3. IMPACT ANALYSIS

The following impact analysis discussion will compare the proposed project against the specific significance criteria outlined in Section 2 above and explain whether or not the project may result in a significant adverse environmental effect.

Impact HAZ-1
Future growth and development generated from implementation of the 2006 General Plan will result in projects which will generate hazardous wastes to or from the project site.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact HAZ-2
There is a strong connection between health risk and the proximity of the source of air pollution. Local jurisdictions have the responsibility for determining land use compatibility for sensitive receptors. A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to poor air quality such as hazardous emissions. The following are land uses where sensitive receptors are typically located: schools, playgrounds and childcare centers; long-term health care facilities; rehabilitation centers; convalescent centers; hospitals; retirement homes; and residences.

There are no specific provisions in the Plan Update that directly creates a new source that emits hazardous emissions, or handles hazardous materials, waste or substances within one-quarter mile of an existing or proposed school. In fact, the San Bernardino County General Plan Update can be a very effective tool to minimize the siting of any facilities that handle, use, store, transport or emit hazardous materials, substances or waste. Project reviews should identify both projects that have a direct probability of pollution-related emissions and projects that may be affected by existing (e.g., upwind) sources. The CARB developed an Air Quality and Land Use Handbook: A Community Health Perspective, which provides advisory recommendations for siting new sensitive land uses in proximity to sources which may pose a potential health risk. Table IV-G-3 outlines these recommendations.

Table IV-G-3. Recommendations on Siting New Sensitive Land Uses

Source Category	Advisory Recommendations
Freeways and high-traffic roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution centers	• 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 operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry cleaners using perchloroethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline dispensing facilities	• 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.

Source: Air Quality and Land Use Handbook: A Community Health Perspective, April 2005, CalEPA, CARB, Table 1-1, Page 4.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact HAZ-3

Government Code Section 65962.5 typically refers to a list of facilities that may be subject to RCRA permits. As previously stated, there are numerous existing facilities within the County that hold RCRA permits to engage in certain aspects of operations involving hazardous waste generation. There are no specific provisions in the San Bernardino County General Plan Update that directly require the siting of any new RCRA facilities, or modification of existing facilities. Any new hazardous waste operations coming into the County or modifications of existing facilities will, however, be required to comply with the Plan goals, policies and objectives, as well as all local, state and federal laws, regulations and programs related to hazardous waste generation activities.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact HAZ-4
Development of land uses allowed by the Update of the General Plan could potentially impact airspace required for safe aircraft operations. New development allowed by the General Plan could also be incompatible with existing or new airports exposing people and property on the ground to crash hazards associated with aircraft operations.

The two basic components of airport safety include the safety of those in the aircraft and the safety of those on the ground. The first involves the protection of airspace required for safe aircraft operations. The second deals with compatibility of surrounding land uses in terms of exposing people and property on the ground to crash hazards associated with aircraft operations.

This impact can be fully mitigated through the adoption of certain mitigation measurers presented in Section 4, below.

Impact HAZ-5
Pursuant to the Emergency Services Act, the state has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government agencies and private persons. Response to hazardous materials incidents is one part of this plan. The Plan is administered by the OES, which coordinates the responses of other appropriate agencies.

In addition, pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985, local agencies are required to develop "area plans" for response to releases of hazardous materials and wastes. These emergency response plans depend to a large extent on the business plans submitted by persons who handle hazardous materials. An area plan must include pre-emergency planning of procedures for emergency response, notification, coordination of affected government agencies and responsible parties, training, and follow-up.

Further, the Hazardous Materials Division of the San Bernardino County Fire Department works in conjunction with city and County firefighters to respond to hazardous materials incidents, assists the District Attorney in the investigation of environmental crimes, and responds to illegal waste disposal complaints.

A primary Board of Forestry responsibility is set forth in Public Resources Code Section 4130, which directs the Board to classify all lands within state responsibility areas (SRAs) based on cover, beneficial water uses, probable erosion damage and fire risks and hazards; to determine the intensity of protection to be given each type of wildland; and to prepare a fire plan to assure adequate statewide fire protection so that lands of each type be assigned the same intensity of protection. The Board's approach to assessing and ensuring wildland fire protection is the California Fire Plan.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact HAZ-6
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 wildland fire will also be subject to injury or death.

The majority of catastrophic wildland fires occur in the mountain region and impact both mountain and foothill communities. The desert-mountain interface areas of the county, from Pinon Hills easterly to southern Hesperia, south Apple Valley and on to Yucca and Morongo Valleys, also has a history of substantial property loss from wildland fires caused by heavy shrub and grass growth in and around rural residential areas.

Certain areas in the County are more susceptible to wildland fire risks and hazards due to: (1) the rugged terrain; (2) the types and amounts of vegetation; (3) pathogen infestation that leads to vegetation die-off; (4) climatic factors; and (5) the presence of people and development.

San Bernardino County has a history of significant wildland fires. In recent history, the Bear Fire burned over 50,000 acres in late 1970 and the Panorama Fire a decade later burned approximately 23,000 acres. The Panorama Fire of 1980, sparked in Waterman Canyon, was fueled by 100 mph Santa Ana winds. Development within the City of San Bernardino at the base of the foothills suffered the greatest damage. Neighborhoods in the North Park and Verdemont areas west of Waterman Canyon were especially hard hit. In 2003, the Old Fire and Grand Prix Fire began on different days and eventually joined and combined to burn over 160,000 acres. Over 1,100 homes were destroyed at a cost of almost 50 million dollars. Extensive damage occurred in the Del Rosa area of San Bernardino at the base of the foothills easterly of Waterman Canyon. The Old Fire and Grand Prix Fire, along with other fires during that same October, 2003 weekend, has been one of the most significant fire events in southern California history. The Old Fire was the first major fires in recent history to cause extensive damage to structures in the mountain top communities of the San Bernardino Mountains. The mountain community of Cedar Glen, near Lake Arrowhead, was particularly hard hit by a fire storm that cause extensive loss of property.

Following the 1980 Panorama Fire, several agencies, cities and the County formed a taskforce that prepared the Foothill Communities Protective Greenbelt Program. This program included recommendations that called for a variety of firesafe measures for residential development and individual building standards. These measures were adopted by the County as fire safety standards and were transformed into a Fire Safety Overlay in the 1989 General Plan. After the fires of 2003, the County made further safety improvements in the Fire Safety Overlay. These standards are carried forward in the Development Code Update that is part of the overall General Plan Update Program addressed in this EIR.

Despite the imposition of certain mitigation measures presented in Section 4 below, the impact cannot be fully mitigated to a level below significance.

4. MITIGATION MEASURES

By incorporating the following policies into all future proposed projects brought before the County for review and approval, potential adverse impacts to hazardous materials can be reduced or mitigated to a level of non-significance.

Mitigation HAZ-1

The County shall promote the proper handling, storage, transportation and disposal of hazardous materials and hazardous wastes through implementing a variety of regulatory, technical oversight, emergency, and waste management services. These programs are

effective mechanisms for reducing the potential impact to the public health and safety and the environment.

Mitigation HAZ-2
The County shall provide 24-hour response to emergency incidents involving hazardous materials or wastes in order to protect the public and the environment from accidental releases and illegal activities.

Mitigation HAZ-3
The County shall operate collection facilities and events for residents of San Bernardino County to safely dispose of household hazardous waste.

Mitigation HAZ-4
The County shall provide affordable waste management alternatives to businesses that generate very small quantities of waste through the Conditionally Exempt Small Quantity Generator program.

Mitigation HAZ-5
The County shall inspect hazardous material handlers and hazardous waste generators to ensure full compliance with laws and regulations.

Mitigation HAZ-6
The County shall implement CUPA programs for the development of accident prevention and emergency plans, proper installation, monitoring, and closure of USTs, and the handling, storage, transportation, and disposal of hazardous wastes.

Mitigation HAZ-7
The County shall conduct investigations and take enforcement action as necessary for illegal hazardous waste disposal or other violations of federal, state, or local hazardous materials laws and regulations.

Mitigation HAZ-8
The County shall manage the investigation and remediation of environmental contamination due to releases from USTs, hazardous waste containers, chemical processes, or the transportation of hazardous materials.

Mitigation HAZ-9
The County shall provide access to records for potential buyers of property to perform due diligence research and environmental assessment.

Mitigation HAZ-10
The County shall use the County's Certificate of Occupancy process to address identification of new facilities that may handle hazardous materials, including facilities subject to the California Accidental Release Prevention Program, accordance with Government Code 65850**.**2**.**

Mitigation HAZ-11
The County shall ensure that environmental review is conducted for projects proposed on sites that have been identified as contaminated, in accordance with all applicable local, state and federal laws, regulations.

Mitigation HAZ-12
The County shall protect vital groundwater resources and other natural resources from contamination for present and future beneficial uses, in accordance with all applicable local, state and federal laws, regulations and policies.

Mitigation HAZ-13
The County shall include extensive public participation in the County's application review process for siting specified hazardous waste facilities and coordinate among agencies and County departments to expedite the process. Apply a uniform set of criteria to the siting of these facilities for the protection of public health and safety, and the environment, in accordance with all applicable local, state and federal laws, regulations and policies.

Mitigation HAZ-14
The County shall require a conditional use permit/site approval and a Land Use/Zoning Amendment from applicants for specified hazardous waste facilities. The applicant shall meet all provisions of the specified hazardous waste facility overlay district as well as other General Plan and Development Code provisions.

Mitigation HAZ-15
The County shall comply, to the extent feasible, with the recommendations on siting new sensitive land uses (see Table IV-G-3), as recommended in CARB's Air Quality and Land Use Handbook: A Community Health Perspective.

Mitigation HAZ-16
For all proposed development in the County, the County shall require the review of any and all ACLUP within proximity of the development to determine land use compatibility, thereby minimizing [mitigating] any potential hazards to airport operations, people and property.

Mitigation HAZ-17
Within the County's Development Code, one overlay district has been established relating specifically to siting hazardous waste facilities in areas that protect the public health, safety, welfare and the environment. This zone also buffers hazardous waste facilities so that incompatible land uses cannot be permitted in the future. The zone also identifies permitted used, within the overlay zone and outlines the applicable permit review procedures. This zone operates as outlined below.

82.18.020 – Location Requirements

A. The Hazardous Waste Overlay District shall be applied to areas where a Hazardous Waste Facility is being approved concurrently.

B. The Hazardous Waste Overlay District may most appropriately be located in the following land use zoning districts:

(1) Resource Conservation (RC) for land disposal and incineration facilities. Incineration facilities shall not, however, be located in areas where emissions from the facility could directly impact food crops or livestock.

(2) Regional Industrial (IR) for treatment, incineration, recycling, storage and transfer facilities. Incineration facilities shall not, however, be located in areas where emissions from the facility could directly impact food crops or livestock.

C. Siting Criteria for Hazardous Waste Facilities: Refer to policies in the Safety Element of the General Plan or to Table 5-2 of Chapter 5 of the San Bernardino County Hazardous Waste Management Plan.

D. A Risk Assessment evaluating a proposal for a Hazardous Waste Facility shall determine the appropriate location for the overlay district for the facility.

82.18.020 – Development Standards

A. Review procedures include State and County processes. The types of applications required for local evaluation of a specified hazardous waste facility proposal include both discretionary and ministerial permits. The required permits or processes include:

(1) A General Plan Amendment to apply the HW overlay district to the proposed site and respective buffer.

(2) A Conditional Use Permit in compliance with Chapter 88.06 (Conditional Use Permit and Minor Use Permit).

(3) A Special Use Permit issued by the San Bernardino County Fire Department, which shall be required as a condition of approval of the Conditional Use Permit.

(4) Ministerial Permits from the Building and Safety Division for building, grading, flood control, etc.

For a complete discussion of the local application review process, refer to Section 5.3.3 and Table 5-4 of Chapter 5 of the San Bernardino County Hazardous Waste Management Plan.

B. Compatible land uses. The following list of use classifications may be compatible with a hazardous waste facility depending on the risk assessment and are allowed within a HW overlay district.

(1) Contract/Construction Services.

(2) Manufacturing Operations I & II.

(3) Open Lot Services I & II.

(4) Repair Services I, II & III.

(5) Salvage Services I and II.

(6) Transportation Services I & II.

(7) Wholesale/Warehouse Services I & II.

C. Prohibited land uses. The following uses are specifically prohibited from the HW Overlay District:

(1) Agricultural uses of any type.

(2) Residential uses of any type.

(3) Facilities with a high concentration of people/immobile population, including schools, hospitals, auditoriums, amphitheaters, jails, etc.

The county shall review proposed development projects within high fire hazard areas as shown on the Fire Safety Overlay Zone as found in the County's Development Code. New

development in this area shall be constructed to reflect the most current fires-safe building and development techniques and standards for structures built in a high fire hazard area.

Mitigation HAZ-18
The county shall review proposed development projects within high fire hazard areas as shown on the Fire Safety Overlay Fire safety development standards as found in the County's Development Code, Chapter 82.13, shall be strictly enforced. New development in this area shall be constructed to reflect the most current fires-safe building and development techniques and standards for structures built in a high fire hazard area.

5. SIGNIFICANT UNMITIGATED IMPACTS

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 a wildland fire. People occupying these structures during a wildland fire will also be subject to injury or death..

H. HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY

1. SETTING

Hydrology/Flooding

Existing Watersheds

A watershed is the area or region from which surface water flows to a particular water body. Three different Regional Water Quality Control Boards (RWQCB) cover the County: the Santa Ana Region, Lahontan Region and Colorado River Region. The most important element for the economic survival of San Bernardino County is the availability, beneficial use, and conservation of its water. Some of the main water features (including lakes and rivers) in the three regions of the County are shown in Figures 6-13A through 6-13C of the Conservation Background Report.

Federal Emergency Management Agency (FEMA)

FEMA provides a majority of the flood hazard mapping in the County. The most common means of planning to avoid or at least mitigate flood damage is participation in the Natural Flood Insurance Program (NFIP). FEMA administers the program, which makes flood insurance available to those communities that have enacted local ordinances restricting development within the 100-year floodplain. The local floodplain ordinances must meet or exceed FEMA's regulations. As part of NFIP, FEMA prepares a Flood Insurance Rate Map delineating the theoretical boundaries of the 100-year floodplain (i.e., the area within which the statistical frequency of flooding is believed to be 1 in 100 in any given year). These maps form the basis for regulating floodplain development and the rating of flood insurance policies.

Water quality issues are becoming increasingly significant throughout the state as well as the County. Improved monitoring techniques have revealed the presence of man-made chemicals and their residues, as well as naturally occurring toxic chemicals, in most of the state's surface and ground waters. Overdraft of aquifers in the arid southwest is known to be a significant contributor to degradation of groundwater quality. In an effort to address water quality issues as they relate to water resources in the county, one must consider groundwater, imported water, recycled water, and surface water as well as degradation of water quality caused by stormwater runoff and various waste and chemical products. One such issue for the County is the presence of high levels Total Dissolved Solids (TDS).

Increases in groundwater TDS are a function of the recharge of saline water originating from storm flows, urban runoff, imported water, and incidental recharge. TDS are also attributed m part to salt contamination from past and existing agricultural and land uses. The TDS impacts of agriculture on groundwater usually originate from fertilizer use on crops, consumptive use, and dairy waste disposal. On an annual basis, the total amount of TDS from manure discharged to the southern half of the Basin that will reach groundwater averages about 29,000 tons (SAWPA 2002).

The Chino Basin Watershed covers approximately 405 square miles. Surface drainage is generally southward, from the San Gabriel Mountains toward the Santa Ana River and Prado Flood Control Basin (RWQCB Santa Ana Region 2002). Although originally developed as an agricultural area, the watershed is being steadily urbanized. The principal remaining

agricultural area is the Chino Dairy Preserve. Located in the south-central part of the watershed, the Preserve contains approximately 340,000 cows, which generate the waste equivalent of more than two million people. Since the Preserve is unsewered, dairy operations have significantly affected the quality of the water resources in the area.

The responsibilities of cities and counties participating in NFIP include requiring that all new construction have its lowest floor elevated to or above the "base flood elevation" (this is calculated in conjunction with the 100-year floodplain delineation) and keeping records of development occurring within the designated floodplain. Under federal law, flood insurance must be purchased when obtaining a federally backed loan for a home within the Flood Insurance Rate Maps 100-year floodplain. The availability of other federal funds also may be affected by participation in NFIP. The city or County must submit a biennial report to FEMA describing any changes in the community's flood hazard area, development activities that have taken place within the floodplain, and the number of floodplain residents and structures. The County is a participant in the NFIP. FEMA Flood Insurance Rate Maps for the County are shown in Figures 7-6a and 7-6b of the Safety Background Report.

Flooding is a serious hazard in San Bernardino County. Flooding is known to occur on the Santa Ana River, San Timoteo Creek, Snow Creek, and Rattlesnake Creek. Wildfires can increase flooding hazards in watershed basins in the County when burned vegetation and soils have decreased ability to absorb runoff from storm events.

Mudflows are known to occur throughout the County and can be caused by earthquakes or heavy storm events. Mudflows have been known to occur in the above river and creeks.

Seiches are a potential hazard known to occur at reservoirs and even swimming pools in the County. Seiches are associated with earthquake hazards in the County. For more information on earthquake hazards please refer to Hazards & Hazardous Materials section in this document.

San Bernardino County Flood Control District

The San Bernardino County Flood Control District was formed as an urgency and progressive measure for the preservation and promotion of public peace, health, and safety as a direct aftermath of the disastrous March 1938 floods, which took many lives and caused millions of dollars in property damage. The District exercise control overall mainstreams in the County; acquires right-of-way for all main channels, constructs, channels, and has carried out an active program of permanent channel improvements in coordination with the U.S. Army Corps of Engineers (USACOE). Through the years, the District has been primarily concerned with control of flood waters in major watercourses and channels under the jurisdiction of the District. Due to the vastness of the County, it has been impossible for them to provide assistance to individual property owners Countywide.

The District is subdivided into six zones with interest (Figure 7-7 of the Safety Background Report), responsibilities, or geographical divisions distinctive of the particular zone. In matters of taxation or ventures, each zone functions independently although by mutual agreements joint activities may be entered into (San Bernardino County Flood Control District, 1997). The six zones, although bounded by defined limits within the Act, are presented in Table IV-H-1.

Master Drainage Plans

There are several drainage plans that have been prepared for the different cities within the County (refer to Table IV-H-2). Master Drainage Plans are used as guidelines for future flood control facility improvements, for future planning and coordinating with San Bernardino County Flood Control District, local cities, future development activities, and as a basis for developing funding mechanisms. The following section provides a summary of the existing Master Drainage Plans in the County.

Water Quality

In order for a developable area to thrive, it must have sufficient environmental resources. One of the most important and valuable resources is water. Water attracts urbanization where it is abundant and can be put to beneficial use. However, not all water can be put to beneficial use if it is contaminated. A major problem with water quality is water pollution. Varieties of sources cause, or have potential to cause, water pollution. In San Bernardino County a number of water quality improvements are being developed to mitigate negative groundwater quality impacts from nearly a century of agricultural, industrial, and residential point and non-point source contributions. Chemicals of concern include:

- Total Dissolved Solids;
- Total Inorganic Nitrogen such as Nitrates;
- Perchlorate;
- Arsenic;
- Pharmaceuticals;
- Methyl tertiary butyl ether; and
- Volatile Organic Compounds (VOCs).

More details regarding specific water quality issues within watersheds in San Bernardino County refer the Conservation Background Report.

Stormwater

Stormwater runoff can cause contamination of reservoirs and adversely impact the quality of water in a groundwater basin. When rain falls on an urban area, the first flush of runoff can pick up and transfer a considerable number of pollutants, including chemical herbicides, pesticides, fertilizers, hazardous spill materials, animal droppings, gasoline and oil drippings, and litter. Sewage lines may also overflow. If the developing area is located in the watershed of a reservoir, these potentially pathogenic and carcinogenic contaminants can enter the water. The Safety Background Report presents the stormwater collection and distribution system in the Valley, Mountain, and the Desert regions of the County.

The Santa Ana RWQCB has required the unincorporated areas of the County, the 16 incorporated cities of the County within the Santa Ana River watershed, and the San Bernardino Flood Control District, as permittees, to be included in the National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit (the Permit). The Permit and Section 4 of the Report of Waste Discharge, dated April 1995, require the development and adoption of New Development/Redevelopment Guidelines (Guidelines).

These Guidelines are to be used by the permittees of the San Bernardino County Stormwater Program as a supplement to the Drainage Area Management Program and the Report of Waste Discharge. The purpose of preparing the Guidelines was to identify pollutant prevention and treatment measures that could be incorporated into development projects. The Guidelines recommend which Best Management Practices (BMPs) should be required as standard practice. The Guidelines provide information on storm water quality management planning, general conditions, special conditions, and construction regulatory requirements. The Guidelines also define structural and non-structural BMPs and lists the BMPs that are considered as "standard practice" for new developments. A major philosophy of the County's NPDES stormwater quality program, as set forth in the report of waste discharge, is a regional approach to stormwater quality planning and management on a watershed basis (San Bernardino County Stormwater Program 2000).

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Hydrology/Water Quality, if the project would cause any of the following effects:

- *Violate any water quality standards or waste discharge requirements.*
- *Substantially 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 pre-existing nearby wells would drop to a level that 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 that would result in substantial erosion or situation on- or off-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 that would result in flooding on- or off-site.*
- *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.*
- *Otherwise 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.*
- *Place within a 100-year flood hazard area structures that would impede or redirect flood flows.*
- *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.*
- *Inundation by seiche, tsunami, or mudflow.*

3. IMPACT ANALYSIS

All individual projects implemented under the General Plan will be required to comply with applicable federal, state, and local water quality regulations. Currently, the County of San Bernardino follows state standards for water quality, and does not have their own specific standards. During construction, projects will be required to obtain coverage under the state's

General Permit for Construction Activities that is administered by the California Regional Board, RWQCB. Storm water management measures will be required to be identified and implemented that will effectively control erosion and sedimentation and other construction-based pollutants during construction. Other management measures, such as construction of detention basins, will be required to be identified and implemented that will effectively treat pollutants that would be expected for the post-construction land use. Because projects will be subject to regulatory requirements, impacts to water quality standards or waste discharge requirements related to implementation of the General Plan are considered less than significant.

Impact HWQ-1
Since groundwater can be a significant potential source of the potable water supply, impacts to water supply are presented in Section IV-P, Utilities and Service Systems. Development under the General Plan may substantially 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.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact HWQ-2
Development under the General Plan may 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 that would result in substantial erosion or situation on- or off-site.

The San Bernardino County Flood Control District is the responsible agency for the operations and maintenance of the existing stormwater drainage system. Also, the District is responsible for the planning of all future stormwater drainage and flood control system. The updated General Plan includes goals and policies to minimize any potential impact that may exceed the existing and future capacity of a stormwater drainage system. Impacts are considered to be less than significant with the implementation of the mitigation measures below.

All future individual construction projects over one-acre in size that are implemented under the updated County of San Bernardino General Plan will be required to have coverage under the state's General Permit for Construction Activities. As stated in the Permit, during and after construction, BMPs will be implemented to reduce/eliminate adverse water quality impacts resulting from development. Compliance with applicable state and local water quality regulations will ensure that impacts to water quality are less than significant.

The impacts from placing 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 are considered to be less than significant with implementation of the identified mitigation measures.

The impacts from placing within a 100-year flood hazard area structures that would impede or redirect flood flows are considered to be less than significant with implementation of the identified mitigation measures.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact HWQ-3
The County of San Bernardino consists of three separate land area types: mountain, desert and valley. Each land area type has its own distinct flooding risks and challenges. The Mountainous area consists of steep terrain that can create a potential risk for high velocity flood flows. The Desert area consists of relatively flat terrain that can create a potential risk for broad, shallow flood flows which can also be of high velocity. The Valley area consists of relatively flat terrain with a higher degree of urbanization and population. Flood flows from the mountain and desert area are typically contained within flood control structures that are located within the Valley area. The San Bernardino County Flood Control District is the responsible agency for the planning, design, operations and maintenance of the current and future stormwater and/or flood control system. Any type of proposed development within these land areas shall be coordinated with this agency. Impacts are considered to be less than significant with implementation of the identified mitigation measures.

A seiche is a to and fro vibration of a waterbody that is similar to the slopping of water in a basin. Once initiated, oscillation within the waterbody can continue independently. Seiches are often triggered by earthquakes. According to the County of San Bernardino General Plan, the most likely area that could be subject to seiche is mountain area that includes various lakes. Tsunamis are tidal waves that occur in coastal areas; therefore, since the County boundary is not located in a coastal area, no impacts due to tsunamis will occur. The County includes a large desert area which, when stormwater and sand sediment are combined, would typically create mudflow conditions. The San Bernardino County Flood Control District operates/maintains flood control and sediment detention basins within areas that are populated. Therefore, impacts from seiche, tsunami, or mudflows are considered to be less than significant with implementation of the identified mitigation measures.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

The following Mitigation Measures will be incorporated into the General Plan as Policies, to reduce the identified impacts to a level below significance.

Mitigation HWQ-1
The County Water Masters shall continue to monitor the County's adjudicated groundwater basins to ensure a balanced hydrological system in terms of withdrawal and replenishment of water from groundwater basins. Since groundwater may be a significant source of potable water supplies in the County, the impacts of growth resulting in water supply impacts are presented in Section P (Utilities and Service Systems) of this EIR.

Mitigation HWQ-2
The County shall promote conservation of water and maximize the use of existing water resources by promoting activities/measures that facilitate the reclamation and reuse of water and wastewater.

Mitigation HWQ-3
The County shall require water reclamation systems and the use of reclaimed wastewater and other non-potable water to the maximum extent feasible for:

- Agricultural uses;

- Industrial uses;
- Recreational uses;
- Landscape irrigation; and
- Groundwater recharge projects.

Mitigation HWQ-4
The County shall apply water conservation and water reuse (reclamation) measures that are consistent with County, state and/or federal policies and regulations on wastewater.

Mitigation HWQ-5
The County shall require new development to implement feasible water conservation measures recommended by the water agency or purveyor that supplies the development with water.

Mitigation HWQ-6
Drainage courses shall be kept in their natural condition to the greatest extent feasible to retain habitat, and allow some recharge of groundwater basins and resultant savings. The feasibility of retaining features of existing drainage courses will be determined by evaluating the engineering feasibility and overall costs of the improvements to the drainage courses balanced with the extent of the retention of existing habitat and recharge potential.

Mitigation HWQ-7
The County shall seek to retain all natural drainage courses in accordance with the Flood Control Design Policies and Standards where health and safety are not jeopardized.

Mitigation HWQ-8
The County shall prohibit the conversion of natural watercourses to culverts, storm drains, or other underground structures except where required to protect public health and safety.

Mitigation HWQ-9
The County shall allow no development in designated flood plains, which would alter the alignment or direction or course of any blue-line stream.

Mitigation HWQ-10
When development occurs, the County shall maintain the capacity of the existing natural drainage channels where feasible, and flood-proof structures to allow 100-year storm flows to be conveyed through the development without damage to structures.

Mitigation HWQ-11
Where technically feasible as part of its efforts to protect residents from flood hazards, the County shall require naturalistic drainage improvement where modifications to the natural drainage course are necessary. As an example, channel linings that will allow the re-establishment of vegetation within the channel may be considered over impervious linings (such as concrete). Where revegetation is anticipated, this must be addressed in the channel's hydraulic analysis and the design of downstream culverts.

Mitigation HWQ-12
The County shall establish an economically viable flood control system by utilizing channel designs including combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Where adjacent to development, said drainage shall be covered

by an adequate County drainage easement with appropriate building setbacks established there from.

Mitigation HWQ-13
The County shall not place streams in underground structures where technically feasible, except to serve another public purpose and where burial of the stream is clearly the only means available to safeguard public health and safety.

Mitigation HWQ-14
To mitigate potential impacts related to adverse water quality, the County shall require new high-density developments using septic tank leach field/seepage pit systems for wastewater disposal to include in their project plans, analyses of alternatives wastewater treatment and disposal methods.

Mitigation HWQ-15
Within the County's Development Code, one overlay district has been established relating specifically to provide greater public safety, promoting public health, and minimizing public and private economic losses due to flood conditions by establishing regulations for development and construction within flood prone areas. The Flood Plan Safety "FP" Overly District does this and operates as described below.

82.16.020 – Location Requirements

(a) The FP1, FP2, and FP3 overlay districts described in Section 82.16.040 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, dated 1978, which has subsequent updates with accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary Maps. Subsequent report and map updates that may be published in the future shall further identify additional flood hazard areas. The most current copy of the Flood Insurance Study is on file with the Clerk of the Board.

(b) The Flood Insurance Study establishes the minimum areas to which the FP overlay districts may be applied. Additional areas may be added after studies for the areas are prepared by the Flood Control District or other governmental agencies (e.g., Corps of Engineers).

82.16.050 – Development Standards

(a) Standards of construction. The following provisions shall apply in all areas of special flood hazards:

(1) Anchoring. All new construction and substantial improvements shall be anchored to the foundation to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. If a structure is elevated on fill as specified in Subsection A.2.e, and A.3.a, the anchoring requirement shall be satisfied. Other alternative anchoring techniques that are effective may be considered.

(2) Construction materials and methods.

(A) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage. This would include but not be limited to water resistant lumber, floor coverings, adhesives,

paints, masonry construction and finishes, water proof electrical systems, and mechanical footings, or other acceptable materials measures.

(B) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage. This would include but not be limited to elevating the structure, parallel alignment of structure, with water flow, increase the structural designs to withstand hydrologic and hydrolographic sources, and increase depth of footings.

(C) All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(D) Adequate drainage paths be provided around structures on slopes to guide flood waters around and away from proposed structures.

(E) If fill is placed to elevate pads one foot above base elevation, it must be demonstrated that fill will not settle and is protected from erosion, scour, or differential settlement, as follows.

(I) Fill shall be compacted to 95 percent per ASTM (American Society of Testing Materials) Standard D-698.

(II) Fill slopes of granular material shall be no steeper than one-half-foot horizontal to one-foot vertical ratio unless substantiating data for steeper slopes is provided, and the slopes are approved by the County.

(III) If flow velocities are greater than five feet per second, fill slopes shall be armored with stone or rock slope protection.

(3) Elevation and flood proofing.

(A) New construction and substantial improvement of any residential structure shall include having the lowest habitable floor, elevated to one foot above base flood elevation in the FP1 area, and one foot above ground level in the FP2 area. Upon completion of the structure, the elevation of the lowest habitable floor, including basement, shall be certified by a registered professional engineer or licensed land surveyor, and verified by the Building Official to be properly elevated above the floodplain elevation at the time of certification. The certification or verification shall be provided to the Flood Plain Management Administrator. In instances when the base flood elevation data has not been provided on the Flood Insurance Rate Map (FIRM), the provisions of Subsection 82.1101B. of this Development Code shall apply. The administrator may further exempt proposed single-family residences from this requirement when the base flood elevation data has not been provided on the FIRM.

(B) New construction and substantial improvement of any residential structure shall include having the lowest habitable floor, elevated above the highest adjacent grade at least one foot higher than the depth number specified in feet on the FIRM, or at least two feet if no depth number is specified. Upon the completion of the structure, the elevation of the lowest habitable floor shall be certified by a registered professional engineer or licensed land surveyor, or verified by the Building Official to be properly elevated above

the flood plain elevation as derived from the adopted FEMA map, applicable to subject area at the time of certification. Such certification or verification shall be provided to the Flood Plain Management Administrator.

(C) Nonresidential construction shall be elevated in compliance with Subsection A.3. of this Section or together with attendant utility and sanitary facilities and shall:

(I) Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

(II) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(III) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the Flood Plain Management Administrator.

(D) All new construction and substantial improvements to existing structures, shall include fully enclosing structural areas below the lowest floor that are subject to flooding, and the areas shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement shall either:

(I) Be certified by a registered professional engineer or an architect; or

(II) Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters; or

(III) Be verified by the Flood Plain Administrator or his designee as complying with flood proofing standards approved by the Federal Insurance Administration.

(b) Utility standards.

(1) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.

(2) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(3) All public utilities and facilities such as electrical, telephone, cable TV, gas etc., shall utilize flood proofing measures in their location and construction to minimize flood damage.

(c) Land use application review requirements.

(1) All preliminary proposals shall identify the flood hazard area and the elevation of the base flood.

(2) All final plans shall provide the elevation of proposed structures and pads above the flood plain elevation as derived from the FEMA map adopted at the time of certification. If the site is filled above the base flood, the final pad elevation

shall be certified by a registered professional engineer or licensed land surveyor and shall be submitted to the Flood Plain Management Administrator. The entire site need not be elevated; only the building pads need be elevated and other means of conducting storm flows through the site shall be provided.

(3) All proposals shall be consistent with the need to minimize flood damage.

(4) All proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

(5) All proposals shall provide adequate drainage to reduce exposure to flood hazards and not deflect flood flows onto other properties.

(d) Manufactured homes. All new and replacement manufactured homes and additions to manufactured homes shall comply with all applicable provisions this Section.

(1) Nonresidential construction shall be elevated in compliance with Subsection A.3.

(2) All manufactured homes shall be securely anchored to a permanent foundation system to resist flotation, collapse or lateral movement. Methods of anchoring shall include, but not be limited to, the use of over-the-top or frame ties to ground anchors.

(e) Floodway standards. Floodway areas are located within a special flood hazard areas and are established as specified in Subsections 85.020305 A. and B. Since the floodway is an extremely hazardous area due to the velocity of flood waters that carry debris, potential projectiles, and erosion potential, the following provisions apply.

(1) Encroachments, including fill, new construction, substantial improvements, stockpiling, and other development are prohibited unless certification by a registered professional engineer or architect is provided, demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(2) If Subsection A.1 is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of this Section.

5. SIGNIFICANT UNMITIGATED IMPACTS

With implementation of the identified General Plan goals and policies, and the incorporation of the above-identified mitigation measures, all impacts related to hydrology and water quality effects are reduced to a less than significant level.

Table IV-H-1. Flood Control District Zones

Zone	Location	Size of Area
Zone 1	The westerly portion of the San Bernardino Valley extending from Beech Avenue in the Fontana area to the Los Angeles County line, all south of the San Gabriel mountain range divide. This embraces the cities of Chino, Chino Hills, Montclair, Ontario, Rancho Cucamonga, and Upland, and the communities of Alta Loma, Etiwanda, and Guasti.	275 square miles
Zone 2	The central area of the San Bernardino Valley easterly of Zone 1 to approximately the Santa Ana River and City Creek demarcations. This includes the Cities of Colton, Fontana, Grand Terrace, Rialto, and San Bernardino, together with the communities of Bloomington, Del Rosa, Devore, and Muscoy.	318 square miles
Zone 3	The easterly end of the San Bernardino Valley east from Zone 2 including the Cities of Highland, Loma Linda, Redlands, and Yucaipa, and communities of Oak Glen and Forest Falls.	366 square miles
Zone 4	The Mojave River Valley from the San Bernardino mountains to Silver Lake and including the Town of Apple Valley, the cities of Adelanto, Barstow, Hesperia, and Victorville, and all or portions of the communities of Daggett, Helendale, Hinkley, Hodge, Oro Grande, Phelan, and Yermo	1,783 square miles
Zone 5	The mountainous watershed of the Mojave River on the crest and north slopes of the San Bernardino mountains including the communities of Crestline, Green Valley Lake, Lake Arrowhead, Lake Gregory, and Running Springs.	163 square miles
Zone 6	The remainder of the County not embraced by other zones including portions of the San Gabriel and San Bernardino Mountains and the semi-Desert portion of the County. This embraces the cities of Big Bear, Needles, and Twenty-Nine Palms, the town of Yucca Valley, the communities of Amboy and Trona, and the Lucerne Valley and Morongo Valley Districts.	17,200 square miles

Source: San Bernardino County Flood Control System Number Index and General File Codes.

Table IV-H-2. Master Plans Within The County

Zone	Name of Master Plan
1	City of Chino and Cypress Channel
1	Etiwanda Area
1	City of Rancho Cucamonga Etiwanda Area
1	Etiwanda San Sevaine/ City of Rancho Cucamonga
1	Ontario Master Plan of Drainage
1	Ontario Master Plan of Storm Drains
1	Ontario
1	Rancho Cucamonga
1	San Sevaine
2	Fontana
2	Reche Canyon
3	Yucaipa Master Plan of Drainage
4	Hesperia Master Plan of Drainage
4	Adelanto
4	Town of Apple Valley
4	Apple Valley West/Desert Knolls
4	Baldy Mesa
4	Phelan
6	Rancho Lucerne
6	Moonridge-Rathbone Creek Master FC Plan
6	Master Plan of Drainage-Rathbun Creek
6	Twentynine Palms
4	Victorville
6	Yucca Valley
1	City of Upland
6	City of Needles
3	City of Big Bear Lake
4	City of Barstow
1	County Comprehensive Strom Drain Plan #1 (San Antonio Flood)
1	County Comprehensive Strom Drain Plan #2 (Cucamonga Creek)
2	County Comprehensive Strom Drain Plan #3 (Rialto Channel)
3	County Comprehensive Strom Drain Plan #6 (East Highland)
3	County Comprehensive Strom Drain Plan #5 (Yucaipa, Live Oak Canyon)
2	County Comprehensive Strom Drain Plan #3 (Sierra, Fontana)
2	County Comprehensive Strom Drain Plan #3, Proj. 3 (Colton, Rialto, Lytle Creek)
2	County Comprehensive Strom Drain Plan #7 (Cajon, Devore)
3	County Comprehensive Strom Drain Plan #4 (Loma Linda, Redlands)
2	Project 3-5 Area Drainage Plan (Rialto Channel)
1	W. Cucamonga Creek Channel
2	Project 3-4 Bloomington - Crestmore

Source: San Bernardino County Flood Control Department

I. LAND USE AND PLANNING

1. SETTING

Since the land area of San Bernardino County exceeds 12 million acres, the General Plan background assessment and policy development has been organized to allow for easier understanding of the unique issues at a more localized level while being able to aggregate issues to a countywide perspective. This organization for evaluation is based on:

- Spheres of Influences of the incorporated cities within the County,
- Community Plans,
- Economic study regions, and
- The remainder area.

The organization of the County into these discrete areas allows for the understanding of issues at a community level, an assessment of the appropriate land use designations, and evaluation of applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effects.

General Plan Land Use Designations

The General Plan identifies and proposes the following land use designations to guide the growth and development of the County:

- Resource Conservation (RC);
- Agriculture (AG);
- Rural Living (RL) (with several discrete minimum lots sizes);
- Single Residential (RS) (with several discrete minimum lots sizes);
- Multiple Residential (RM);
- Neighborhood Commercial (CN);
- Office Commercial (CO);
- Rural Commercial (CR);
- Highway Commercial (CH);
- General Commercial (CG);
- Service Commercial (CS);
- Community Industrial (IC);
- Regional Industrial (IR);
- Institutional (IN);
- Special Development (SD);
- Floodway (FW);
- Specific Plan (SP); and
- Open Space (OS).

Community Plans

Community plans are policy instruments focusing on a particular region or community within the overall County's General Plan. The land use elements within each of the Community Plans, often the core around which other elements are developed, do not propose significant land use changes. Instead, goals and policies are included to guide development in a manner that maintains the existing mix of land uses, preserves the character of the community, and complements existing development. To preserve existing community character, many of the land use goals and policies in the Community Plans direct the location and concentration of future development areas consistent with the countywide land use map, and the scale and

arrangement of future development such that it complements the existing community character. Community Plans are prepared for the following communities:

- Bear Valley
- Bloomington
- Crest Forest
- Hilltop
- Homestead Valley
- Joshua Tree
- Lake Arrowhead
- Lucerne Valley
- Lytle Creek
- Morongo Valley
- Muscoy
- Oak Glen
- Oak Hills
- Phelan/Pinon Hills

a) Valley Region

Existing General Plan Designations

Of the 1,885,913 countywide unincorporated acres covered under existing General Plan designations only 51,766 acres are in the Valley Region. Nearly half, 24,241 acres, of the Valley's 51,766 acres of unincorporated acreage is devoted to residential uses. There are 2,155 acres of commercial land uses and nearly 5,155 acres of industrial land use designations. Agriculture and Resource conservation designations take up 938 acres and 1,769 acres respectively. Also within the Valley Region there are 9.1 square miles (5,281 acres) of Floodway, almost 1,600 acres of specific plan designations, 2,875 acres of Institutional land use designation and 7,216 acres of planned development.

Existing Land Uses

In the Valley Region, almost half of the 51,766 acres of unincorporated County land is existing single and multifamily residential uses, occupying 24,236 acres. The Valley Region also has nearly 5,155 acres of industrial uses. Commercial uses occupy almost 2,155 acres, while agriculture uses occupy 938 acres, and a classification that allows mineral extraction, regional parks, farming and Open Space uses (Resource Conservation) occupies 1,778 acres. Other existing land uses include 2,875 acres of institutional uses and 7,216 aces of planned development and almost 1,600 acres of specific plan. There are also 5,820 acres of improved flood and waterways in the Valley Region.

Existing Incorporated Cities

Following are the fifteen incorporated cities located in the Valley Region:

- Chino
- Chino Hills
- Colton
- Fontana
- Grand Terrace
- Highland
- Loma Linda
- Montclair
- Upland
- Yucaipa
- Ontario
- Rancho Cucamonga
- Redlands
- Rialto
- San Bernardino

b) Mountain Region

Existing General Plan Designations

Approximately 84,937 acres or 133 square miles of the Mountain Region is unincorporated, the Mountain Region has only one incorporated city -- the City of Big Bear Lake. Approximately 39,767 acres of the unincorporated Mountain land is designated Resource Conservation. Residential land use designations occupy approximately 36,092 acres of the total unincorporated Mountain land. Relative to the other regions there is little commercial, 798 acres, and even less, 100 acres, of industrial land use designations in the unincorporated Mountain Region. Other land use designations include 437 acres of agriculture, 596 acres of institutional uses and 4,067 acres of planned development. There are almost 5 square miles (3,080 acres) of Floodway designation and no specific plan designations.

Existing Land Uses

The Mountain Region has 36,084 acres of residential uses, 798 acres of commercial uses and 100 acres of industrial uses. Other existing uses include 437 acres of agriculture, and 39,776 acres of Resource Conservation (which allows recreational facilities, mineral extraction, grazing, animal raising, and regional parks). There are also 596 acres of institutional uses and 4,067 acres of planned development classification. There are also 3,080 acres of improved flood and waterways.

Existing Incorporated Cities

- City of Big Bear Lake

c) Desert Region

Existing General Plan Designations

There are 1,749,209 acres of land under existing general plan designations in the Desert Region. Of this almost 1.8 million area 595,525 acres are designated as residential use most of which, almost 562,000 acres, are in the rural living designation. The Desert Region has 6,581 acres of commercial and 16,493 of industrial land use designations. Other designations include 6,902 acres of institutional, 10,465 of planned development and over 1.06 million acres of Resource Conservation. There are almost 17 square miles (10,787 acres) of Floodway designation and no specific plan designations.

Existing Land Uses

Within the Desert Region there are over one million acres of land uses such as mineral extraction, grazing and Open Space. There are also 595,283 acres of existing residential uses. The Desert Region has 6,342 acres of commercial uses, about 16,493 acres of industrial uses, 6,902 acres of institutional uses and 10,901 acres of planned development. There are also 10,787 acres of improved areas that are subject to flooding in the Desert Region.

Existing Incorporated Cities

Following are the eight incorporated cities located in the Desert Region:

- Adelanto
- Apple Valley
- Barstow
- Hesperia
- Needles
- Twentynine Palms
- Victorville
- Yucca Valley

Focused Land Use Studies

Focused Land Use studies were conducted in specific areas of the county facing individual land use challenges, particular to each area studied. The three areas subject to a Focused Land Use Study are West Fontana, Mentone, and Newberry Springs.

West Fontana

The West Fontana area is an unincorporated area with irregular boundaries, and isolated pockets of unincorporated islands intertwined with the City of Fontana. The unincorporated area has developed with eclectic land uses and incompatible uses abutting each other. Residential land use designations that evolved to a variety of mixed uses, many of which have been established without proper permits and developed in conflict with traditional residential while adjacent areas in the City are being approved under industrial zoning. Inadequate infrastructure is also characteristic of West Fontana although the City is extending infrastructure as annexation takes place. The area is under substantial growth pressure and the County and City development standards are at different levels creating lost expectations for new development not to City standards. The City is also focusing on annexation of key areas such as Foothill Blvd and areas suitable for industrial development south of the I-10 Freeway.

Mentone

The Mentone area is characterized as a semi-rural area with citrus farming as the historic economic base. The area is under tremendous pressure to develop as the City of Redlands moves east towards Redlands and Crafton Hills. Factions of the community desire to remain rural as long as possible and avoid incompatible uses. However, general new conventional higher density housing tracts have been built over the last year. In addition, the Mentone community desires to ensure water and adequate utilities in general while pacing growth to revenue sources for infrastructure.

Newberry Springs

The Newberry Springs area is in the high desert east of Barstow and in need of economic development, especially related to freeway commercial capitalizing on the Historic Route 66. Residents are concerned about urban sprawl moving easterly from Barstow a network of unpaved roads. Once extensive alfalfa farms have given way to less water consumptive agricultural uses like pistachio orchards. Scattered rural residential uses that combine home-based businesses occupy most of the area. Deteriorated paved roads depleting underground water supplies, and no Parks, libraries, etc, characterize the infrastructure in the area. More housing will bolster the local economic growth.

Incidental Land Use Designation Changes / Zoning Changes

The County of San Bernardino maintains a "One Map" System for the General Plan Land Use map and the Zoning map. The project includes the following modifications to the land use/zoning map:

- Deleted land use designations on all properties (i.e. BLM and Forest Service lands) that the County does not have land use jurisdiction while labeling each remaining individual County jurisdiction property with a land use designation;
- Redefined Resource Conservation boundaries abutting non Resource Conservation areas where deleting designations from non-jurisdictional land created a discrepancy;
- Align land use designations to parcel boundaries;
- Remove all obsolete zoning "prefixes" and "suffixes";
- Revise all residential land use designations into a standardized list of minimum lot sizes for the Agriculture, Rural Living, and Single Family Residential designations;
- Incorporate BLM and USFS boundary changes into the land use map;
- Changed all Planned Development (PD) designations to Specific Development (SD) with either a residential or commercial suffix indicating the primary designated use;
- Corrected City Boundary discrepancies;
- Zoning changes in certain small unincorporated pockets in the SOI of the Cities of Chino and Montclair to establish a more consistent land use pattern;
- Corrected mapping to the recently adopted unincorporated Glen Helen Specific Plan; and
- Made land use changes to specific properties in Phelan, Pinon Hills, Muscoy, West Chino, Mentone/Crafton Hills, Joshua Tree, Lucerne, Apple Valley, Newberry Springs and Hesperia.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Land Use/Planning, if the project would cause any of the following effects:

- *Physically divide an established community*
- *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*
- *Conflict with any applicable habitat conservation plan or natural community conservation plan*

3. IMPACT ANALYSIS

Impact LU-1

The General Plan does not contain policies or programs proposing development (e.g., freeways or other major linear infrastructure facilities) that could physically divide an established community in the County. Development under the General Plan will involve residential, commercial, and industrial uses that will be designed to be compatible with adjacent existing development and maintain the existing community character. The proposed General Plan policies guide future development to already established communities reinforcing their viability.

The 2006 General Plan proposes to eliminate redundant policies and consolidate many other policies in order to be more concise in the delivery of sound guidance for future development. For example, the Plan involves the deletion of Policy D-45 ("Provide a harmonious mix of residential, commercial and industrial land uses which will generate sufficient tax revenues to pay the costs of maintaining desired levels of services and adequate infrastructure facilities"); however, the deletion of this Policy does not cause a physical impact because it is replaced by new Policy CI 11.5 ("makes available or establishes financial mechanisms (such as assessment and community facility districts) to most efficiently spread the cost of necessary infrastructure improvements as determined by the local public agency over all development benefiting from such improvements. Provide legal written notice to all people affected by such financial mechanism cost,") which is a redrafting and consolidation of previous policies. Also, new Policy CI 11.4 ("ensures that new development pay a proportional fair share of the costs to provide infrastructure facilities required to serve such development") is added.

Another example of consolidation is the deletion of Policy D-56 ("Provide new services only within defined urban and rural service boundaries,") and Policy LU-9 ("Coordinate land use policies with cities") which would remove the County's restrictions on where new services could adequately be provided. However, deletion of this Policy is not a land use impact because of new Policy LU 9.2, which "discourages leap-frog development and urban sprawl by restricting the extension or creation of new urban services or special districts to areas that cannot be sustained in a fiscally responsible manner." Due to the addition of new policy LU 9.2, the deletion of Policies D-56 and LU-9 is considered a less than significant impact.

Impact LU-2

Due to new, rewritten, and consolidated policies such as CI 11.4 and CI 11.5, there will be a less than significant land use impact due to the deletion of Policies BI-3, BI-4, D-45 and D-56. In addition, implementation of the 2006 General Plan may lead to potential conflicts with regional plans of other agencies such as the Airport Land Use Plans for County Airports and the air Quality Attainment Plans for either of the Air Quality Management Districts. Conformance with those regional plans is presented in other sections of this EIR (e.g., Traffic Hazards and Air Quality).

Impact LU-3

Implementation of the 2006 General Plan may conflict with adopted or proposed Habitat Conservation Plans. Policy CO 2.1 and CO 2.3 encourages habitat conservation. Policy CO 2.1 reads that "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. And Policy CO 2.3 reads that "in addition to conditions of approval that may be required for specific future

development proposals, the County will establish long term comprehensive plans for the County's role in the protection of native species because preservation and conservation of biological resources are statewide, regional, and local issues that directly affect development rights.

The County took a lead role in the preparation of a Multi-Species Habitat Conservation Plan (MSHCP) for the San Bernardino Valley in 1995. The Plan was conceived as a program that would address and resolve the continuing conflicts between community growth and preservation of rare, threatened and endangered species.

The difficulties in developing a comprehensive plan and disagreements with the United States Fish and Wildlife Service over various aspects of the plan ultimately lead to a decision to discontinue work on the program. The program has been on hold since 2002.

Other Habitat Conservation Plans within the boundaries of San Bernardino County include but are not limited to:

- Participation in West Mojave Plan (largest HCP in country)
- Upper Santa Ana Wash
- Angelus Block;
- Highlands Roadway Project;
- Cushenbery Sand and Gravel;
- High Desert Power Project;
- Reichel;
- SCE/Etiwanda and Mira Loma Corridor;
- Sunland Communications; and
- Vulcan Material (aka Calmat) Cajon Creek and Delhi-Sands Flower Loving Fly.

4. MITIGATION MEASURES

There are no significant Land Use and Planning impacts identified and therefore no mitigation measures are required. However, it should be noted that the policies of the 2006 General Plan function as issue mitigation. General Plan Policies are mitigation in other topical areas while for land use and planning, they are addressed as part of project.

5. SIGNIFICANT UNMITIGATED IMPACTS

None have been identified.

J. MINERAL RESOURCES

1. SETTING

Minerals are defined as any naturally occurring chemical elements or compounds, formed from inorganic processes and organic substances. Minable minerals or an "ore deposit" is defined as a deposit of ore or mineral s having a value materially in excess of the cost of developing, mining and processing the mineral and reclaiming the project area. Mineral resources are an integral part of development and the economic well being of the County. The conservation, extraction and processing of those mineral resources is essential to meeting the needs of society. In San Bernardino County minerals are a foremost natural resource, with the Desert Planning Area accounting for over 90 percent of all County mining activities.

There are 92 mines within the County (Figures 6-11-A thru 6-11-C of the Conservation Background Report) prepared as part of the update of the County's General Plan). Table IV-J-1 includes a list of some of the mines and processing plants that are located with the County. There are several large calcium carbonate mining operations in San Bernardino County. The County is home to the largest cement producer in the state. It also has the largest rare earth mine in North America. Extensive aggregate mining is also a major component of the mining industry within the County.

Table IV-J-1. Prominent Mine and Processing Plant Locations in San Bernardino County

	Company Name	Site Name	Commodity	Mine/Plant (M/P)
1.	BMCS Insulation Products	Ontario Plant	Perlite	P
2.	California Portland Cement Co.	Colton Plant	Cement	P
3.	Cargill Inc./Leslie Salt	Amboy Plant	Salt	M/P
4.	CV Organic Fertilizer Co.	Amboy Mine	Gypsum	M
5.	Fort Cady Mineral Corporation	FT Cady	Boron	M/P
6.	Mitsubishi Cement	Cushenbury Plant	Cement	M/P
7.				
8.	Molycorp Incorporation	Molycorp Mill	Rare Earths	M/P
9.	North American Chemical Corporation	Westend Plant	Boron, Sodium Sulfate	M/P
10.	North American Chemical Corporation	Argus Plant	Trona/Soda Ash	M/P
11.	Pacific Salt and Chemical Company	Searles Dry Lake	Salt	M/P
12.	Rheox Inc	Hector Mine	Bentonite	M/P
13.	Riverside Cement Co	Oro Grande Plant	Cement	P
14.	Salt Products Co.		Salt	M/P
15.	Southwestern Portland Cement Co (Southdown)	Victorville Plant	Cement	P
16.	Specialty Mineral Incorporated	Mud Hills	Zeolite	M
17.	Superior Salt Inc.	Dale Lake	Salt	M/P
18.	Superior Salt Inc.	Dale Lake	Salt	M/P
19.	Viceroy Gold Corporation.	Castle Mountain Mine	Gold/Silver	M*
20.	Pfizer Chemical	Castle Mountain Mine	Silver	M*

Source: USGS Mine and Processing Plant Locations, Arranged by State and County, 2001; CGS, California Non-Fuel Minerals, 2004

More details on mining resources in San Bernardino County are provided in the Conservation Background Report. In addition to the known mines and areas of mineral resources outlined in the Conservation Background report, the California Geological Survey (CGS) has an ongoing classification project for San Bernardino County which is mandated by the Surface Mining and Reclamation Act

(SMARA). SMARA addresses 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. The Act applies to anyone, including government agencies, engaged in surface mining operations in California, including federally managed lands that disturb more than one acre or remove more than 1,000 cubic yards of material cumulatively from one site. This includes, but is not limited to, prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials. The current 2006 Draft General Plan Update incorporate the requirements and mineral classification and designation information of SMARA.

The California Department of Conservation's Division of Mines and Geology Mineral Land Classification Project continues to provide the County with mineral resource maps which have proved to be of value in land use planning and mineral conservation. The State Department of Conservation, Division of Mines and Geology, is also in the process of identifying lands within the County with the potential for mineral resource recovery and will be used by the County in identifying new mineral resource areas to help ensure there preservation. The programs produce maps of Mineral Resource Zones (MRZ) that designate known or suspected economic mineral deposits.

The County requires mining operations to have approved Mining/Reclamation Plans in compliance with the applicable sections of the Public Resources Code; SMARA; the State Administrative Code, Natural Resources, Mining and Geology; State Mining and Geology Board; and the San Bernardino County General Plan and Development Code prior to the start of mining operations. Before a mining project is approved, a reclamation plan must be prepared and approved by the County. The plan must include the following information:

- Maximum anticipated depth of extraction;
- A description of the reclamation land use;
- A description of the manner in which affected streambed channels and stream banks will be rehabilitated to a condition minimizing erosion;
- Final slope stability;
- Removal of improvements and actions to reduce compaction of areas sited for roads, buildings, or other improvements; and
- Revegetation methods to reestablish wildlife habitat and provide long-term soil stabilization.

The plan also includes performance standards for:

- Revegetation;
- Drainages and erosion control;
- Reclamation of prime agricultural land and other agricultural land;
- Stream protection, including protection of surface water and groundwater;
- Topsoil salvage; and
- Slope stability.

The State requires that a Mining Report be submitted annually by each mine operator. The Report must include information as to the amount of land disturbed during the previous year, acreage reclaimed during the previous year, and any amendments to the mine's reclamation plan. This process helps the County and the State to track mining operations. The County performs at least one inspection of all active mines and mines that are temporarily inactive in compliance with SMARA.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Mineral Resources, if the project would cause any of the following effects:

- *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.*

3. IMPACT ANALYSIS

Impact MR-1

The proposed update of the County's General Plan does not propose any land uses that would conflict with known mineral resources of regional or state importance. However, impacts to mineral resources will be significant if adjacent land uses preclude the availability for future development of significant mineral resources. The 1989 General Plan addresses the protection of mineral resources with current goals and policies consistent with the state SMARA and associated mineral resource classification. The Draft 2006 General Plan Update incorporates the prior goals and policies with minor modifications and clarifications to be consistent with the format and more simplified approach of the other sections of the General Plan update. The Resource Conservation Land Use/Zoning designation is assigned to remote areas. Low density development optimizes mineral resource availability of regionally significant mineral sites and can minimize potential land use conflicts.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact MR-2

The siting and permitting of mineral operations in the County continues to be controversial. The leading issues include land use competition, surface and groundwater issues, as well as noise, dust, and truck-traffic in populated area. The impacts of increased amounts of air emissions, hydrology and water quality affecting land use noise and transportation and traffic issues in the County are analyzed in further detail in the respective topical sections of this EIR. The County will work with mine operators to help prevent mining operations from negatively impacting adjacent residential and commercial land use. However, it is anticipated that resistance to mining will continue to push production to more rural areas in the Desert Planning Area, with increased transportation costs impacting the cost of these materials to County consumers. Designation of mining sites with MRZ and operation mapping has been added in the 2006 General Plan update.

This impact can be fully mitigated by the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

The following mitigation measures are incorporated into the project to reduce its impacts on mineral resources.

Mitigation MR-1
The County shall 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.

Mitigation MR-2
In areas containing 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.

Mitigation MR-3
The County shall 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 in the updated County General Plan.

Mitigation MR-4
The County shall recognize and protect areas within San Bernardino County that show or have proven to have significant mineral resources and protect their access. The Infrastructure Map, one of the layers of the General Plan mapping system, will be amended to identify mine sites that have a long-term operational horizon.

Mitigation MR-5
The County shall implement the state Mineral Resource Zone designations to establish a system that identifies mineral potential and economically viable reserves. These designations are as follows:

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 shall 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.

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 shall 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.

MRZ-3: Containing deposits whose significance cannot be evaluated from available data.

MRZ-4: Available information is inadequate for assignment to any other MRZ zone.

SZ Areas: Containing unique or rare occurrences of rocks, minerals or fossils that are of outstanding scientific significance shall be classified in this zone.

IRA: San Bernardino County or State Division of Mines and Geology Identified Areas where adequate production and information indicates that significant minerals are present.

Mitigation MR-6
Mining operators/owners will provide buffers between mineral resources (including access routes) and abutting incompatible land uses. New mineral and non-mineral development in these zones shall be designed and reviewed according to the compatibility criteria specified in this policy.

Mitigation MR-7
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.

Mitigation MR-8
The County shall provide for the monitoring of mining operations for compliance with established operating guidelines, conditions of approval and the reclamation plan.

5. SIGNIFICANT UNMITIGATED IMPACTS

There are no unmitigated impacts to mineral resources. Significant unmitigated impacts to mineral resources could occur in the event that a future incompatible land use is permitted on or near a significant mineral resource prior to identification and classification of the resource. However, implementation of the above mitigation measures will avoid this situation.

K. NOISE

1. SETTING

The unincorporated and residential areas, along with noise-sensitive receptors and potential noise generators, are shown on Figures 4-1A through 4-1C of the Noise Background Report (Appendix I), for each of the three planning regions. Focusing on unincorporated areas of the County, noise-sensitive receptors include convalescent homes, hospitals, day-care centers, residential areas, fire stations, schools, hotels, libraries and campgrounds. Since hotels and most fire stations contain sleeping quarters, they are classified as noise-sensitive receptors. The County applies the same noise abatement criteria to hotels and residences and buildings where people normally sleep. Potential major noise generators include roadways, airports, industrial plants, railroads, racetracks, off-highway vehicle areas and public shooting ranges.

Based on the results presented in the Noise Background Report, prepared for the update to the County General Plan, the unincorporated portions of the County represent the full range of community noise environments from very quiet rural to moderately noisy suburban to noisy urban. Noise patterns in the County are generally consistent with published data regarding the intensity of development/type of land use and the expected levels of environmental noise. More details regarding the noise environment in the County can be found in the Noise Background Report. The Noise Element of the General Plan also contains additional information regarding noise and its effects, and presents policies and standards for compatibility between noise levels and land uses. Section 87-0905(b)(3) of the County Code reinforces these standards for new residential and other development that may be adversely affected by high noise levels. Section 87-0905(b)(2) of the County Development Code (Noise Ordinance) presents limits on noise generation from commercial and industrial uses that may adversely affect adjacent uses.

Noise levels discussed in the Noise Background Report, Noise Element, and in this section are based on equivalent noise levels (Leq) expressed as "A" weighted decibels (dBA). An Leq value is a constant or single computed noise level that represents the same acoustic energy associated with a varying noise level over a given period of time. Leq values are usually expressed for one-hour time periods, but longer or shorter times may be specified. "A" weighted decibels reflect the frequency sensitivity of human ears. Longer term standards are identified in the County Noise Element. These include the Day-Night Average Noise Level (Ldn), which is a 24-hour equivalent noise level with a "penalty" of 10 dBA added to noise levels during the night time (10:00 p.m. to 7:00 a.m.), to account for the added nuisance of noise during these hours. A similar 24-hour average is the Community Noise Equivalent Level (CNEL), which also includes a 5 dBA addition during the evening hours (7:00 p.m. to 10:00 p.m.). CNEL values are usually only about 1 dBA higher than Ldn values, and the two terms are often used interchangeably.

Decisions made by local governments affecting lands within defined influence boundaries around airports are subject to review by the local Airport Land Use Commission (ALUC) for consistency with the countywide Airport Land Use Plan. The Airport Land Use Plan addresses aircraft noise, as well as safety, and the planning and review process used by the ALUC is set forth in the California Public Utilities Code (Sections 21670 through 21679.5). Typically, Airport Land Use Plans define areas with a Community Noise Equivalent Level (CNEL) above 65 dBA as being incompatible with residential land uses.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Noise, if the project would cause any of the following effects:

- *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.*
- *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.*
- *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.*
- *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.*
- *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.*
- *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.*

Specific standards that can be used to define the numerical threshold above which noise levels are considered a significant impact for a given land use are found in the County Noise Element and are presented in Table IV-K-1. These standards indicate that a Day-Night Average Noise Level or a Community Noise Exposure Level (Ldn or CNEL) in excess of 70 decibels (dBA) is normally unacceptable for residential uses and for most other sensitive land uses. Ldn values between 60 and 70 dBA are conditionally acceptable, meaning that additional study and appropriate mitigation measures are necessary to avoid impacts. The County Code requires that exterior noise levels affecting new residential development be reduced to no more than 60 dBA, or 65 dBA if the best available noise reduction technology has been applied (Section 87-8905(b)(3)).

3. IMPACT ANALYSIS

Impact N-1

Vehicle traffic noise from freeways and arterial roadways causes the Ldn value of adjacent areas, some of which have land use designations allowing residential uses or other sensitive uses, to exceed 60 or even 70 dBA. Similar noise effects are associated with areas adjacent to railroad track operations.

The extent of noise impacts associated with freeways and arterial roadways depends on traffic volume, speed, and other factors. As an example, the Noise Background Report (Table 4-3 of the Noise Background Report) indicates that a freeway carrying a modest average daily traffic (ADT) volume of 28,000 will cause the Ldn to exceed 60 dBA out to a distance of 790 feet from the roadway. Distances to other Ldn contours under different traffic conditions are also presented in the Noise Background Report. Similarly, the estimated distance to the 60 dBA Ldn noise contour adjacent to an intensively used freight train line ranges from 800 to 1,200 feet, depending on train speed. Land use designations allowing residential and other sensitive land uses within these distances from roadways or railroad lines with these noise levels are not compatible and could lead to significant noise impacts.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact N-2
The development of new industrial and commercial uses may create stationary noise sources that generate noise levels which are incompatible with adjacent residential or other sensitive land uses. Adherence to applicable regulations in the County Code will reduce these impacts.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact N-3
Aircraft noise generates occasional, but intrusive noise levels to the occupants of property adjacent to airports and/or under the flight patterns of aircraft using airports. Development of residential or other noise sensitive uses in the vicinity of airports may expose people to incompatible noise levels.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

Mitigation N-1
The County shall consider 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 Table IV-K-1 (see Noise Element Policy N-1.1, and Section 87-0905(b)(1) of the County Code). Consistent with (new) Policy N-1.7, the County shall prevent incompatible land uses in such areas.

Mitigation N-2
Consistent with Policy N-1.2 and N-2.1, the County shall 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 project design to reduce noise levels to the standards of Table IV-K-2. Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, places of worship and libraries. For each application involving such a land use at a location where the Ldn is expected to be in excess of 60 dBA, based either on noise contours for future traffic volumes as presented n the Noise Element or on the project's location near a freeway, arterial street, or railroad line that may reasonably be expected to generate a similar noise level, the County shall require a project specific noise analysis.

As described in the Noise Element, the acoustical analysis shall:

- Be the responsibility of the applicant;
- Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
- Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;

- Include estimated noise levels in terms of the descriptors shown in the Noise Background Report (Appendix I) for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element;
- Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the 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; and include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided [see Existing Policy NO-1d].

Mitigation N-3
When industrial, commercial or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use shall not exceed the performance standards of Table IV-K-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards of Table IV-K-2 at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.

Mitigation N-4
Implementation of measures N-1 and N-2 above should avoid or reduce potential aircraft noise impacts to a level below significance. The County shall submit all projects involving land use decisions on properties within airport influence areas to the Airport Land Use Commission for review.

Mitigation N-5
The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC).

Mitigation N-6
The County shall 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.

Mitigation N-7
Within the County's Development Code, one overlay district has been established to protect the public from high noise levels. The Noise Hazard "NH" Overlay District has been created to provide greater public safety by establishing land use review procedures and requirements for land uses in areas with identified high noise levels. The NH District operates as described below.

82.20.020 – Location Requirements

The NH overlay district may be applied to those areas where the Average Day-Night Sound Level (Ldn) is 65 decibels, 65 dBA or greater..

82.20.030 – Development Standards

When a land use application or development permit is proposed within the NH overlay district, the following standards shall apply with respect to residential uses:

(a) Acoustical report required. Noise levels shall be identified. An acoustical report shall be performed to identify noise impact. Any recommendation for noise attenuation or other mitigation measures shall be incorporated into the design standards or conditions of approval as applicable.

(b) Interior noise levels. Interior noise levels in all single family and multi family residences and educational institutions shall not exceed 45 dBA Ldn emanating from sources outside of the residential building.

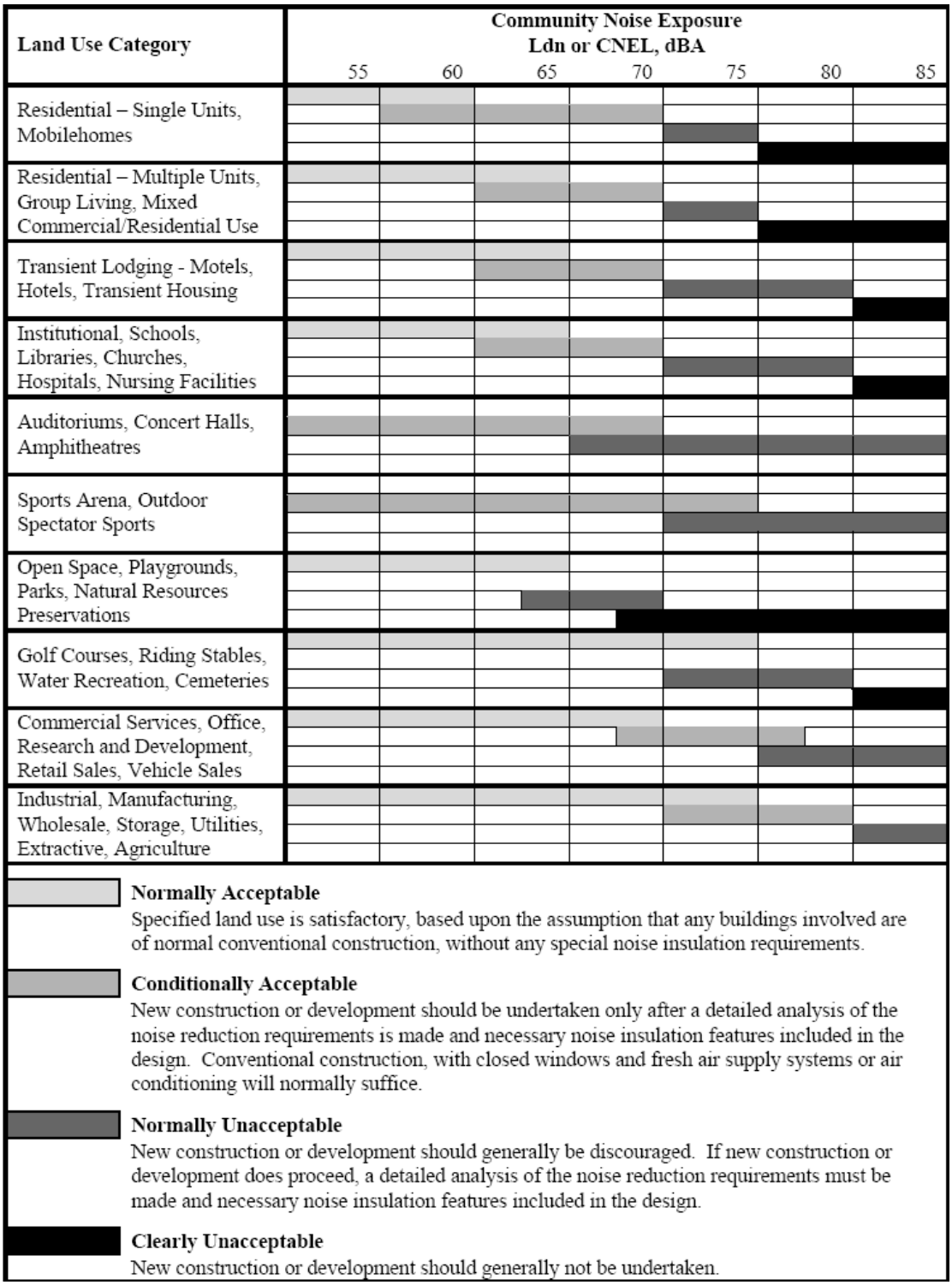
(c) Exterior noise levels. Exterior noise levels in all single family residential land use areas and multi family residential land use areas should not exceed 65 dBA Ldn. Exterior noise levels shall not exceed 70 dBA Ldn for any residential use areas. Ability to mitigate exterior noises to the levels of 65 dBA Ldn and 70 dBA Ldn shall be considered by the review authority when determining the actual Ldn level with which the land uses must comply.

(d) Noise mitigation measures. In areas where noise exceeds the noise standard, measures shall be taken to mitigate noise levels. An acoustical report identifying these mitigation measures shall be required and reviewed by the Environmental Health Services Division before issuance of any required development permits or approval of land use applications.

5. SIGNIFICANT UNMITIGATED IMPACTS

There are no noise impacts that cannot be mitigated to a level below significance.

Table IV-K-1. Noise Level Standards



Source: State of California General Plan Guidelines, Appendix C: Noise Element Guidelines, 2003, Governor's Office of Planning and Research, pg. 250

Table IV-K-2. Hourly Noise Level Performance Standards – Locally – Regulated Sources

	7 am - 10 pm		10 pm - 7 am	
LAND USE CATEGORY	**Leq**	**Lmax**	**Leq**	**Lmax**
Residential or other noise-sensitive receivers	55 dB(A)	75 dB(A)	45 dB(A)	65 dB(A)

* Noise sources that are stationary and not pre-empted from local noise control. Pre-empted sources include vehicles operated on public roadways, railroad line operations and aircraft in flight.

These limits are set forth in Section 87-0905(b)(2) of the County Development Code. Additional limits are specified in the code for other land use categories, including professional services, commercial, and other industrial uses.

L. POPULATION AND HOUSING

1. SETTING

Population

The State of California, Department of Finance predicts that San Bernardino County will be one of the fastest growing regions in the United States. According to the Department of Finance, the County is predicted to have a population of 2,456,089 in 2020 and 2,762,307 in 2030. The Valley Region of the County has experienced most of this growth.

Housing Stock

The projected increase in the housing stock reflects the population trend identified above. While the population of the County (incorporated cities and unincorporated County) is projected to rise by 467,041 over the next 10 years, the housing stock will increase by 151,650 units over the same interval (refer to Tables 3-6 and 3-9 of the Housing Background Report prepared for the update to the County's General Plan).

The spatial distribution of new residential construction is expected to continue to be skewed toward the Valley Region of the County. About 70% of the new units to be built in the County between 2000 and 2010 are expected to be located in the Valley Region. Although the Mountain and Desert regions are increasing their share of the projected growth, over 70% of the housing units in the County shall still be found in the Valley Region in 2020.

With a projected increase of 198,640 residents to the unincorporated portions of the County Regional Statistical Area (RSA) over the next 10 years, the unincorporated housing stock is expected to increase by 63,149 units. In line with the population growth, the Valley and Mountain Regions are projected to experience the greatest growth in housing, with a slower rate of growth occurring in the Desert region. According to the 1994 SCAG Regional Growth Forecast, the unincorporated Valley Region is projected to add nearly 45,000 new housing units (+63%). Consistent with the County trend, the growth in the Valley Region represents over 70% of the total unincorporated growth. The remainder of the unincorporated housing growth is respectively split between the Mountains and Desert regions, with 10,286 and 8,207 additional units.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Population/Housing, if the project would cause any of the following effects:

- *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).*
- *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*

Table IV-L-1. Housing Trends by Regional Statistical Area (RSA) 1980-2010

RSA	1980	1990	1980-1990 Growth	1980-1990 (%)	2000	1990-2000 Growth	1990-2000 (%)	2010	2000-2010 Growth	2000-2010 (%)
Valley										
West Valley RSA 28	17,764	26,356	8,592	48.4%	43,497	17,141	65.0%	73,102	29,605	68.1%
East Valley RSA 29	40,056	21,846	-18,210	-45.5%	27,296	5,450	24.9%	42,347	15,051	55.1%
Mountain										
RSA 30	13,254	14,161	907	6.8%	18,677	4,516	31.9%	28,963	10,286	55.1%
Desert										
Baker RSA 31	2,693	4,228	1,535	57.0%	4,236	8	0.2%	5,351	1,115	26.3%
Barstow RSA 32a & Victor Valley RSA 32b	24,909	20,641	-4,268	-17.1%	24,791	4,150	20.1%	28,141	3,350	13.5%
Morongo Basin RSA 33	15,011	16,549	1,538	10.2%	16,522	-27	-0.2%	20,025	3,503	21.2%
Outlying Deserts RSA 34	1,101	1,373	272	24.7%	1,333	-40	-2.9%	1,572	239	17.9%
Total Unincorporated	114,788	105,154	-9,634	-8.4%	136,352	31,198	29.7%	199,501	63,149	46.3%

Note: Unincorporated Total may not correspond to numbers presented in other tables due to methodology.
Sources: 1980 & 1990 Census; 1994 SCAG Growth Forecast

3. IMPACT ANALYSIS

Impact PH-1

The update of the San Bernardino County General Plan anticipates additional population and household growth in the County. The policies within the proposed General Plan and the associated Community Plans and the Development are designed to manage this projected growth. With the implementation of the proposed General Plan, the majority of the projected growth will be directed towards developed areas of the County, such as the Community Plan areas and the SOI areas.

Implementation of the proposed General Plan and the Community Plan policies will have several adverse indirect impacts on resources other than housing (for example, increase in traffic levels, deterioration of air quality, loss of open space, and increase in ambient noise). These are discussed throughout the DEIR and appropriate mitigation measures are proposed. .

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Impact PH-2

Buildout under the General Plan update is not likely to displace substantial numbers of existing housing and/or people, necessitating the construction of replacement housing elsewhere. The General Plan Update is intended to guide the location and intensity of land uses in San Bernardino County. The land use maps primarily apply to undeveloped land within the County; and does not redesignate lands designated for residential development to other land uses, such as Commercial or Industrial, thus the proposed project is not expected to directly displace existing housing and/or people such that it would lead to the need for the development of replacement housing elsewhere. Redevelopment activities have low to moderate potential to displace existing older housing. However, redevelopment requirements under State law require replacement and additional set aside housing. The Housing Element includes policies that address the factors that could lead to the need for replacement housing. Policies Housing Program 5-a through Housing Program 5-u promote the conservation of the County's current stock of affordable housing. By limiting the conversion of affordable housing to other uses, these policies reduce the potential for displacement of people and housing. Policies Housing Program 6-a through Housing Program 6-b prevent discrimination in housing, which reduces the potential for displacement of people. Policies Housing Program 7-a through Housing Program 7-b promote the development of all types of housing, including affordable housing, to meet regional housing needs. The development of affordable housing throughout the County would help ensure that replacement housing would not be necessary if very low and low-income populations increase over time.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

Mitigation PH-1

The County shall continue to utilize Planned Development density bonus and density transfer provisions as described in the County Development Code to allow creation of lot sizes less than that normally required by residential land use districts.

Mitigation PH-2
The County shall continue to allow mobile home parks in the Single Residential Land Use District at densities specified in the Development Code and in the Multiple Residential Land Use District subject to design guidelines which will ensure compatibility with the natural environment while minimizing potential adverse environmental impacts.

Mitigation PH-3
The County shall continue the Community Development Block Grant single-family homeowner rehabilitation loan program in order to rehabilitate housing and improve neighborhoods.

Mitigation PH-4
The County shall use and update the County Rehabilitation Guide for inspection of existing renter- and owner-occupied dwelling units to facilitate economical and safe rehabilitation of housing.

Mitigation PH-5
The County shall contract with for-profit and non-profit developers and assist them in acquiring and rehabilitating vacant Housing and Urban Development and VA repossessed properties. These houses will be resold at affordable prices to first-time and other homebuyer families.

Mitigation PH-6
Because the preservation of existing housing stock is important in providing housing opportunities for all income levels, housing and community rehabilitation programs shall be established and implemented through the following action programs.

Mitigation PH-7
The County shall preserve units at risk of being lost to lower income households through completion of their federal subsidies and affordability covenants or contracts by developing various kinds of incentives or other programs.

Mitigation PH-8
The County shall preserve historic structures through the use of various federal and state tax incentive and other programs.

Mitigation PH-9
The County shall continue to implement the Housing Incentives Program such that it would encourage the phasing of affordable housing in large planned developments when the density bonus incentive has been implemented.

Mitigation PH-10
The County shall identify and use surplus public land to assist in the provision of housing that is affordable to lower income groups.

Mitigation PH-11
The County shall identify sites for affordable housing in the various planning regions of the County.

Mitigation PH-12
The County shall continue to pursue opportunities to acquire and "bank" sites, as necessary, to be used for affordable housing.

Mitigation PH-13
The County shall continue to integrate all aspects of housing assistance and development planning within the Consolidated Plan, consistent with the broader County General Plan and Development Code, and Community Plans in order to identify the existing inventory as well as proposed locations for affordable housing.

Mitigation PH-14
The County shall continue to allow emergency and transitional shelters in any land use district with the appropriate permits, and concurrently develop the appropriate location and design standards for such uses.

Mitigation PH-15
Because of the various lifestyles and population characteristics of the County's residents, a variety and balance of housing types and densities shall be provided, through the General Plan Update, to require that all new planning area or specific plan studies provide housing types and densities commensurate with demonstrated lifestyles, projected needs, and population characteristics of the individual planning area.

Mitigation PH-16
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.

Mitigation PH-17
The County shall identify areas of the County where urban infill is appropriate, and encourage their development through the use of various incentives.

Mitigation PH-18
In the unincorporated areas of the County, the County shall designate residential land use districts within close proximity (three to five miles) of major transportation corridors. The more intensive residential land uses (RS and RM) shall be designated in urbanized areas, and less intensive residential land uses (RS-1, RL-2.5, etc.) in the more rural areas.

Mitigation PH-19
Throughout the County, the County shall continue to encourage mixed-use development through the Planned Development process that includes dense, multiple family residential developments as well as clustered, single family residential development, and other uses which provide convenient shopping and employment opportunities close to major transportation corridors.

5. SIGNIFICANT UNMITIGATED IMPACTS

None have been identified.

M. PUBLIC SERVICES

1. SETTING

Law Enforcement

The San Bernardino County Sheriff's Department, in collaboration with various cities and other agencies having jurisdiction in the County, provides law enforcement services to the incorporated and the unincorporated communities in the County. Many cities have contracted police protection services to the County Sheriff's Department. Crime statistics summary from the Federal Bureau of Investigation Crime Index and the California Crime Index for the County of San Bernardino show that from 1992 to 2001 the numbers of incidents have decreased by more than 35,000 annually, a reduction of 34%. However, the pattern of crimes remains unchanged over the years with the majority of crimes throughout the County being property crimes and larceny theft, followed by incidents of violent crimes and arson (Source: California Department of Justice).

Data from the California Department of Justice (refer to Table 2-60 of the Circulation and Infrastructure Background Report prepared for the County General Plan update) show there were a total of 6,303 criminal justice personnel in San Bernardino County in 2001. Of this total, more than 4,500 personnel were employed specifically in law enforcement positions. These statistics report that the number of personnel in the criminal justice system has increased steadily from 1992 to 2001.

The personnel of the San Bernardino Sheriff's Department provide law enforcement services to the County's citizens through 24 patrol stations and 13 specific divisions, including an Aviation Division headquartered at the Rialto Airport.

The San Bernardino Sheriff's Department maintains three correctional facilities, the West Valley Detention Center in Rancho Cucamonga; the Glen Helen Rehabilitation Center, a two-unit, male and female-inmate facility in Devore; and, the Central Rehabilitation Center that houses federal inmates for the United States Marshall Service located in the City of San Bernardino. Additionally, the County of San Bernardino has 11 Superior Court jurisdictions. More details on law enforcement services of the County are provided in the Circulation and Infrastructure Background Report.

Fire Protection

Fire protection services are collaboratively provided through various agencies in San Bernardino County. Below is a brief discussion about these agencies. More details on fire protection services in the County are provided in the Circulation and Infrastructure Background Report prepared for this project.

County of San Bernardino Fire Department: The San Bernardino County Fire Department provides services through 63 fire stations located throughout the four divisions of the Department: Mountain, North Desert, South Desert, and Valley Division.

Fire Districts and County Service Areas (CSAs): There are six County governed fire protection districts and 24 CSAs with fire protection authority. These help make up the overall County fire districts.

California Department of Forestry: The California Department of Forestry has 12 fire stations located at the following locations:

- Chino;
- Chino Hills;
- Crestline;
- Devore;
- Hesperia;
- Highland (Station 541 and 542);
- Lucerne Valley;
- Phelan;
- Yucaipa (Crafton Hills and Station 551); and
- Yucca Valley

Healthcare

California State Law and County Code has assigned the County of San Bernardino Department of Public Health (the Department) the responsibility of protecting the health of the County's citizens. As the primary agency in charge of its residents' health, the Department carries out wide-ranging, yet comprehensive, public health programs including traditional public health services mandated by the state of California, but also a substantial range of personal health services provided at the request of its residents, and triaged as priority by the County Board of Supervisors and County-mandated regulatory services. The Department operates more than 30 major programs dedicated to specific public health activities. Specific public health related services include control of communicable diseases, epidemiology, veterinary services, the Public Health Laboratory, child and adolescent health programs, the California Children Services Program, family planning and maternal health services, nutrition services, including the Women, Infants, and Children (WIC) program, preventive health services for the aging, school health, control of chronic disease, public health nursing services, food protection, safe drinking water programs, waste management, animal care and control services, education programs, registration of vital events, and public health data collection and analysis. The Department operates 33 major programs.[1] A list of the Department programs and services is provided in Appendix D to the Circulation and Infrastructure Background Report.

There are approximately 24 hospitals in the overall County area. There is one County hospital – Arrowhead Regional Medical Center that is a full service acute care hospital. Arrowhead also has the only burn treatment facility for both San Bernardino and Riverside counties. There are approximately 283 beds in this County facility. There are also 17 private hospitals that are considered "general acute care" facilities. Of these 17 facilities, 15 have basic emergency services with a physician on duty. The remaining two facilities have basic emergency services with a physician on stand-by. There is one "rural general acute care" hospital located in the Lake Arrowhead area. There are also two major acute psychiatric hospitals in the County. The California Institution for Men also has a hospital onsite. There are approximately 3,269 beds combined for the County's hospitals.

[1] http://www.co.san-bernardino.ca.us/pubhlth/misc/mission.htm

More details on healthcare services of the County are provided in the Circulation and Infrastructure Background Report prepared for this project.

Libraries

The San Bernardino County Library system currently serves approximately 1,100,000 people in 18 cities and all San Bernardino County's unincorporated areas through the 29 facilities and two bookmobiles. Twenty-eight of the buildings are branch libraries located throughout the vast county while the Administration building in the City of San Bernardino is considered the 29th branch. The 28 branch facilities have a combined 177,925 square feet of library space, providing one library for every 714 square miles, an equivalent of 0.21 square feet per person[2] residing in a library's service area. More details on library facilities in the County are provided in the Circulation and Infrastructure Background Report prepared for the County's General Plan.

Education

With a County-wide K-12 student population of an approximate 420,000 students attending more than 480 schools, the San Bernardino County Superintendent of Schools (SBCSS) office is a regional agency. The SBCSS provides vital and necessary service, leadership and advocacy to the 34 K-12 districts in the County (*Source: California Department of Education, California Basic Education Data System, Various Years*). Table IV-M-1 provides the location and enrollment levels, while Table IV-M-2 offers schools by type, for the District's 2002 - 03 school year. The County has 13 colleges: California State University at San Bernardino, six community colleges, four state-approved institutions, and two Western Association of Schools and Colleges accredited non-public institutions. Table IV-M-3 shows the location and enrollment levels of these colleges. The County also has six Special Education Local Plan Areas (SELPA) consisting of Desert/Mountain; East Valley; Fontana Unified School District; Morongo Unified School District; San Bernardino City Unified School District; and West End SELPA, and three regional occupational programs including Baldy View; Colton-Redlands-Yucaipa; and county schools regional occupational programs. The County Board of Supervisors exercises direct control over the County School System. The County School System is under the jurisdiction of the State Board of Education.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Public Service, if the project would cause any of the following effects:

- *The project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or*

[2] Desirable space for public libraries is 0.5-0.6 square feet per capita for a community of population between 35,000-100,000 persons. Source: Joseph L Wheeler and Herbert Goldhor, Practical Administration of Public Libraries (New York: Harper and Row, 1962) p. 554

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 public services:

- *Fire protection.*
- *Police protection.*
- *Schools.*
- *Parks.*
- *Other public facilities (e.g., safety).*

3. IMPACT ANALYSIS

Law Enforcement

Impact PS-1
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. The update to the San Bernardino County General Plan includes objectives and policies related to police services that will help to ensure the provision of adequate law enforcement services and meet future County residents' needs.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Fire Protection

Impact PS-2
Growth and development in the unincorporated communities of San Bernardino County will result in an increase in demand for fire protection services. However, in anticipation of that growth, the County has established policies that guide the provisions of fire services and require financial participation by projects.

Of the various public services, fire infrastructure planning is a high priority for the County, especially after the wildfire disasters of 2003. Fire hazard planning continues to be coordinated with land use planning to minimize the detrimental impacts to life and safety of the County residents and the firefighters, as well as damages to property and structures; these issues will be addressed under "safety" in the impact analysis.

The Fire Department currently has eight fire stations either funded and under construction, or pending funding and approval. The necessary type of equipment and staffing at the fire stations may change as development occurs. The provision of additional fire stations and equipment will help serve the needs of future County residents.

The update to the San Bernardino County General Plan provides goals and policies related to fire protection services. Implementation of these goals and policies will reduce the impacts of future growth of the County on the services. Related goals and policies are included in the Mitigation Measures discussion below.

This impact can be fully mitigated by the adoption of certain mitigation measures presented in Section 4, below.

Health Care

Impact PS-3
With the projected growth in the unincorporated areas of San Bernardino County will result in an increased use of health care facilities. Hospitals and other health care centers will need to expand their facilities or create new facilities in areas that show population growth. Also, doctors and health care physicians will need to be on hand to properly staff these facilities to suit the various needs of residents.

This impact can be fully mitigated though the adoption of the Land Use Element, which provides suitable land use designations to accommodate health care facilities.

Libraries

Impact PS-4
Future growth within the County will result in need for additional library facilities to serve the needs of future County residents. Significant impacts will occur. The San Bernardino County Library Facilities Master Plan presents the library's need for new facilities over the next 20 years. The Facilities Master Plan establishes three levels of facilities priorities, encompassing renovation, expansion, and replacement of the 29 facilities. The Facilities Master Plan will serve as a major analytical tool for the library's applications for funds from the Library Bond Act of 2000 (Proposition 14). The plan will result in a total of 666,556 square feet of space, or 0.36 square feet per capita for an approximate service area population of 1,866,146. Provision of additional library facilities as provided by the Facilities Master Plan will provide for future County residents' library needs, reducing the impact of the future population growth.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Education

Impact PS-5
Population growth in the County shall increase the number of school age children needing to be served by the various school districts along the County. This will require the expansion of existing school sites/facilities and the construction of new schools. The new school sites will need to be located in proximity to the areas they will serve. Schools are not under County control.

The budget cuts for schools and community colleges due to the state's economic difficulties during the last two years are the most critical issues faced by the San Bernardino County education system. The proposed fee increases and enrollment freezes in the state budget will affect the total enrollment in colleges for County residents. Another concern for schools is the decreasing rate of enrollments within the school districts.

The update of the County's General Plan includes a policy that requires the provision of convenient access to County educational facilities that will help in providing future school facilities to serve additional County residents.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

The following information is provided in accordance with the Goals and Policies Report for the County of San Bernardino.

Law Enforcement

Mitigation PS-1
The County shall provide adequate law enforcement facilities to deliver services to deter crime and to meet the growing demand for services associated with increasing populations and commercial/industrial developments.

Mitigation PS-2
The County shall seek and commit sufficient investigative resources for effective follow-up on criminal offenses.

Mitigation PS-3
The County shall assess and update training and equipment needs on a routine basis when possible to ensure policing methods are effectively executed while minimizing unnecessary liability.

Fire Protection

Mitigation PS-4
The County shall protect its residents and visitors from injury and loss of life and protect property from fires through the continued improvement of existing Fire Department facilities and the creation of new facilities, but also through the improvement of related infrastructure that is necessary for the provision of fire service delivery such as water systems and transportation networks.

Mitigation PS-5
The County shall create a Fire Master Plan that can be used to identify areas in the County that are in need of increased levels of fire service delivery and thereby identify geographic areas that are in need of infrastructure improvements so that those areas can take the necessary steps to improve that infrastructure and eventually can adequately support the commensurate improvement in fire service delivery.

Mitigation PS-6
The County shall encourage development in areas that have adequate infrastructure for the provision of fire service that include, but are not limited to, water system infrastructure that is capable of delivering appropriate fire flow and transportation networks that can provide access for fire apparatus and other emergency response vehicles as well as provide efficient egress for evacuees.

Mitigation PS-7
The County shall create Community Facilities District or other long-term financial instruments within proposed developments and areas available for development to provide a fair share funding mechanism to support pro-rata increases for the provision of long-term fire

protection. The Community Facilities Districts should be designed to provide sustained long-term levels of staffing operations, equipment, and facilities. The Community Facilities Districts should also be designed specifically to the impacts of the related development and thereby to minimize the impact to the general fund and other existing funding mechanisms that support the Fire Department.

Libraries

Mitigation PS-8
The County shall ensure that adequate school, library, and day-care facilities are available and appropriately located to meet the needs of its residents

Education

Mitigation PS-9
The County shall provide convenient access to K-12 and higher educational opportunities for all, activities for youth, and programs for residents of all ages.

5. SIGNIFICANT UNMITIGATED IMPACTS

All public service impacts are fully mitigated.

Table IV-M-1. School Districts, 2002-03

	School District	City	Enrollment
1	Adelanto School District (elem)	Adelanto	5,548
2	Alta Loma School District (elem)	Alta Loma	7,609
3	Apple Valley Unified School District	Apple Valley	13,850
4	Baker Valley Unified School District	Baker	213
5	Barstow Unified School District	Barstow	6,816
6	Bear Valley Unified School District	Big Bear Lake	3,390
7	Central School District (elem)	Rancho Cucamonga	5,231
8	Chaffey Joint Union High SD	Ontario	21,981
9	Chino Valley Unified School District	Chino	32,916
10	Colton Joint Unified School District	Colton	24,018
11	Cucamonga School District (elem)	Rancho Cucamonga	2,892
12	Etiwanda School District (elem)	Etiwanda	10,287
13	Fontana Unified School District	Fontana	40,168
14	Helendale School District (elem)	Helendale	603
15	Hesperia Unified School District	Hesperia	16,195
16	Lucerne Valley Unified School District	Lucerne Valley	1,005
17	Morongo Unified School District	Twentynine Palms	9,467
18	Mountain View School District (elem)	Ontario	3,439
19	Mt. Baldy Joint School District (elem)	Mt. Baldy	80
20	Needles Unified School District	Needles	1,190
21	Ontario-Montclair School District (elem)	Ontario	27,270
22	Oro Grande School District (elem(	Oro Grande	2,846
23	Redlands Unified School District	Redlands	20,285
24	Rialto Unified School District	Rialto	30,172
25	Rim of the World Unified School District	Lake Arrowhead	5,780
26	San Bernardino City Unified School District	San Bernardino	56,096
27	San Bernardino Co. Off. Of Education	San Bernardino	3,223
28	Silver Valley Unified School District	Yermo	2,670
29	Snowline Joint Unified School District	Phelan	8,785
30	Trona Joint Unified School District	Trona	350
31	Upland Unified School District	Upland	13,237
32	Victor Elementary School District	Victorville	9,442
33	Victor Valley Union High School District	Victorville	10,424
34	Yucaipa-Calimesa Joint Unified School District	Yucaipa	9,242
	Total		406,720

Source: San Bernardino County Superintendent of Schools (www.sbcss.k12.ca.us) California Department of Education (www.cde.ca.gov), and California Post Secondary Education Commission (www.cpec.ca.gov)

Table IV-M-2. Schools by Type, 2002-03

	Number of Schools
Elementary	296
Middle	73
Junior High	2
High School	50
K-12	5
Alternative	11
Special Education	6
Continuation	24
Community Day	12
Juvenile Court	2
Calif. Youth Authority	1
Total	482

Source: California Department of Education, Educational Demographics Unit

Table IV-M-3. Colleges, San Bernardino County

	College District	Location	Enrollment
	California State University		
1	California State University, San Bernardino	San Bernardino, CA	16,341
	California Community Colleges		
2	Barstow College	Barstow, CA	3,349
3	Chaffey Community College	Rancho Cucamonga, CA	19,984
4	Copper Mountain College	Joshua Tree, CA	2,158
5	Crafton Hills College	Yucaipa, CA	5,519
6	San Bernardino Valley College	San Bernardino, CA	14,273
7	Victor Valley College	Victorville, CA	11,793
	State-Approved Institutions		
8	Community Christian College	Redlands, CA	N/A
9	Everest College	Rancho Cucamonga, CA	N/A
10	Inland Valley College	Upland, CA	N/A
11	International School of Theology	Fontana, CA	89
	WASC-Accredited Non-public Institutions		
12	Loma Linda University	Loma Linda, CA	3,297
13	University of Redlands	Redlands, CA	4,297
	Total		81,100

Source: California Post Secondary Education Commission (http://www.cpec.ca.gov/)

N. RECREATION

1. SETTING

Open space can be a resource to be used for recreational purposes, including regional parks and other areas that are suited for hiking, nature enjoyment, skiing and similar uses. While modern society has created many types of recreation that can occur in an urban setting, open areas in the outdoors remain an important location for many people seeking rest and relaxation. The County of San Bernardino has an abundance of outdoor recreational opportunities. Within the County there are: water sports; hiking, bicycling, and equestrian activities; off-road vehicle recreation; fishing, camping and hunting; passive recreation and enjoyment of the natural setting; and developed parks. The major providers of outdoor recreation are the BLM, the USFS, State Department of Parks and Recreation, National Parks, County Regional Parks Department, and local City Parks Departments.

The BLM has jurisdiction of vast areas of the County. The BLM manages about 6,076,378 acres of public land in the Desert Region of the County, which represents about 47% of the County's public land holdings. BLM special management areas in the County include: California Desert Conservation Plan; Northern & Eastern Colorado Desert Management Plan; Northern & Eastern Mojave Desert Plan; and the West Mojave Habitat Conservation Plan and California Desert Conservation Plan Amendment. In addition to these plans, the BLM manages the congressionally designated Wilderness Areas, of which there are 28 of these in the County. These Wilderness Areas are undeveloped lands which have no permanent improvements or human habitation. There are also six off-highway vehicle recreation areas which are open spaces where vehicles such as off-road motorcycles are used. These off-highway vehicle areas are: Spangler Hills, El Mirage, Stoddard Valley, Johnson Valley, Rasor and Dumont Dunes.

The U.S. Forest Service (USFS), and Department of Agriculture manage the majority of the geographic area within the Mountain Regions of the County totaling over 671,000 acres in the San Bernardino Mountains and a portion of the San Gabriel Mountains. The National Forests are managed by the USFS for multiple uses including recreation, watershed protection, grazing, and forest stand management within the Cucamonga Wilderness, San Gorgonio Wilderness, and Big Horn Mountain Wilderness. The USFS has recently updated the Land and Resource Management Plans for the Angeles, Cleveland, Los Padres, and San Bernardino National Forests. The USFS also administers the Pacific Crest Trail (PCT), which is a designated wilderness trail approximately 2,650 miles long running from Canada to Mexico. One hundred fifteen miles of the PCT trail runs through San Bernardino County.

The National Park Service regulates the Mojave National Preserve, Joshua Tree National Park, and Death Valley National Park. All of these National Parks attract visitors for the scenic beauty and uniqueness in the California landscape.

The California Department of Parks and Recreation manages a number of parks within the County, including: Silverwood State Recreation Area, Providence Mountain State Recreation Area, Chino Hills State Recreation Area and Wildwood Canyon. Wildwood Canyon is a new park and is currently not available for public use.

There are also nine regional parks in the County. Regional parks generally encompass 100 or more acres and are designed to serve a population of 100,000 residents. These regional parks offer a variety of recreational and entertainment opportunities.

In addition to the regional parks, there are 17 community parks within the County. Community parks serve a 2- to 4-mile radius with a population of 50,000 to 80,000. The size of these parks is generally from 15 to 20 acres. Community, municipal and neighborhood park facilities are provided by self-governed park districts within the unincorporated portions of the County and by cities and towns within the unincorporated areas. These facilities typically include playgrounds, sports fields, and senior citizen centers. Table IV-N-1 lists the County's regional and community parks.

Inventory of Recreational Areas by Planning Region

a) Valley Region

The Valley Region of the County contains only 20% of the land area of the County, but almost three-quarters of the County's population lives there. State parks in the region include Chino Hills State Park and Wildwood Canyon State Park Property. Table IV-N-2 lists the regional and community parks in the Valley Region of the County.

b) Mountain Region

Most of the Mountain Region of the County of San Bernardino is covered by the Angeles and San Bernardino National Forests. State parks include Cucamonga Wilderness Area, San Gorgonio Wilderness Area, Bighorn Mountains Wilderness Area, and Silverwood Lake State Recreation Area. Table IV-N-3 lists the regional and community parks in the Mountain Region of the County.

c) Desert Region

The Desert Region of the County has the most recreational opportunities. Off-Highway Vehicle Recreation Areas in the Desert include Spangler Hills, El Mirage, Stoddard Valley, Johnson Valley, Rasor, Dumont Dunes. National Parks in the Desert Region are Death Valley, Mojave National Preserve, and Joshua Tree. State parks in the region are Providence Mountain State Park, and Providence Mountains State Recreation Area. Table IV-N-4 lists the regional and community parks in the Desert Region of the County.

d) County

When examining the County as a whole it is important to note that the County is currently within the County standard of 2.5 acres of park area for each 1,000 population The County population total (incorporated and unincorporated) is approximately 1,716,166. Using the County standard of 2.5 acres per 1,000 populations, the County would need approximately 4,290 acres of parkland. The total parkland in all three planning regions is 9,647 acres. The County meets the standard of 2.5 acres of parkland per 1,000 populations.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Recreation, if the project would cause any of the following effects:

- *The project would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.*
- *The project includes recreational facilities or requires the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.*

3. IMPACT ANALYSIS

Impacts related to increased demand for recreational opportunities will be significant if a proposed project requires new construction to maintain acceptable performance standards for public parks or recreational opportunities and that new construction causes new significant environmental impacts.

a) Valley Region

The 2030 projected unincorporated County population for the Valley Region is 186,224. The total projected population for incorporated city residents in the Valley Region is 1,716,384. This brings the projected total residents of the Valley Region to 1,902,608. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. Using the County standard, the required regional park space for the Valley Region would be approximately 4,757 acres. Currently, there are approximately 3,045 acres of regional and community parks in the Valley Region.

Impact REC-1
The County does not have adequate park space for the projected population called for by the updated General Plan in the Valley Region. The County would need an additional 1,712 acres of parkland to meet the accepted standard.

There is a planned regional park, Colton Regional Park, which will add 150 acres of parkland to the Valley Region. The County and local cities would still need an additional 1,562 acres of regional parkland in the Valley Region.

The 2030 projected unincorporated County population for the Mountain Region is 72,833. The total projected population for incorporated city residents in the Mountain Region is 11,890. This brings the projected total residents of the Mountain Region to 84,723. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Mountain Region would be approximately 213 acres. Currently, there are approximately 1,551 acres of regional and community parks in the Mountain Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.

This impact can be fully mitigated by the adoption of certain mitigation measures presented in Section 4, below.

b) Mountain Region

Impact REC-2
The 2030 projected unincorporated County population for the Desert Region is 148,918. The total projected population for incorporated city residents in the Desert Region is 548,584. This brings the projected total residents of the Desert Region to approximately 698,000. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Desert Region would be approximately 1,745 acres. Currently, there are approximately 5,051 acres of regional and community parks in the Desert Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.

This impact can be fully mitigated by the adoption of certain mitigation measures presented in Section 4, below.

c) Desert Region

Impact REC-3
The 2030 projected population for the County as a whole is 2,685,486. Under the County's guidelines of 2.5 acres of parkland per 1,000 populations, there will need to be 6,714 acres of County parkland. The County as a whole currently has 9,647 acres of parkland.

While the majority of the population of the County lives in the Valley Region, the residents of the Valley Region visit parkland in the Mountain and Desert Regions of the County. The County also has a large amount of national parks, state parks and BLM land which the people of the County can use.

This impact can be fully mitigated by the adoption of certain mitigation measures presented in Section 4, below.

d) County

The 2030 projected population for the County as a whole is 2,685,486. Under the County's guidelines of 2.5 acres of parkland per 1,000 populations, there will need to be 6,714 acres of County parkland. The County as a whole currently has 9,647 acres of parkland. The County as a whole will meet the County standard.

While the majority of the population of the County lives in the Valley Region, the residents of the Valley Region visit parkland in the Mountain and Desert Regions of the County. The County also has a large amount of national parks, state parks and BLM land which the people of the County can use.

4. MITIGATION MEASURES

Mitigation REC –1
The County shall support the establishment of "urban open space areas" within urban areas, and seek to develop or retain these areas through cooperation with local cities. Where possible, these areas shall be located along or near regional trail routes.

Mitigation REC –2
The County shall 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 parkland per 1,000 populations. "Undeveloped lands" may include areas established to buffer regional parks from encroachment by incompatible uses.

Mitigation REC –3
When specific projects are reviewed which exhibit natural features worthy of regional park land status, the County shall require the dedication of these lands when recommended by the Regional Parks Department and approved by the Board of Supervisors.

Mitigation REC –4
The County shall ensure that the variety of recreational experiences at Regional Park sites meets the needs of the region.

Mitigation REC –5
The County shall require new residential development to provide a park and recreation facilities at a rate of not less than 3 acres per 1,000 population. This could include the dedication of lands, payment of fees, or a combination thereof.

Mitigation REC –6
The County shall implement the Quimby Act (Gov. Code Section 66477) through the subdivision process in providing for local opportunities (both passive and active).

Mitigation REC –7
Areas in new developments that are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to increase its buildable area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.

Mitigation REC –8
In addition to parkland to meet the 3 acres per 1,000 local park standard, large-scale housing projects in the Valley Region with 100 or more units shall provide on-site recreational facilities, including pools, tennis courts and turfed play areas and tot-lots.

Mitigation REC –9
The County shall classify local parks in three categories: Local, Neighborhood and Community Parks, and establish size and location standards as follows:

- Local Park: A small walk-in park, up to five acres, serving a concentrated or limited population, particularly children, within a quarter mile radius.

- Neighborhood Park: A walk-in park, up to 10 acres, with a service radius of a half-mile. Serves a neighborhood and provides a passive recreation location for all age groups.
- Community Park: A walk-in, drive to park, up to 40 acres, which includes areas for intense recreational facilities and serves a combination of neighborhoods within a 1-2 mile radius.

Mitigation REC –10
The County shall expand its trail systems for pedestrians, equestrians, and bicyclists to connect with the local, state, and federal trail systems.

Mitigation REC –11
The County shall provide a regional trail system, plus rest areas, to provide continuous interconnecting trails that serve major populated areas of the County and existing and proposed recreation facilities through the regional trail system. The purpose of the County regional trails system shall be to provide major backbone linkages to which community trails might connect. The provision and management of community and local trails will not be the responsibility of the regional trail system.

Mitigation REC –12
The County shall provide equestrian, bicycling, and pedestrian staging areas consistent with the master plan of Regional Trails and the trail route and use descriptions shown in Figures 2-11A through 2-11C of the Circulation Background Report.

Mitigation REC –13
The County shall work with local, state and federal agencies, interest groups and private landowners in an effort to promote an interconnecting regional trail system; and to secure trail access through purchase, easements or by other means.

Mitigation REC –14
The County shall utilize public funding mechanisms whenever possible to protect and acquire lands for open space uses.

Mitigation REC –15
The County shall actively seek state, federal, and private grants for the purpose of financing open space and trail acquisition, construction and operation.

Mitigation REC –16
The County shall use general funds, user fees, proceeds from concession operations and other sources that may be available to finance open space and trail acquisition, construction and operation.

Mitigation REC –17
The County shall include open space and trail acquisition and development in its Capital Improvement Programs.

Mitigation REC –18
The County shall locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.

Mitigation REC –19
The County shall use lands already in public ownership or proposed for public acquisition, such as right-of-way for flood control channels, abandoned railroad lines and fire control roads for trails wherever possible, in preference to private property.

Mitigation REC –20
The County shall encourage the dedication or offers of dedication of trail easements where appropriate for establishing a planned trails system alignment, or where an established trail is jeopardized by impending development or subdivision activity.

Mitigation REC –21
The County shall monitor all dedicated public trails and/or easements on a continuing basis and maintain an up-to-date map of all existing and proposed dedicated public trail easements on the Resources Overlay. Existing trail easements or alignments shall be mapped in their correct positions; proposed alignments shall be mapped in general locations. The Resources Overlay shall be reviewed during consideration of applications for permits or development approvals to ensure that new development does not result in loss of existing or potential public use of dedicated easements.

Mitigation REC –22
The County shall use active and abandoned road, utility, and railroad rights-of-way for non-vehicular circulation in all new development when found feasible.

Mitigation REC –23
The County shall require proposed development adjacent to trail systems to dedicate land for trailhead access points. Existing right-of-way and surplus public properties should be utilized for these staging areas whenever possible.

Mitigation REC –24
The County shall begin acquisition of trail easements or rights-of-way after a trail route plan has been adopted, unless a trail segment is to be acquired through dedication in conjunction with development activity or acts of philanthropy that occur prior to adoption of a route plan.

Mitigation REC –25
The County shall develop multipurpose regional open spaces and advocate multi-use access to public lands including national parks, national forests, state parks, and BLM areas.

Mitigation REC –26
To preserve and protect recreational facilities in the County, the County shall utilize public funding mechanisms wherever possible to protect and acquire regional park lands.

Mitigation REC –27
To expand recreational opportunities in the County, the County shall utilize small parcels adjacent to flood control facilities for equestrian, pedestrian and biking staging areas. The County Department of Public Works shall contact the Regional Parks Department or other County open space agency prior to disposing of any surplus lands.

5. SIGNIFICANT UNMITIGATED IMPACTS

All impacts on recreation would be less than significant after mitigation.

Table IV-N-1. Regional and Community Parks in San Bernardino County

Regional Parks	
Calico Ghost Town Regional Park	Cucamonga-Guasti Regional Park
Glen Helen Regional Park	Lake Gregory Regional Park
Moab Regional Park	Mojave Narrows Regional Park
Mojave River Forks Regional Park	Prado Regional Park
Yucaipa Regional Park	
Community Parks	
Big Bear Park	Big River Park and Recreation Site
Chet Hoffman Park	Covington Park
Crest Park	Crestline Park
Dana Point Park	Erwin Lake Park
Grout Bay Park	Meadows Edge Park
Midway Park	Miller Park
Pioneer Park	Running Deer Park
Sugarloaf Park	Switzer Park Picnic Area
Thurman Flats Picnic Area	

Source: http//www.co_san_bernardino.ca.us/parks/;GIS

The adequacy of outdoor recreational opportunities is typically measured in terms of the quantity of space and the quality of the facilities and programs. County standards for the quantity of space distinguish between local and regional parkland: 2.5 acres of developed regional parkland per 1,000 populations.

Table IV-N-2. Regional Parks and Community Parks in the Valley Region

Regional Parks	**Acreage**
Prado Regional Park	2,000
Cucamonga-Guasti Regional Park	150
Yucaipa Regional Park	885
Total Acres:	**3,035**
Community Parks	
Miller Park	8
Running Deer Park	2
Total Acres:	**10**
Total Regional and Community Park Acres	**3,045**

Sources: http://www.co.san-bernardino.ca.us/parks/GIS

Based on the County standard of 2.5 acres of park area for each 1,000 population served, 3,202 acres of parkland would be required for the Valley Region's year 2000 population of approximately 1,280,964. Therefore, the local recreation facilities would not have capacity available to support additional population and 157 acres of additional parkland that are required for the existing population in the Valley Region. However, the Mountain and Desert Region have parkland in excess of the 2.5 acres for each 1,000 of population. Countywide the requirement for park area is exceeded by 5,513 acres.

Table IV-N-3. Regional Parks and Community Parks in the Mountains Region

Regional Parks	**Acreage**
Glen Helen Regional Park	1,340
Lake Gregory Regional Park	150
Total Acres:	**1,490**
Community Parks	
Big Bear City Park	9
Crest Park	3
Crestline Park	2
Dana Point Park	8
Erwin Lake Park	2
Grout Bay Park	8
Meadows Edge Park	9
Switzer Park Picnic Area	12
Thurman Flats Picnic Grounds	8
Total Acres:	**61**
Total Regional and Community Park Acres	**1,551**

Sources: http://www.co.san-bernardino.ca.us/parks/GIS

Based on the County standard of 2.5 acres of park area for each 1,000 population served, 139 acres of parkland would be required for the Mountain Region's year 2000 population of approximately 55,428. The Mountain Region has 1,551 acres of parkland currently which is over the standard for park areas.

Table IV-N-4. Regional Parks and Community Parks in the Desert Region

Regional Parks	**Acreage**
Big Morongo Regional Park	183
Calico Ghost Town Regional Park	480
Moabi Regional Park	1,100
Mojave Narrows Regional Park	840
Mojave River Forks Regional Park	2,393
Total Acres:	**4,996**
Community Parks	
Big River Park and Recreation Site	14
Chet Hoffman Park	4
Covington Park	3
Midway Park	16
Pioneer Park	12
Sugarloaf Park	6
Total Acres:	**55**
Total Regional and Community Park Acres	**5,051**

Sources: http://www.co.san-bernardino.ca.us/parks/GIS

Based on the County standard of 2.5 acres of park area for each 1,000 population served, 950 acres of parkland would be required for the Desert Region's year 2000 population of approximately 379,774. The Desert Region has 5,051 acres of parkland currently which is over the standard for park areas.

O. TRANSPORTATION/TRAFFIC

1. SETTING

San Bernardino County extends from the eastern edge of the Los Angeles metropolitan region to the Arizona border. Because of its location, the County acts as the gateway between southern California and the continental United States. The vast majority of travel trips in the County are made by automobile, using the existing network of freeways and arterial highways. Transit (i.e., bus and commuter rail) service is also an increasingly important mode of transportation in the more urbanized parts of the County. A small fraction of the trips are made utilizing other modes of transportation such as air, intercity rail, bicycling and walking.

San Bernardino County has major freeway and railroad corridors that provide access to cargo and products between the Ports of Los Angeles and Long Beach and the rest of the country. Currently, these ports are two of the busiest ports in the world, and, as a result, a large portion of the goods traveling into and out of the United States pass from these ports through the County either by truck or rail. Cargo operations are aided by two large-scale railroad classification yards and a state-of-the-art intermodal transfer facility located within the County.

Other rail infrastructure includes portions of three commuter rail lines, connecting the County to Los Angeles and Orange Counties, and two transcontinental routes operated by Amtrak. The County has also been identified as one of the prime locations for the development of magnetic levitation high-speed rail, Maglev, in the near future.

The aviation industry also has a strong presence in San Bernardino County, with a total of 44 public and private airports and 25 heliports. Included in these are Ontario International Airport, one of the fastest growing commercial airports in the United States; Southern California Logistics Airport (SCLA) and San Bernardino International Airport (SBDIA), new intermodal gateways for air freight just beginning to develop; and Cable Airport, the largest privately-owned airport in the United States.

Roadway System

There are currently over 10,000 miles of roadways located within San Bernardino County. These facilities fall under the jurisdiction of one of three levels of governmental agencies responsible for construction and maintenance of roadway infrastructure. Caltrans is responsible for maintaining approximately 1,240 miles of roadway throughout the County. This total includes six federal (Interstate) freeways, two federal (U.S.) highways and eighteen state highways, also known as state routes. The San Bernardino County Department of Public Works is responsible for maintaining approximately 2,830 miles of both paved and unpaved roadways primarily located in unincorporated areas of the County. These facilities range in classification from major arterial highways to local streets. The remaining 5,930 miles of roadways within San Bernardino County fall under the jurisdiction of the numerous incorporated municipalities located across the County. These facilities also range in classification from major arterials to local streets. Figures 2-1A through 2-1C of the Circulation Background Report show the extensive roadway network that currently exists within the Valley, Mountain and Desert Regions. Figures 2-2A through 2-2C of the Circulation Background Report show the roadway network that is currently under County jurisdiction in the three regions.

Roadway Descriptions

The following roadways are considered to be major transportation corridors and routes within San Bernardino County. A brief description of each facility and, if available, its current lane configuration, average daily traffic volume (ADT) and operating level of service (LOS) for the specified time period are provided.

Freeways

Freeways act as major thoroughfares across the County and provide regional access to areas located both inside and outside the County boundaries. Caltrans is responsible for designing, building and maintaining all freeway facilities located in the County. Descriptions of the interstate freeway facilities located in San Bernardino County are provided below.

San Bernardino Freeway (I-10) – The San Bernardino Freeway travels east-west across the southern edge of Valley Region in San Bernardino County. This facility provides access to Los Angeles to the west and Arizona and beyond to the east.

Ontario Freeway (I-15) – The Ontario Freeway extends north from the San Diego metropolitan area through the western portion of San Bernardino County and continues in a north-easterly direction to Las Vegas, Nevada and beyond.

State Route 30 (SR-30) – State Route 30 provides an alternative connection between I-10 and I-215 for residents of eastern San Bernardino and Highland. This facility currently extends easterly from I-215 to State Route 330 then turns southward and continues to its junction with the I-10 Freeway. SR-30 will become the eastern section of SR-210 and be expanded to three lanes in each direction once construction is completed.

Needles Freeway (I-40) – The Needles Freeway splits from I-15 just east of Barstow and continues east until the Arizona State Line. This facility is a major trucking route providing access to Los Angeles to the west and Flagstaff, Arizona and beyond to the east.

The Pomona Freeway (SR-60) – The Pomona Freeway splits from I-10 in downtown Los Angeles and rejoins it in the City of Beaumont as it travels through the Inland Empire. SR-60 provides the Inland Empire with access to the Los Angeles metropolitan area to the west and Riverside County to the east and Ontario as well as a portion located on unincorporated county land southeast of Ontario.

Chino Valley Freeway (SR-71) – The Chino Valley Freeway travels southeast from the I-10/SR-210 Interchange in San Dimas to the Riverside Freeway (SR-91) in Corona. This facility serves as a major commuter route between the Inland Empire and Orange County.

State Route 210 (SR-210) – State Route 210 begins at an interchange with the Golden State Freeway (I-5) in Los Angeles County and continues east across the Valley region to its current terminus at Alder Avenue in the City of Rialto. Construction is currently in progress to extend this facility to SR-30, and that facility will become the eastern segment of SR-210

Interstate 215 (I-215) – Interstate 215 provides an alternative route to I-15 through San Bernardino County by splitting from I-15 near Devore and reconnecting south in Riverside County.

State Route 259 (SR-259) – State Route 259 is a connector route that begins just south of 16th Street in the city of San Bernardino and continues northward until it merges with State Route 30.

State Highways

State highways also fall under Caltrans' jurisdiction and provide additional connectivity and access not afforded by the interstate freeways discussed earlier. These facilities are especially important in providing access to many areas of both the Mountain and Desert Regions. Descriptions of the state highway facilities located in San Bernardino County are provided below.

Angeles Crest Highway (SR-2) –Angeles Crest Highway is a rural highway that travels from State Route 210 in La Canada Flintridge northeast to Pearblossom Highway (SR-138). This roadway is primarily used as access into the Angeles Crest National Forest.

Waterman Avenue / Rim of the World Highway / Happy Trails Highway / Palmdale Road (SR-18) – The portion of this roadway from SR-30 to Big Bear Lake is a major access route into the Lake Arrowhead and Big Bear Lake resorts. This facility continues north and then east along the southern shore of Big Bear Lake. Beyond Baldwin Lake, it turns northwest and travels to the SR-247 junction in Lucerne Valley where it turns west continuing to Central Road in Apple Valley. This facility continues west from Central Road in Apple Valley as Happy Trails Highway until it becomes D Street in Victorville and eventually reaches I-15. SR-18 merges with I-15 and continues south to Palmdale Road where it turns westward until it merges with SR-138 just west of the San Bernardino County Line. From I-15 to it junction with SR-138, this roadway provides a direct connection between Victorville and Palmdale. This segment also operates as a bypass for trucks making deliveries in the western portion of the Los Angeles Metropolitan Region.

Mill Creek Road / North Shore Drive (SR-38) – This facility is a major access route to the Big Bear Lake area. From I-10, SR-38 travels north, as Orange Avenue, and east, as Lugonia Avenue, out of the City of Redlands into unincorporated county land, passing through the community of Mentone where it is named Mentone Boulevard. East of Mentone, SR-38 becomes Mill Creek Road and continues traveling northeast into the San Bernardino National Forest until the junction with SR-18 just east of Big Bear Lake. From this junction, SR-38 continues west past Big Bear Lake as North Shore Drive before terminating at SR-18 just west of Big Bear Lake.

Mojave-Barstow Highway (SR-58) – The Mojave-Barstow Highway originates in Barstow at I-15 and travels west through Kern County to Mojave in Los Angeles County. This facility provides a connection between Barstow and Mojave. It also provides some relief to I-15 during periods of severe congestion.

Twentynine Palms Highway / Aqueduct Road (SR-62) – Twentynine Palms Highway (SR-62) travels along the extreme southern edge of San Bernardino County. SR-62 extends north from I-10 out of Riverside County and continues east through Yucca Valley all the way to the Arizona State Line. This rural highway provides access to Yucca Valley, Twentynine Palms and Joshua Tree National Park.

Foothill Boulevard (US-66/SR-66)/ 5th Street / Greenspot Road / Florida Street – This corridor is a major thoroughfare across the entire northern portion of the Los Angeles

Metropolitan Area. In San Bernardino County, it begins as Foothill Boulevard at the Los Angeles County line and is classified as a state highway (US-66/SR-66). It extends eastward through the cities of Upland, Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto. After entering the City of San Bernardino, it becomes 5th Avenue, a primary arterial, and continues east into the City of Highland. East of Boulder Avenue, this roadway becomes Greenspot Road, a secondary arterial, and continues through the eastern portion of the City of Highland. At the edge of East Highlands, the classification is again changed to a minor arterial or residential street. Greenspot Road continues south and east until becoming Florida Street. The terminus of this corridor is Florida Street which is located in the extreme eastern portion of the City of Highlands and links to Mill Creek Road (SR-38) through Garnett Street.

Euclid Avenue (SR-83) – Euclid Avenue (SR-83) is a north-south arterial that travels through the Valley Region of San Bernardino County. This roadway provides direct connections between 19th Street (SR-30), Foothill Boulevard (SR-66), the San Bernardino Freeway (I-10), the Pomona Freeway (SR-60) and the Chino Valley Freeway (SR-71).

State Route 127 (SR-127) – This rural highway extends north from I-15 in Baker and continues through Inyo County to the Nevada State Line. It is primarily used to provide access to Death Valley National Monument from the east and to other rural properties located in southeastern Inyo County.

Pearblossom Highway (SR-138) – Pearblossom Highway is a rural highway that travels southeast from Palmdale in Los Angeles County to an interchange with I-15 at Cajon Junction. This segment provides a connection between the Antelope Valley and Apple Valley for commuters and commercial traffic. SR-138 continues east and then south from I-15 through the San Bernardino National Forest until it terminates at Rim of the World Highway (SR-18). This segment provides access to the Lake Arrowhead and Big Bear Lake resorts from the northwest.

Carbon Canyon Road / Chino Hills Parkway (SR-142) – This corridor is designated as a state highway (SR-142) and extends southwest through the cities of Chino and Chino Hills. This facility provides a direct connection between San Bernardino County and Orange County.

State Route 173 (SR-173) – This rural highway extends north from Rim of the World Highway (SR-18) and continues counterclockwise around Lake Arrowhead before terminating at SR-138 just northwest of Silverwood Lake. The portion of roadway between Willow Creek Jeep Trail and Pacific Crest National Scenic Trail is unpaved.

State Route 189 (SR-189) – This rural highway splits from Rim of the World Highway (SR-18) and continues east until it terminates at a junction with SR-173. This facility provides access to residential properties in the Twin Peaks and Blue Jay communities.

Barstow Road / Old Woman Springs Road (SR-247) – Barstow Road (SR-247) is a north-south rural highway that originates at I-15 and provides access between Barstow and Lucerne Valley. Old Woman Springs Road (SR-247) travels southeast from Lucerne Valley to Yucca Valley and terminates at SR-62.

City Creek Road (SR-330) – City Creek Road (SR-330) originates as an interchange with SR-30. It is located at the southward turn in the SR-30 alignment and is currently a divided freeway until just north of Highland Avenue. From Highland Avenue, this facility continues

north and east as a rural highway until it terminates at a junction with SR-18 in the Running Springs community. This roadway operates as an alternative access route for the Lake Arrowhead and Big Bear Lake areas.

Federal U.S. Highways

These facilities are also under Caltrans' jurisdiction and operate in a similar manner to state highways discussed above. Descriptions of the federal highway facilities located in San Bernardino County are provided below.

United States Highway 95 (US 95) – US 95 is a rural highway that travels along the extreme eastern border of San Bernardino County. This facility provides a connection between Las Vegas, Nevada, I-15, I-40 and I-10.

Three Flags Highway (US 395) – This roadway is a rural highway that extends from Cajon Pass in Hesperia north through Victorville and continues along the eastern edge of the Sierra Nevada Mountains. This facility is a connection between I-15, SR-18 and SR-58.

Roadway Facilities

Jurisdiction for these roadways fall under either the County or that of the municipality in which they are located. These facilities provide connectivity between residential and commercial regions, as well as, channeling traffic to the numerous interstate freeways and state highways located throughout the County. Descriptions of major roadway facilities located in San Bernardino County and as incorporated in the County's Congestion Management Program are provided below.

Valley – East/West Facilities

16th Street / Base Line Road – This primary arterial extends across the entire Valley Region of San Bernardino County. It operates as an east-west connector for the cities of Upland, Rancho Cucamonga, Rialto, San Bernardino and Highland.

19th Street (SR-30) – Nineteenth Street originates in Upland just west of Mountain Avenue and extends to just east of Haven Avenue in Rancho Cucamonga where it terminates at San Benito Avenue. The entire segment between Mountain Avenue and Haven Avenue is classified as a state highway (SR-30) from Mountain Avenue to Haven Avenue.

2nd Street – This secondary arterial is located in the City of San Bernardino and extends from Mount Vernon Avenue to Waterman Avenue. This street provides access to the San Bernardino Metrolink station and Park & Ride lot as well as San Bernardino International Airport from I-215.

3rd Street – Third Street is a secondary arterial that provides access to the San Bernardino Metrolink station, Park & Ride lot and San Bernardino International Airport. This street begins just east of Mount Vernon Avenue and extends eastward to Palm Avenue, traveling just to the north of San Bernardino International Airport.

4th Street – This roadway is located in the City of Ontario. It operates as a primary arterial and is a major east-west link across the city. This facility extends both to the east and west outside the City of Ontario as San Bernardino Avenue.

5th Avenue / Sand Canyon Road – This facility begins in the City of Redlands just east of I-10 and continues eastward into unincorporated San Bernardino County. At this point the roadway turns southeast and becomes Sand Canyon Road, continuing to the City of Yucaipa. This roadway provides direct access to Crafton Hills College and acts an alternative route to I-10 as it passes from the City of Redlands into the City of Yucaipa. It is currently classified as a secondary arterial.

40th Street – Fortieth Street originates from Kendall Drive in the City of San Bernardino and extends eastward until eventually turning south and becoming Del Rosa Avenue. This roadway provides an east-west thoroughfare across the northern portion of the City of San Bernardino.

Agua Mansa Road – This secondary arterial travels through the southern portion of the City of Colton and provides a connection into Riverside County.

Arrow Highway / 8th Street – Arrow Highway is a primary arterial that travels through the city of Montclair and becomes 8th Street once it enters the city of Upland. This facility parallels the Burlington Northern Santa Fe (BNSF) rail line upon which the Metrolink San Bernardino Line operates. Arrow Highway / 8th Street provides access to both the Montclair Transportation Center and the Upland Metrolink station. This facility is also a major corridor for commuters traveling west into Los Angeles County.

Arrow Route - This roadway is a major connector that provides access to several communities within the Valley Region of San Bernardino County. It begins at the Los Angeles County line in Upland and extends through Rancho Cucamonga, unincorporated San Bernardino County, Fontana and ends in Rialto.

Barton Road / Washington Street / Brookside Avenue / Citrus Avenue – This corridor begins at La Cadena Drive in the city of Grand Terrace and continues eastward along the border between the cities of Colton and San Bernardino, where its name is changed to Washington Street. After entering the city of Loma Linda its name returns to Barton Road and it continues into the city of Redlands. In the city of Redlands, its name is changed again to Brookside Avenue and finally to Citrus Avenue.

Bloomington Avenue – This primary arterial provides a connection between I-10 and the Rialto Metrolink station. It is also a connection between the two major north-south thoroughfares of Cedar Avenue and Riverside Avenue in the city of Rialto.

Colorado Street – This secondary arterial is a link between Oak Glen Road and Wildwood Canyon Road and acts as a reliever for traffic utilizing I-10 through the city of Yucaipa.

Colton Avenue / Inland Center Drive – This primary arterial is located between the cities of San Bernardino and Colton.

Edison Avenue – This roadway begins just east of SR-71 in the city of Chino and extends eastward through the city of Ontario. It is classified as a primary arterial.

Grand Avenue – This primary arterial extends from the boundary between the cities of Chino and Chino Hills westward through Chino Hills into Los Angeles County.

Highland Avenue – Highland Avenue passes through the cities of Rancho Cucamonga, Fontana, Rialto, San Bernardino and Highland. This roadway originates as a secondary arterial at Amethyst Street in the City of Rancho Cucamonga and continues east to Milliken Avenue. From Milliken Avenue, it continues as a minor arterial until it reaches Rochester Avenue. Between Rochester Avenue and Etiwanda Avenue, Highland Avenue is once again a secondary arterial. At Etiwanda Avenue, this roadway returns to a minor arterial until the SR-210 and I-15 interchange. For the segment east of this interchange to Sierra Avenue, Highland Avenue becomes a secondary arterial. At Sierra Avenue, this roadway becomes a state highway (SR-30) and continues until just east of California Street where SR-30 turns north, just before I-215. At this point, Highland Avenue becomes a primary arterial and continues to Boulder Avenue in the City of Highland. The roadway then reverts back to a secondary arterial until it reaches Church Street. East of Church Street, Highland Avenue becomes a minor arterial before terminating at Pleasant View Lane.

Holt Boulevard – Holt Boulevard is a primary arterial that originates in the City of Pomona and provides a connection between SR-71 and I-10 as well as access to Ontario International Airport.

Jurupa Street / Jurupa Avenue – Jurupa Street originates at Archibald Avenue and continues east to Etiwanda Avenue as a secondary arterial. From Etiwanda Avenue to Mulberry Avenue, this roadway becomes Jurupa Avenue, a minor arterial. At Mulberry Avenue, it returns to a secondary arterial and continues to Sierra Avenue.

Live Oak Canyon Road – This facility is a secondary arterial located at the extreme southern edge of San Bernardino County. It provides a connection between San Timoteo Canyon Road and I-10 in the City of Redlands.

Lugonia Avenue / Mentone Boulevard / Mill Creek Road – Lugonia Avenue begins at Mountain View Avenue as a secondary arterial and extends eastward across the City of Redlands. At Orange Street, it becomes a state highway (SR-38) before entering unincorporated San Bernardino County. At this point, it becomes Mentone Boulevard and eventually Mill Creek Road. This roadway is one of the primary access routes to Big Bear Lake and the surrounding communities.

Merrill Avenue / Mill Street – Merrill Avenue originates as a secondary arterial at Cherry Avenue in unincorporated San Bernardino County west of the City of Fontana. At Fontana Avenue, the classification is changed to primary arterial and continues eastward to Riverside Avenue. The classification returns to secondary arterial and will continue as such until reaching Mount Vernon Avenue. From Mount Vernon Avenue to its terminus at Tippecanoe Avenue, this roadway is again classified as a primary arterial.

Mission Boulevard – This roadway is a primary arterial that parallels the Union Pacific rail line for its entire distance across San Bernardino County. It is a major thoroughfare across the county and provides access to Ontario International Airport.

Oak Glen Road – This roadway is a secondary arterial that begins at I-10 and travels northeast through the City of Yucaipa and eventually turns south into Riverside County.

Redlands Boulevard – Beginning just east of the I-215 and I-10 interchange, Redlands Boulevard is a primary arterial that parallels I-10 as it crosses the City of Redlands. This facility provides drivers with an alternative to I-10 if congestion or delay is encountered.

Riverside Drive – Riverside Drive is a primary arterial that originates at SR-71 just outside the southern boundary of the City of Pomona. It extends eastward paralleling SR-60 through the cities of Ontario and Chino until terminating just inside Riverside County at Etiwanda Avenue. This facility provides an alternative route to avoid congestion or delay on SR-60.

San Bernardino Avenue / 4th Street – This roadway extends across a large portion of San Bernardino County and travels through the cities of Montclair, Ontario (as 4th Street), Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto before ending in the City of Colton. San Bernardino Avenue begins again in the City of San Bernardino at Tippecanoe Avenue and continues east through the City of Redlands and into unincorporated San Bernardino County.

Slover Avenue – Slover Avenue parallels the I-10 Freeway on the south, extending from Etiwanda Avenue east to Pepper Avenue. A majority of this facility is located in unincorporated San Bernardino County with small segments passing through the Cities of Fontana and Rialto.

Wildwood Canyon Road – Wildwood Canyon Road is a secondary arterial that extends through the southern portion of the City of Yucaipa. It is a connection between I-10 and Oak Glen Road.

Valley Boulevard – This facility is a primary arterial that runs parallel to the I-10 Freeway to the north. Beginning just east of Etiwanda Avenue, this roadway continues east through unincorporated San Bernardino County and the Cities of Fontana and Rialto before terminating at Mount Vernon Avenue in the City of Colton.

Yucaipa Boulevard – This roadway originates at I-10 and extends through the central portion of the City of Yucaipa.

Valley – North/South Facilities

14th Street – This roadway is a minor arterial / residential street located between Yucaipa Boulevard and Oak Glen Road in the City of Yucaipa.

Alabama Street – Alabama Street is a primary arterial that extends from Third Street in the City of Highland to Barton Road in the City of Redlands. This roadway is a relief route to SR-30 through the City of Highland.

Alder Avenue – Alder Avenue is a north-south connector that provides access along the eastern boundary of the City of Fontana. This facility is a secondary arterial that extends from Baseline Road to San Bernardino Avenue. Continuing south into unincorporated San Bernardino County, this roadway becomes a residential street.

Archibald Avenue – This primary arterial extends from Hillside Road in the City of Rancho Cucamonga, through the City of Ontario and into Riverside County. This facility is a major north-south corridor across San Bernardino County that provides access to both SR-210, I-10 and SR-60 as well as Ontario International Airport.

Bryant Street – Located in the City of Yucaipa, Bryant Street is a primary arterial from Mill Creek Road to Wildwood Canyon Road. This facility is the easternmost major thoroughfare in the city of Yucaipa.

Cajon Boulevard – Cajon Boulevard begins in unincorporated San Bernardino County just southeast of the I-15 and I-215 interchange. This major arterial extends southeast through the City of San Bernardino before becoming Mount Vernon Avenue. This roadway parallels I-215 and also located along Historic Route 66.

California Street / San Timoteo Canyon Road – California Street originates just south of the Santa Ana River in the City of Redlands as a minor arterial. This roadway becomes a secondary arterial from San Bernardino Avenue to Barton Road. From Barton Road, this roadway, now titled San Timoteo Canyon Road, becomes a primary arterial and extends southeast into Riverside County.

Cedar Avenue – Cedar Avenue is a primary arterial from Baseline Road to Bloomington Avenue, just south of the City of Rialto in unincorporated San Bernardino County. South of Bloomington Avenue, this roadway continues into Riverside County as a primary arterial.

Central Avenue – This corridor travels through the cities of Upland, unincorporated San Bernardino County, Montclair and Chino along the western edge of San Bernardino County. Beginning at Foothill Boulevard just south of Cable Airport, this facility provides a north-south connection between I-10, SR-60 and SR-71.

Cherry Avenue – This facility is located almost entirely within the City of Fontana with a portion traveling through unincorporated San Bernardino County. This roadway extends from north of I-15 south to Slover Avenue as a primary arterial. From Slover Avenue to Mulberry Avenue, it is reduced to a secondary arterial. This facility provides a connection between SR-210 and I-10 and access to The California Speedway.

Citrus Avenue – Citrus Avenue is located in the City of Fontana and extends from just south of I-15 at Duncan Canyon Road to Slover Avenue as primary arterial. From Slover Avenue, this roadway becomes a secondary arterial and continues to Jurupa Avenue.

Del Rosa Drive / Del Rosa Avenue – Del Rosa Avenue begins at 39th Street in the City of San Bernardino and extends south to San Bernardino International Airport. This secondary arterial provides direct access to the airport from SR-30.

E Street – This facility is a primary arterial that begins at Kendall Drive in the City of San Bernardino and extends south to I-10. Traveling parallel to I-215, E Street operates as an alternative to I-215 during periods of congestion and delay. It also provides access to SR-30 and I-10.

Etiwanda Avenue – Etiwanda Avenue is a primary arterial located in the cities of Rancho Cucamonga, Ontario, Fontana and unincorporated San Bernardino County. This roadway provides direct access to I-10 and SR-60 in Riverside County.

Garnet Street – Garnet Street is a minor arterial located on the eastern edge of the Foothill Boulevard east-west corridor. This facility connects Florida Street to Mill Creek Road (SR-38).

Grove Avenue – This roadway is a secondary arterial that extends from Foothill Boulevard in the City of Upland south to the Chino Airport in the City of Ontario. South of the airport, it continues to Pine Avenue in unincorporated San Bernardino County.

Haven Avenue – Haven Avenue is a primary arterial located in the City of Rancho Cucamonga and extending through the City of Ontario. This roadway provides direct access to SR-210, I-10 and SR-60.

Hunts Lane – Located at the terminus of E Street just east of the I-10 and I-215 interchange in the City of San Bernardino, Hunts Lane is a primary arterial between E Street and Redlands Boulevard. South of Redlands Boulevard to Barton Road, Hunts Lane is classified as a secondary arterial.

Kendall Drive – This secondary arterial is located in the northern portion of the City of San Bernardino and extends from Cajon Boulevard southeast to I-215 at North Palm Avenue. From Palm Avenue, it continues southeast as a primary arterial to its terminus at E Street. This facility is an alternate route for traffic traveling along I-215.

La Cadena Drive – La Cadena Drive splits from Mount Vernon Avenue in the City of Colton and continues south to I-10. From I-10, this roadway continues southwest until merging with I-215 at the Riverside County Line.

Milliken Avenue –This roadway extends from Banyan Street, north of SR-210, to Riverside Drive, south of SR-60, and provides direct access to SR-210, I-10 and SR-60. Milliken Avenue is a secondary arterial

Monte Vista Avenue – Monte Vista Avenue begins at SR-210 in Los Angeles County and travels south through the cities of Montclair and Chino. Between SR-210 and I-10, this roadway is classified as a primary arterial

Mountain Avenue – The northern terminus of this roadway is with Mt. Baldy Road at the Los Angeles County line. From here, Mountain Avenue crosses a portion of unincorporated San Bernardino County and the cities of Upland and Ontario before ending at Edison Avenue in the City of Chino. This facility is classified as a primary arterial except for the segment between 19th Street and 16th Street which is classified as a state highway (SR-30).

Mountain View Avenue – This roadway is located on the boundary between the cities of San Bernardino and Redlands and within the City of Loma Linda. Beginning at San Bernardino Avenue, Mountain View Avenue extends south to Beaumont Avenue. It is classified as a secondary arterial for its entire length.

Mount Vernon Avenue – Mount Vernon Avenue begins as a secondary arterial at Highland Avenue and travels south through the cities of San Bernardino, Colton and Grand Terrace before entering Riverside County. From Highland Avenue to I-215 just north of the City of Grand Terrace, this facility is classified as a primary arterial.

Mulberry Avenue – This roadway extends from Slover Avenue to the Riverside County Line in the City of Fontana. It is a secondary arterial.

Orange Street / Boulder Avenue – Boulder Avenue is a divided primary arterial located in the City of Highland, just east of SR-30, and extends southward from Highland Avenue to Lugonia Avenue in the City of Redlands. From Lugonia Avenue to I-10, this roadway is classified as a state highway (SR-38) and a primary arterial from I-10 to Citrus Avenue.

Palm Avenue – This roadway is a primary arterial that extends from Highland Avenue in the City of San Bernardino to 5th Street in the City of Highland. It completes the relief corridor occupied by Alabama Avenue to the south.

Pepper Avenue – Pepper Avenue begins Baseline Street as a minor arterial in the City of San Bernardino and continues south to Foothill Boulevard where it becomes a secondary arterial. This classification holds for its entire remaining length to Slover Avenue in the City of Colton.

Rancho Avenue – Beginning at Foothill Boulevard / 5th Street in the City of San Bernardino, Rancho Avenue is a secondary arterial that travels southward through the City of Colton and terminates at La Cadena Drive.

Reche Canyon Road – This secondary arterial extends southeast from Barton Road in the City of Colton into Riverside County.

Riverside Avenue – Riverside Avenue is a primary arterial that extends across the Valley Region of San Bernardino County and continues into Riverside County. This major north-south corridor originates at Sierra Avenue, just south of I-15, in the City of Fontana. It extends to the southeast along the northeastern boundary of the City of Rialto before turning to the south east of Rialto Municipal Airport. As it passes through the Valley Region, it provides access to SR-30 and I-10 as well as the Rialto Metrolink station.

Sierra Avenue – Sierra Avenue is a major north-south corridor through the Valley Region of San Bernardino County. This roadway begins just north of I-15 in the extreme northern portion of the City of Fontana. It is a primary arterial and has interchanges with I-15, SR-210 and I-10 before it terminates just southeast of Armstrong Road in Riverside County.

Tippecanoe Avenue / Anderson Street – This roadway begins in the City of San Bernardino at Baseline Street as a secondary arterial. Continuing southward, Tippecanoe Avenue becomes a primary arterial at Third Street and extends to I-10. South of I-10, the roadway becomes Anderson Street and continues as a primary arterial to Barton Road.

Victoria Avenue – This secondary arterial is located in the cities of San Bernardino and Highland. It extends from Lynwood Drive to Third Street.

Wabash Avenue – Wabash Avenue extends from San Bernardino Avenue to Fifth Street in the City of Redlands as a secondary arterial and continues south to I-10 as a minor arterial.

Waterman Avenue – This roadway begins at the intersection of Sierra Avenue and Rim of the World Way (SR-18), just south of the San Bernardino National Forest. Traveling south, this roadway is designated as a state highway (SR-18) until reaching SR-30. Beyond SR-30, Waterman Avenue continues as a primary arterial. This roadway parallels I-215 and serves as an alternative route with direct access to I-10 before terminating at Barton Road.

Victor Valley

Arrowhead Lake Road – This primary arterial begins at the eastern terminus of Main Street in the City of Hesperia and continues south until its junction with SR-173. This roadway is a major corridor through the southeastern portion of the City of Hesperia.

Baldy Mesa Road – Baldy Mesa Road is a secondary arterial located between Phelan Road and Duncan Road / Bear Valley Road in the community of Phelan.

Bear Valley Road – Bear Valley Road is a major east-west corridor through the cities of Victorville, Hesperia and Apple Valley. This roadway begins at the eastern terminus of Duncan Road just west of the City of Victorville in unincorporated San Bernardino County. Traveling west, Bear Valley Road is a secondary arterial until it intersects with US 395. It continues as a primary arterial through its intersections with I-15 and Hesperia Road before terminating at SR-18 east of the City of Apple Valley.

Duncan Road - This secondary arterial extends from Baldy Mesa Road east to the western terminus of Bear Valley Road.

El Mirage Road – This roadway originates in Los Angeles County and continues eastward as a primary arterial through unincorporated San Bernardino County until it reaches the City of Adelanto. At Koala Road, this facility is reduced from a primary arterial to a minor arterial until it intersects with US 395.

Hesperia Road – Originating in the southern portion of the City of Hesperia, Hesperia Road is a north-south primary arterial that travels through the cities of Hesperia and Victorville. From Lime Street to Main Street in the City of Hesperia, this roadway is a secondary arterial. North of Main Street, it becomes a primary arterial and continues northward until terminating at D Street in the City of Victorville.

Main Street – Main Street is an east-west roadway that passes through the City of Hesperia. It begins just east of US 395 and intersects with I-15 and Hesperia Road before terminating at Arrowhead Lake Road.

National Trails Highway – National Trails Highway originates as an interchange with I-15 in the City of Victorville and continues north and east until terminating at Lenwood Road in the community of Lenwood, just southwest of the City of Barstow.

Palmdale Road – Palmdale Road (SR-18) splits from SR-138 in Los Angeles County and terminates at I-15 in the City of Victorville.

Phelan Road – This is an east-west facility that begins at SR-138 in the community of Phelan and continues east through unincorporated San Bernardino County until reaching US 395 where it becomes Main Street. This primary arterial intersects with Sheep Creek Road and Baldy Mesa Road

Sheep Creek Road – This primary arterial located in the western edge of unincorporated San Bernardino County. It extends between El Mirage Road to the north and SR-138 in the south.

Barstow

Barstow Road – This roadway is designated as a state highway (SR-247). Barstow Road begins at Main Street in the City of Barstow and provides access to I-15 and Barstow College before entering unincorporated San Bernardino County.

Main Street – Main Street is an east-west roadway that originates at I-40 and travels west through intersections with I-15, Barstow Road and SR-58 before becoming National Trails Highway (US 66).

Old Highway 58 – This primary arterial is located on the extreme northern edge of the City of Barstow. It begins at I-15 and continues west across the High Desert into Los Angeles County.

Needles

Needles Highway – This primary arterial is located in the northern portion of the City of Needles and provides access to I-40.

Operational Characteristics

Average daily traffic and level of service are two of the most critical factors utilized in determining how well a roadway facility operates. To provide a clearer picture regarding how these factors influence operational capacity, brief descriptions of each characteristic are provided below.

Average daily traffic volumes (ADT) for the roadways described above were obtained using two methodologies. The first approach is used when historical count data are available (preferred approach). A statistical analysis of the count data for the roadway segment is performed to obtain the average growth per year for the facility in question. The growth factor is then applied to the most recent count data available to obtain Base Year 2000 ADT. The second approach is used when count data for the roadway segment is unavailable. In this particular case, the 2000 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) Model was used to determine the Year 2000 ADT. An analysis of adjacent roadways near the desired link is used to determine the percent difference between the model data and count data. The percent difference is then applied to the model data for the roadway in question to determine the Year 2000 ADT.

Level of Service (LOS) is defined as a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Level of service indicators for the highway and roadway system are based on specific characteristics of traffic flow on designated sections of roadway during a typical day. For mainline freeway and roadway segments, these include overall traffic volume, speed and density. Several physical and operational characteristics of the roadway, such as lane configuration, free-flow speed (typical speed between intersections) and number of intersections per mile, are used to determine the vehicular capacity of the roadway segment. When these two sets of data are compared, a volume to capacity (V/C) ratio is calculated. These factors are then converted to a letter grade identifying operating conditions and expressed as a level of service, or LOS, A through F. LOS A identifies the best operating conditions along a section of roadway and is characterized by free-flow traffic, low volumes and little or no restrictions on maneuverability. LOS F characterizes forced traffic flow with high traffic densities, slow travel speeds and often stop-and-go conditions. For intersections, LOS can be determined by using either the methodology described above or by using the average control delay (the amount of time a vehicle is delayed by the operations of the traffic signal) calculated at an individual intersection.

Information detailing the existing lane configurations, ADT volumes and LOS values for the roadway facilities described above are shown in Tables IV-O-1 through IV-O-4. This data is based on information obtained from the 2004 SCAG RTP model, Caltrans' 2003 traffic count data and the San Bernardino County Associated Governments (SANBAG) Congestion Management Program (CMP), 2003 Update.

Table IV-O-1. Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Freeways Located in San Bernardino County

Roadway	Segment	Number of lanes (Each direction)[1]	ADT Volume (000's) [1]	LOS AM Peak Hour (EB or NB / WB or SB)[1]	LOS PM Peak Hour (EB or NB / WB or SB) [1]
Interstate 10	Los Angeles County Line to Euclid Ave	4 general traffic; 1 HOV	224 – 239	B-C / C-D	D / C
	Euclid Ave to I-15	4 general traffic; 1 HOV	214 - 232	B-C / C -E	C-D / C-D
	I-15 to Sierra Ave	4 general traffic; 1 HOV	186 - 189	C / D-E	D-E / D
	Sierra Ave to I-215	4 general traffic	173 - 179	C-E / C-D	C-D / C-E
	I-215 to SR-38	4 general traffic	141 – 187	A-E / C-F	D-F / A-D
	SR-38 to Riverside County Line	3 general traffic	73 - 122	A / A-E	A-D / A-B
Interstate 15	SR-60 to I-10	4 general traffic	172 - 175	E / C	E / D
	I-10 to SR-210	4 general traffic	90 – 150	A / A-E	B-E / A
	SR-210 to I-215	4 general traffic	80 – 90	A / A-D	B-E / A
	I-215 to US 395	4 general traffic	94 – 114	A / A-F	B-F / A-C
	US 395 to SR-18	3 general traffic	67 – 84	A / A	B-C / A
	SR-18 to Nevada State Line	2 general traffic	28 – 65	A / A-E	A-F / A-E
State Route 30	Sierra Ave to I-215	1-2 general traffic	14 - 26	A / A	A / A
	I-215 to SR-330	2-4 general traffic	34 – 87	A / A-B	A-B / A
	SR-330 to I-10	2 general traffic	44 – 57	A-C / A	A / A-C
Interstate 40	Barstow to Arizona State Line	2 general traffic	11 - 15	A / A	A / A
State Route 60	I-10 to I-10	4 general traffic, 1 HOV	180 - 201	A / D-E	D-E / B-D
State Route 71	SR-60 to SR-142	3 general traffic; 1 HOV	47 – 59	A / A	A / A
	SR-142 to Euclid Ave	2 general traffic; 1 HOV	36 – 40	A / A	A / A
	Euclid Ave to Riverside County Line	2 general traffic	33	A / A	A / A
State Route 210	Los Angeles County Line to I-15	3 general traffic; 1 HOV	110 – 141	A / B-E	D-E / A
	I-15 to Sierra Ave	3 general traffic; 1 HOV	34 - 52	A / A	A / A
Interstate 215	Riverside County Line to I-10	3 general traffic	147 – 162	E-F / F	F / D-E

Roadway	Segment	Number of lanes (Each direction)[1]	ADT Volume (000's) [1]	LOS AM Peak Hour (EB or NB / WB or SB)[1]	LOS PM Peak Hour (EB or NB / WB or SB) [1]
	I-10 to SR-259	3-4 general traffic	123 - 160	A-C / E-F	E-F / C-F
	SR-259 to SR-30	3 general traffic	48 - 60	A / A	A / A
	SR-30 to I-15	2-3 general traffic	40 – 71	A / A-B	A-B / A
State Route 259	I-215 to SR-30	2 general traffic	52 - 67	A / C-D	C-D / A

[1]Where a range is provided, the roadway characteristic varies across the segment. For example, on Interstate 10 from the Los Angeles County Line to Euclid Ave., the ADT varies from 224,000 to 397,000, the AM peak hour LOS in the eastbound direction varies from B to C, and the AM peak hour LOS in the westbound direction varies from C to D.

Table IV-O-2. Existing Lane Configuration, Average Daily Traffic Volumes and Peak Hour Level of Service for State Highways Located in San Bernardino County

Roadway	Segment	Number of lanes (Total Two-way) [1]	ADT Volume (000's) [1]	Peak Hour LOS (AM / PM)[1]
State Route 2	Los Angeles County Line to SR-138	2	17 - 28	C-F / C-F
State Route 18	SR-30 to SR-138	4	17 – 28	C-F / C-F
	SR-138 to Lakeview Dr.	2	7 – 11	E / E
	Lakeview Dr. to SR-38 East	4	16 – 17	C-E / C-E
	SR-38 East to Bear Valley Cutoff	2	3 – 9	C-E / C-E
	Bear Valley Cutoff to US-395	4	9 – 42	D/ D
	US 395 to Los Angeles County Line	2	6 - 9	D / D
State Route 38	I-10 to Bryant Ave.	2	12 - 16	F / F
	Bryant Ave. to Big Bear Blvd./Greenspot Blvd.	2	2 – 5	D-E / D-E
	Big Bear Blvd./Greenspot Blvd. to SR-18 West	4	13	D-E / D-E
	SR-18 East to Big Bear Dam	2	3	E / E
State Route 58	Los Angeles County Line to I-15	4	9 - 13	D / D
State Route 62	Riverside County Line to Utah Trail	4	12 – 21	na
	Utah Trail to Arizona State Line	2	1 - 3	na
State Route 66	Los Angeles County Line to Vineyard Ave.	4 - 6	32 – 42	C-E / D-F
	Vineyard Ave. to Citrus Ave.	4 – 6	28 – 47	C-F / D-F
	Citrus Ave. to I-215	4	15 – 29	B-D / C-E
	I-215 to Boulder Ave.	2 - 4	8 – 20	A-D / B-D
	Boulder Ave. to SR-38	2	11 - 12	D / D
State Route 83	SR-30 to I-10	4 – 6	14 – 34	B-D / B-D
	I-10 to SR-60	4 – 6	28 – 34	B-D / C-D
	SR-60 – SR-71	2 – 6	13 - 32	B-C / B-C
State Route 127	I-15 to Inyo County Line	2	<1 - 2	B / B
State Route 138	Los Angeles County Line to I-15	2	12 – 14	E / E
	I-15 to Waters Dr.	2	1 – 2	C-D
	Waters Dr. to SR-18	2	6 - 8	E / E

Roadway	Segment	Number of lanes (Total Two-way) [1]	ADT Volume (000's) [1]	Peak Hour LOS (AM / PM)[1]
State Route 142	Orange County Line to Chino Hills Pkwy.	2	15 – 16	F / F
	Carbon Canyon Rd. to SR-71	4	23 – 27	D / D-E
	SR-71 to Central Ave.	4	17 - 18	A / A
State Route 173	SR – 18 to Hook Creek Rd.	2	5 – 7	E / E
	Hook Creek Rd. to Grass Valley Rd.	2	< 1	B / B
	Grass Valley Rd. to Arrowhead Lake Rd.	2 (unpaved)	< 0.5	B / B
	Arrowhead Lake Rd. to SR-138	2	1 – 2	C / C
State Route 189	SR-18 to SR-173	2	5 - 7	D / D
State Route 247	I-15 to Barstow City Limits	4	16 – 17	B / B
	Barstow City Limits to Camp Rock Rd.	2	2 - 3	B / B
	Camp Rock Rd. to SR - 62	2	6	D / D
State Route 330	SR-30 to SR-18	2-4	11	E / E

[1]Where a range is provided, the roadway characteristic varies across the segment. For example, on SR-2 from the Los Angeles County Line to SR-138, the ADT varies from 17,000 to 28,000, the AM peak hour LOS varies from C to F, and the PM peak hour LOS varies from C to F.

Table IV-O-3. Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Federal Highways Located in San Bernardino County

Roadway	Segment	Number of lanes (Total Two-way) [1]	ADT Volume (000's) [1]	Peak Hour LOS (AM / PM) [1]
United States 95	Nevada State Line to Riverside County Line	2	1 - 5	B-C / B-C
United States 395	Kern County Line to El Mirage Rd.	2	4 – 8	C / C
	El Mirage Rd. to I-15	2	13 - 14	E / E

[1]Where a range is provided, the roadway characteristic varies across the segment. For example, on US-95 from the Nevada State Line to the Riverside County Line, the ADT varies from 1,000 to 5,000, the AM peak hour LOS varies from B to C, and the PM peak hour LOS varies from B to C.

Table IV-O-4. Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Major Roadways Located in San Bernardino County

Roadway	Segment	Number of lanes (Total Two-way) [1]	ADT Volume (000's) [1]	Peak Hour LOS (AM / PM) [1]
Valley East-West Facilities				
16th Street / Baseline Rd	Los Angeles County Line to Cherry Ave.	4 – 6	12 – 27	A-D / B-D
	Cherry Ave. to Cedar Ave.	2	14 – 15	D / D-E
	Cedar Ave. to Boulder Ave.	4	16 - 21	A-C / C
19th Street	Mountain Ave. to Carnelian Ave.	2	9 – 18	D-F / E-F
	Carnelian Ave. to Haven Ave.	4	18 - 23	D-F / F
2nd Street	Mount Vernon Avenue to Waterman Avenue	4	5 - 12	A-B / A
3rd Street	Mount Vernon Avenue to Palm Avenue	4	8 - 14	B-C / B-D
4th Street	I-10 to Milliken Ave.	4	14 – 24	B-C / B-C

Roadway	Segment	Number of lanes (Total Two-way) [1]	ADT Volume (000's) [1]	Peak Hour LOS (AM / PM) [1]
	Milliken Ave. to Etiwanda Ave.	6	18 – 28	A-C / B-C
5th Avenue / Sand Canyon Rd	I-10 to Yucipa Boulevard	2 – 4	6 – 7	A / A
40th Street	Kendall Drive to Del Rosa Avenue	4	9 – 10	D / B
Agua Mansa Rd	Rancho Avenue to Market Street	2 – 4	4 – 7	A / A-D
Arrow Highway / 8th Street	Los Angeles County Line to Vineyard Avenue	2 – 4	17 – 25	C-F / C-F
Arrow Route	Los Angeles County Line to Alder Avenue	2 – 4	14 – 21	B-D / C-D
Burton Rd / Washington Street / Brookside Avenue / Citrus Avenue	La Cadena Dr. to Washington St.	2 – 4	9 – 20	B-C / C-F
	I-215 to Orange Ave.	4 – 6	17 – 32	C-E / C-F
	Orange Ave. to Wabash Ave.	4	6 – 10	A-B / A-B
Bloomington Avenue	Cedar Avenue to Riverside Avenue	4	14 – 15	A / B
Colorado Street	Oak Glen Rd to Wildwood Canyon Rd	4	1 – 2	A / A
Colton Avenue / Inland Center Drive	10th Street to E Street	2 – 4	11 – 12	B / C
Edison Avenue	Pipeline Avenue to Cleveland Avenue	4 – 6	13 – 15	A-C / B-C
Grand Avenue	Los Angeles County Line to Pipeline Avenue	4 – 6	19 – 26	B-D / C-E
Highland Avenue	Haven Ave. to Cherry Ave.	2	9 – 13	B-D / D-F
	Cherry Ave. to Sierra Ave.	2	13 – 14	D / F
	Sierra Ave. to SR-30 West	2	20 – 24	F / F
	SR-30 West to SR-30 East	4	11 – 23	B-F / B-F
	SR-30 East to SR-330	4	10 – 25	B-D / B-E
Holt Boulevard	Los Angeles County Line to I-10	4	21 – 29	B-D / B-D
Jurupa Street / Jurupa Avenue	Archibald Avenue to Sierra Avenue	4 – 6	12 – 25	A-C / A-D
Live Oak Canyon Rd	San Timoteo Canyon Rd to I-10	2	10 – 11	A / A
Lugonia Avenue / Mentone Boulevard / Mill Creek Rd	Mountain View Avenue to Valley of the Falls Drive	2	11 – 15	F / F
Merrill Avenue / Mill Street	Cherry Avenue to Tippecanoe Avenue	2 – 4	9 – 20	A-D / A-E
Mission Boulevard	Los Angeles County Line to Riverside County Line	4	12 – 24	A-D / B-D
Oak Glen Rd	I-10 to Riverside County Line	2 – 4	13 – 26	C-D / C
Redland Boulevard	Hunts Lane to I-10	4	10 – 18	A-B / B-D
Riverside Avenue	SR-71 to Etiwanda Avenue	4	11 – 17	A-B / B-D
San Bernardino Avenue / 4th Street	Los Angeles County Line to Meridian Avenue	2 – 4	6 – 14	A-D / B-D
Slover Avenue	Etiwanda Avenue to Pepper Avenue	4	11 – 17	B-E / B-E
Wildwood Canyon Rd	I-10 to Oak Glen Rd	4	9 – 10	B / A

Roadway	Segment	Number of lanes (Total Two-way) [1]	ADT Volume (000's) [1]	Peak Hour LOS (AM / PM) [1]
Valley Boulevard	Etiwanda Avenue to Mount Vernon Avenue	4	9 – 24	C-F / C-F
Yucipa Boulevard	I-10 to Bryant Street	4	19 – 26	B / B
Valley North-South Facilities				
14th Street	Yucipa Boulevard to Oak Glen Rd	2	2 - 3	A / A
Alabama Street	3rd Street to Barton Rd	4	14 - 27	A-C / B-E
Alder Avenue	I-10 to Valley Blvd.	2	1 – 2	A / A
	Valley Blvd. to Foothill Blvd.	4	9 – 11	A / A-B
	Foothill Blvd. to Baseline Rd.	2	4 – 5	B / A
Archibald Avenue	19th St to Foothill Blvd.	4	17 – 21	A-B / A-B
	Foothill Blvd. to I-10	4	24 – 31	C-D / C-E
	SR-60 to Riverside County Line	4 – 6	10 - 28	B-C / B
Bryant Street	Mill Creek Rd. to Yucaipa Blvd.	2 – 4	4 – 5	A / A
	Yucaipa Blvd. to Riverside County Line	2	4 – 6	A-C / A-C
Cajon Boulevard	I-15/I-215 interchange to Mount Vernon Avenue	2	2 - 3	A / A
California Street / San Timoteo Canyon Rd	San Bernardino Ave. to I-10	2 – 4	3 – 4	A / A
	I-10. to Redlands Blvd.	4	17 – 18	B / C
	Redlands Blvd. to Barton Rd.	2	8 – 9	B / C
	Barton Rd. to Riverside County Line	2	5 - 6	B / B
Cedar Avenue	Baseline Rd. to San Bernardino Ave.	2	20 – 24	F / F
	San Bernardino Ave. to I-10	4	33 – 55	C-F / D-F
	I-10 to Riverside County Line	4	17 - 30	C-D / C
Central Avenue	Foothill Blvd. to San Bernardino Ave.	4 – 6	27 – 58	A-B / B-F
	San Bernardino Ave. to SR-60	4 – 6	36 – 40	C-E / C-E
	SR-60 to Riverside Dr.	6	40 – 44	C / C-D
	Riverside Dr. to SR-71	4	13 – 34	B-D / A-D
Cherry Avenue	Summit Ave. to Baseline Rd.	4	5 – 9	A-B / B-D
	Baseline Rd. to I-10	4 – 6	12 – 40	B-D / B-D
	I-10 to Jurupa Ave.	4	15 - 34	B-D / A-C
Citrus Avenue	I-15 to Baseline Rd.	2	2 - 7	A-D / A-C
	Baseline Rd. to I-10	2 – 4	18 – 32	B-E / B-E
	I-10 to Jurupa Ave.	2 – 4	9 – 20	A-E / A-D
Del Rosa Drive / Del Rosa Avenue	39th Street to Harry Sheppard Boulevard	2 – 4	4 - 11	A / A-C
E Street	Kendall Drive to I-10	4	9 - 17	A-B / A-B
Etiwanda Avenue	Summit Avenue to Limonite Avenue	4 – 6	23 - 42	A-C / B-F
Garnet Street	Florida Street to Mill Creek Rd	2	11 - 12	D / D
Grove Avenue	Foothill Boulevard to Merrill Avenue	4	14 - 16	B-C / B-C
Haven Avenue	19th St. to Baseline Rd.	4	20 – 29	C-D / E
	Baseline Rd. to I-10	6 - 8	33 – 52	B-D / D
Hunts Lane	E Street to Washington Street	2 - 4	12 - 14	C / C-D
Kendall Drive	Cajon Boulevard to E Street	2 – 4	11 - 18	A-B / A-B
La Cadena Drive	Mount Vernon Avenue to I-215	4	16 - 20	B-C / C-D
Milliken Avenue	Banyan Street to Riverside Drive	4 – 6	15 – 20	A-C / A-F

Roadway	Segment	Number of lanes (Total Two-way) [1]	ADT Volume (000's) [1]	Peak Hour LOS (AM / PM) [1]
Monte Vista Avenue	SR-210 to Eucalyptus Avenue	4 – 6	13 - 25	A-B / A-B
Mountain Avenue	19th St. to Foothill Blvd.	4	18 – 23	C-D / D-E
	Foothill Blvd. to I-10	6	34 – 49	C-D / D-E
	I-10 to SR-60	4	29 – 37	D-E / E
	SR-60 to Edison Ave.	2 – 4	16 – 21	A-C / C-D
Mountain View Avenue	San Bernardino Ave. to I-10	2	10 - 11	C / D
	I-10 to Barton Rd.	4	19 - 21	B / C-D
Mount Vernon Avenue	Highland Avenue to Riverside County Line	4	4 - 13	A-C / A-D
Mulberry Avenue	Slover Avenue to Riverside County Line	4	13 - 14	D / D
Orange Street / Boulder Avenue	Highland Ave. to 5th St.	2 – 4	4 – 7	A-C / A-C
	5th St. to I-10	2	11 – 17	D-F / E-F
	I-10 to Citrus Ave.	4	10 - 15	A-B / B-C
Palm Avenue	Highland Avenue to 5th Street	4	8 - 14	A-C / A-C
Pepper Avenue	Baseline Street to Slover Avenue	2 – 4	11 - 26	B-D / B-D
Rancho Avenue	Foothill Blvd. to Mill St.	2	4 – 7	B / B-D
	Mill St. to I-10	4	9 – 20	B-C / B-D
	I-10 to La Cadena Dr.	2	11 - 15	D-F / D-F
Reche Canyon Rd	Barton Rd to Riverside County Line	2	19 - 20	F / F
Riverside Avenue	Sierra Avenue to Riverside County Line	4	15 - 43	B-D / B-E
Sierra Avenue	I-15 to SR-30	2	5 – 18	B-E / C-D
	SR-30 to Arrow Rt.	4	13 – 21	B-C / C
	Arrow Rt. to Slover Ave.	4	26 – 53	C-F / C-F
	Slover Ave. to Riverside County Line	6	13 - 20	A-B / A-B
Tippecanoe Avenue / Anderson Avenue	Baseline Street to Barton Rd	4	21 - 27	C / D
Victoria Avenue	Lynwood Drive to 3rd Street	4	6 – 9	A-C / A-C
Wabash Avenue	San Bernardino Avenue to 5th Street	2 – 4	2 - 6	A / A
Waterman Avenue	Rim of the World Highway to Barton Rd	4 – 6	19 - 29	A-D / B-E
Victor Valley				
Arrowhead Lake Rd	Main Street to SR-173	2	2 - 3	B / C
Baldy Mesa Rd	Phelan Rd to Duncan Rd / Bear Valley Rd	2	2 - 7	A / A
Bear Valley Rd	I-15 to I Ave.	6	27 – 38	C-E / C-D
	I Ave. to Apple Valley Rd.	4 – 6	35 – 36	D / D
	Apple Valley Rd. to Navajo Rd.	4	19 – 34	A-C / C
	Navajo Rd. to SR-18	2	5 – 6	A / A
Duncan Rd	Baldy Mesa Rd to Bear Valley Rd	2	<1	A / A
El Mirage Rd	Los Angeles County Line to US 395	2	2 - 4	A / A
Hesperia Rd	D Street to Lime Street	2	14 - 15	D / D
Main Street	US 395 to Rock Springs Rd	4	9 - 16	A-D / A-D
National Trails Highway	I-15 to Lenwood Rd	2	3 - 11	A / A

Roadway	Segment	Number of lanes (Total Two-way) [1]	ADT Volume (000's) [1]	Peak Hour LOS (AM / PM) [1]
Palmdale Rd	Los Angeles County Line to US-395	2	5 – 9	A-B / B-D
	US-395 to I-15	4	28 – 38	C-E / D-F
Phelan Rd	SR-138 to US 395	2	8 – 10	A / A
Sheep Creek Rd	El Mirage Rd to SR-138	2	2 - 11	A / A
Barstow				
Barstow Rd	Main Street to Veterans Parkway	4	17 - 18	C / C
Main Street	National Trails Highway to I-40	4	7 - 16	A-D / A-C
Old Highway 58	Los Angeles County Line to I-15	2	8 - 9	B / D
Needles				
Needles Highway	Nevada State Line to Broadway Street	2	3 – 4	A / A

[1]Where a range is provided, the roadway characteristic varies across the segment. For example, on 16th Street / Baseline Road from the Los Angeles County Line to Cherry Ave., the number of lanes varies between 4 and 6, the ADT varies from 12,000 to 27,000, the AM peak hour LOS varies from A to D, and the PM peak hour LOS varies from B to D.

Facility Deficiencies

In a region the size of San Bernardino County, mobility becomes a very important issue. The effective operation of freeways and streets is necessary to ensure that the movement of people and goods within and through the region continues as uninterrupted as possible. Overall operating conditions on the County's major highway systems are typically characterized by heavy peak commute period congestion lasting for several hours in the southbound and westbound direction in the morning and the reverse in the evening hours. Most major freeways and parallel arterial corridors exhibit these heavily directional congestion patterns on a daily basis. Recreational travel also exhibits weekly recurring congestion patterns along the east-west freeways and the I-15 to and from attraction points across the Nevada state line.

Those facilities currently operating at LOS F are included in Table IV-O-5.

Table IV-O-5. Existing Transportation Facilities Currently Operating at Level of Service F within San Bernardino County

Freeways	Location	Roadway Segment
I-10		
Westbound AM	Redlands	Mountain View Avenue to SR-30
Eastbound PM	San Bernardino	I-215 to Waterman Avenue
I-15		
Southbound AM	San Bernardino County	I-215 to Oak Hill Road
Northbound PM	San Bernardino County; Barstow	I-215 to Oak Hill Road; SR-58 to SR-247
I-215		
Northbound AM	Colton, Grand Terrace	Barton Road to I-10
Southbound AM	Colton, Grand Terrace, San Bernardino	La Cadena Drive to I-10; Orange Show Road to SR-259
Northbound PM	Colton, Grand Terrace, San Bernardino	La Cadena Drive to I-10; Orange Show Road to 2nd Street; 5th Street to Baseline Road
Southbound PM	San Bernardino	Mill Street to 2nd Street
State Highways	**Location**	**Roadway Segment**
SR-38	Redlands, San Bernardino County	I-10 to Bryant Street

Arterial Roadways – Valley Region	Location	Roadway Segment
North-South Facilities		
Cedar Avenue Central Avenue	Rialto, San Bernardino Montclair	Baseline Road to I-10 I-10 to Moreno Street
Etiwanda Avenue	Fontana, Ontario	I-10 to Slover Avenue
Milliken Avenue	Rancho Cucamonga, Ontario	Foothill Boulevard to 4th Street
Orange Avenue (SR-30)	Redlands	I-10 to San Bernardino Avenue
Rancho Avenue Reche Canyon Road	Colton Colton, San Bernardino County	I-10 to Agua Mansa Road Washington Street to Riverside County Line
Sierra Avenue	Fontana	Valley Boulevard to I-10
Arterial Roadways – Desert Region	**Location**	**Roadway Segment**
Waterman Avenue	San Bernardino	40th Street to SR-30
East-West Facilities		
19th Street (SR-30)	Upland, Rancho Cucamonga	Mountain Avenue to Haven Avenue
Barton Road/Washington Street	Colton, Grand Terrace, San Bernardino, Loma Linda	La Cadena Drive to I-215; Reche Canyon Road to University Avenue
Carbon Canyon Road (SR-142)	Chino Hills	Orange County Line to Chino Hills Parkway
Foothill Boulevard (SR-66)	Rancho Cucamonga	Vineyard Avenue to I-15
Highland Avenue (SR-30)	Fontana, Rialto, San Bernardino, Highland	Etiwanda Avenue to SR-30; Sterling Avenue to SR-30
Palmdale Road (SR-18)	Victorville	Amargosa Road to I-15

Source: SCAG RTP Model, San Bernardino County CMP, 2003 Update.

Public Transportation

There are seven public transit agencies that operate within San Bernardino County. These provide approximately 17.5 million passengers per year with access to a vast majority of the Valley and Mountain Regions of the County and to the more developed areas of the Desert Region. Of the seven transit operators, six are located almost entirely within the County and are provided funds and received oversight from San Bernardino Associated Governments (SANBAG), the County's transportation planning agency. SANBAG does not provide funding or have oversight over Foothill Transit Agency.

San Bernardino County also maintains a service directory for organizations and agencies that provide specialized transportation for seniors and persons with disabilities. This directory, created and maintained by the Public and Specialized Transportation Advisory and Coordination Council, currently lists approximately 200 public transit operators and social service transportation providers that have been registered by the County to provide access to seniors, disabled persons and persons of limited means.

Greyhound offers regional and nationwide bus service to San Bernardino County residents through seven stations located in these communities – Baker, Barstow, Fontana, Needles, a limited station in Redlands, San Bernardino and Victorville. From these stations, Greyhound offers connections to locations such as Los Angeles, Las Vegas, Phoenix, Tucson and points beyond. In 2002, San Bernardino was the tenth busiest terminal for Greyhound patrons in the United States.

Railroads

Commuter Service

Commuter rail service in San Bernardino County is currently provided by Metrolink. Metrolink is the regional commuter rail system operated by the Southern California Regional Rail Authority (SCRRA), a joint powers authority created by the transportation commissions of the counties of Los Angeles, Orange, Riverside and San Bernardino, as mandated by the California Legislature through Senate Bill 1402, Chapter Four of Division 12 of the Public Utilities Code. Metrolink operates seven lines throughout the Los Angeles Metropolitan Area, three of which provide direct service to San Bernardino County; the San Bernardino Line, the Riverside Line and the Inland Empire Orange County Line. More details on commuter service in the County are provided in the Circulation and Infrastructure Background Report.

Amtrak

Amtrak has two routes that travel through San Bernardino County. The Southwest Chief operates daily between Los Angeles and Chicago and stops in four cities in San Bernardino County - San Bernardino, Victorville, Barstow and Needles. The Sunset Limited operates three times per week between Los Angeles and Orlando, Florida, and makes one stop in San Bernardino County, in the City of Ontario.

High-Speed Rail / Maglev

- The Southern California Association of Governments (SCAG) has been studying the feasibility of constructing four magnetic levitation (Maglev) high-speed transportation system corridors within the region. The intent of this project would be to create an integrated regional airport system by connecting all significant airport facilities as well as major activity centers and multi-modal transportation centers using a high-speed transportation system.

After this initial network is constructed and shown to be a feasible alternative to the automobile, further expansion could include travel between such destinations as Los Angeles and San Diego, San Bernardino and Palmdale and possibly Los Angeles and Las Vegas.

SCAG's Regional Council approved the deployment of a 56-mile "Initial Operating Segment" in December 2002 that would extend from West Los Angeles via Los Angeles Union Passenger Terminal to Ontario International Airport. Additionally, advanced planning was approved for the Los Angeles International Airport to Palmdale and Los Angeles to Orange County corridors. However, no segment has been constructed to date.

Aviation

Currently, there are 44 public and private airports operating throughout the County. The County manages, operates and maintains six of these facilities. San Bernardino County also has a total of 25 heliports; 4 are publicly operated, 11 for private medical use and 10 for private general use.

Ontario International Airport (ONT) is operated by Los Angeles World Airports, a branch of the City of Los Angeles. It is currently equipped to accommodate international flights. ONT is one of the fastest growing commercial airports in Southern California and is one of the top 100 busiest airports in the United States for both commercial and cargo services.

San Bernardino International Airport (SBD) is operated by the San Bernardino International Airport Authority (SBIAA), a joint powers authority comprised of the County of San Bernardino and the Cities of San Bernardino, Colton, Loma Linda and Highland. are currently equipped to accommodate international flights. San Bernardino International has been converted to a commercial airport from its previous use as Norton Air Force Base and is seeking to establish itself as an alternative destination for both passenger and cargo carriers.

The former George Air Force Base, located in Victorville, is one of the five federally-owned airports in the County and is also being converted to civilian use and has been renamed as the SCLA. This facility is currently operating as a staging area for military personnel stationed at National Training Center in Fort Irwin. The final proposed use of this facility is to act as an intermodal gateway to southern California through which a large portion of the freight being carried along the I-15 corridor can be distributed. The remaining four facilities are being maintained and operated by the respective government agencies by which they are owned.

Four municipal airports are located within San Bernardino County and are widely utilized for recreational and educational purposes with the number of annual operations at these facilities ranging from 12,500 to 125,000.

The remaining 27 airports are privately owned and can be found throughout the County. Cable Airport is considered to be the largest privately-owned airport in the United States and conducts 88,000 operations per year. The Hesperia and the Roy Williams (formerly Hi–Desert) Airports are also greatly utilized.

The 44 airports and 25 heliports are spread across the three planning areas: the Valley, the Mountains and the Desert. The locations of these facilities are presented on Figures O-7 through O-13 of the Circulation Background Report prepared for the update to the County's General Plan. Table IV-O-6 provides details of the airports in the county and Table IV-O-7 provides details of the County's heliports.

Goods Movement

Due to the County's location at the eastern edge of the Los Angeles Metropolitan Area, the transportation and distribution of goods is a very important industry in San Bernardino County. Millions of tons of freight are distributed to destinations across the United States utilizing County roadways, rail lines and airports. Below are descriptions of each mode of transportation as it relates to goods movement.

Trucking

According to U.S. Census Bureau Nonemployer Statistics, 2001 Warehousing & Transportation, there were 4,022 trucking entities operating in San Bernardino County. Of this total, 1,566 engaged in local delivery routes and another 2,184 conducted long-distance deliveries. A local trip generally occurs in the same metropolitan area and only requires a single day to complete. Long-distance trips are those trips that occur between metropolitan areas and require greater periods of time to complete. An additional 272 firms concentrate on goods that require specialized delivery due to inherent characteristics of the product (i.e., size, weight, etc.) regardless of trip length. These entities generated a total of $337,747,000 in total receipts for 2001.

Rail Freight

Class I Railroads: There are two Class I freight railroads that operate lines in San Bernardino County: the BNSF Railway (owned by the Burlington Northern Santa Fe Corporation) and the Union Pacific (UP) Railroad.

Class II Railroads: There are currently no Class II railroads in San Bernardino County.

Class III Railroads: Two Class III railroads are currently operating in San Bernardino County. Traffic along the Trona Railway, operating near the Town of Trona in the northwestern portion of the County, only consists of railcars loaded with borax destined for overseas markets. This railroad's activity level is near 5 million gross ton-miles and occurs over 31 total miles of track. The Arizona & California Railroad operates along a branch line from the main BNSF Railway line and carries cargo to the Phoenix metropolitan area. This railroad operates 134 miles of track and carries approximately 5 million gross ton-miles of cargo per year.

Table IV-O-6. San Bernardino County Airports

Airport	Location	Size (acres)
Valley Region Airport(s)		
Cable	2 miles northwest of Upland	95
Chino	3 miles southeast of Chino	1,097
Ontario International	2 miles east of Ontario	1,700
Redlands Municipal	2 miles northeast of Redlands	194
Rialto Municipal / Art Scholl Memorial	3 miles northwest of Rialto	600
San Bernardino International	2 miles southeast of San Bernardino	1,329
Mountain Region Airport(s)		
Big Bear City	Immediately west of Big Bear City	117
Desert Region Airport(s)		
Abraham Ranch	16 miles southeast of Lucerne Valley	na
Adelanto	4 miles southwest of Adelanto	350
Apple Valley	3 miles north of Apple Valley	456
B & E Ranch	10 miles northwest of Yucca Valley	160
Baker	2 miles northwest of Baker	240
Barstow – Daggett	4 miles east of Barstow	1,087
Bauer	Near Twentynine Palms	na
Bicycle Lake AAF	3 miles northeast of Barstow	na
Cadiz Airstrip	1 miles south of Cadiz	na
Camino Airstrip	7 miles southeast of Goffs	na
Cones Field	2 miles north of Twentynine Palms	30
Conner	13 miles northwest of Goffs	40
Crosswinds	4 miles northeast of Twentynine Palms	78
Depue	2 miles southwest of Lenwood	na
Dick Dale Skyranch	5 miles northeast of Twentynine Palms	80
Dick Taylor Airstrip	8 miles southwest of Kelso	na
Gene Wash Reservoir	3 miles northwest of Parker Dam	na
Goldstone / GTS	28 miles north of Barstow	na
Hansen	12 miles southwest of Adelanto	370
Hart Mine	7 miles southeast of Ivanpah	na
Harvard	8 miles east of Yermo	na
Hesperia	3 miles south of Hesperia	26
Holiday Ranch	7 miles northeast of Apple Valley	70
Kelly	17 miles east of Lucerne Valley	120

Airport	Location	Size (acres)
Krey Field	9 miles southwest of Adelanto	140
Ludlow	50 miles east of Barstow	na
Needles	5 miles south of Needles	796
Osborne Private	4 miles northeast of Victorville	na
Palisades Ranch	3 miles southwest of Helendale	240
Roy Williams	3 miles northeast of Joshua Tree	115
Southern California Logistics	5 miles northwest of Victorville	2,300
Sun Hill Ranch	10 miles west of Helendale	215
Trona	4 miles north of Trona	150
Twentynine Palms	6 miles east of Twentynine Palms	480
Twentynine Palms EAF	9 miles northwest of Twentynine Palms	na
Valley Vista	16 miles northwest of Yucca Valley	na
Yucca Valley	3 miles east of Yucca Valley	35

Table IV-O-7. San Bernardino County Heliports

Heliport	Location
Valley Region Heliport(s)	
Arrowhead Regional Medical Center	1 mile west of Colton
County	2 miles southeast of San Bernardino
Fontana Police	Immediately north of Fontana
Kaiser Hospital	2 miles south of Fontana
Loma Linda University Medical Center	Immediately north of Loma Linda
R.I. San Bernardino G/L Helistop	4 miles northeast of San Bernardino
San Bernardino Community Hospital	Immediately southeast of San Bernardino
San Bernardino County Medical Center	2 miles west of San Bernardino
SCE Eastern Division	3 miles southwest of San Bernardino
Mountain Region Heliport(s)	
Bear Valley Hospital	Immediately north of Big Bear Lake
M H 15 Heaps Peak USFS	3 miles southeast of Lake Arrowhead
Mountains Community Hospital	2 miles northeast of Lake Arrowhead
Desert Region Heliport(s)	
Barstow Community Hospital	1 mile east of Barstow
Barstow Service Center	1 mile southeast of Barstow
Hi-Desert Memorial Hospital	2 miles west of Joshua Tree
IPP Adelanto	2 miles southwest of Adelanto
Lugo Substation	4 miles southwest of Hesperia
Morongo Basin CHP	2 miles east of Joshua Tree
Ord Mountain	17 miles southeast of Barstow
SCE High Desert District	Immediately north of Victorville
SCE Solar I	3 miles south of Yermo
St. Mary Desert Valley Hospital	1 mile northwest of Apple Valley
Victor Valley Community Hospital	Immediately north of Victorville
William E. Poole	6 miles northwest of Apple Valley
Yucca Valley Service Center	1 mile east of Yucca Valley

Air Freight

Ontario International Airport (ONT) is currently served by nine major U.S. airfreight carriers. These carriers processed 575,369 tons of cargo through the facility in 2005. The freight movement system surrounding ONT also includes two Class I railroads, four major freeways and an expanding network of freight forwarders.

The airfreight carriers operating from ONT include Airborne Express, Ameriflight, DHL, Empire Airways, Express Net, Federal Express, West Air, Union Flights and United Parcel Service (UPS). UPS is the largest airfreight carrier operating at ONT, consisting of approximately 70% of the airport's cargo, and began four weekly flights to China using Boeing 747 cargo aircraft, creating a direct link to the Pacific Rim's largest and fastest growing market.

There are two other facilities in San Bernardino County that are currently developing operating plans and infrastructure to begin processing large quantities of cargo: San Bernardino International Airport (the former Norton Air Force Base in the City of San Bernardino) and SCLA (the former George Air Force Base in Victorville). At completion, SCLA is expected to have the capacity to handle nearly four million tons of air cargo annually and grow from three to nine million tons per year for the next 20 years. San Bernardino International Airport currently has three airfreight carriers, Custom Air Transport, Heavylift and Kitty Hawk, operating at the facility and is located within two miles of the state-of-the-art BNSF Intermodal Rail Facility and is in close proximity to six major freeways.

More details on goods movement facilities in the County are provided in the Circulation and Infrastructure Background Report.

Transportation Demand Measures

Park and Ride Facilities

Within San Bernardino County, there are 11 Park & Ride facilities located across the southwestern portion of the County. Currently, there are five facilities located in the Valley Region, four in the Desert Region and two in the Mountain Region. Each Park & Ride lot is free of charge and open for public use 24 hours a day, seven days a week. The Circulation and Infrastructure Background Report contains descriptions of each facility, operating agency, average daily usage of each facility and transit connections.

High Occupancy Vehicle Carpool Lanes

San Bernardino County has approximately 43 miles of carpool lanes along four separate freeways (i.e., I-10, SR-60, SR-210 and SR-71). All of the existing facilities are located in the western portion of the Valley Region. Construction of an additional 18 miles is scheduled to occur in the next several years and will located in the eastern portion. A list of the existing and planned carpool lanes is provided below:

Existing

- An 8.5-mile facility along SR-71 in Chino was completed in 1997.
- A 10-mile segment of SR-60 in Chino, Ontario and an unincorporated portion of San Bernardino County also opened in 1997.

- A 9.9-mile segment of I-10 through Ontario and Montclair was opened in January 2000.
- A 6-mile portion of SR-210 in Rancho Cucamonga and Fontana was completed in 2001.
- A 9-mile segment along SR-210 in Rancho Cucamonga and Upland opened in 2002.

Planned

- An 8-mile segment of SR-210 in Rialto and San Bernardino is expected to open in 2007;
- A 6-mile segment on I-215 is under development and will travel through downtown San Bernardino and is scheduled for completion in 2008; and
- A 4-mile section of I-215 extending from the Riverside County line to I-10 through Grand Terrace and Colton. An EIR is currently being prepared for this project and will continue until 2009.

Ridesharing

SANBAG operates two programs for individuals and one for employers through which commuters can receive financial incentives by participating in a rideshare program. Option Rideshare is a program that offers commuters financial incentives of up to $2.00 per day when they use a rideshare mode for three consecutive months. Team Ride is an extension of the initial program that provides discounts and special offers to participants at restaurants and events in both San Bernardino and Riverside Counties. The final program is the Inland Empire Commuter Services Program. This program is designed to help employers develop and maintain a rideshare program through continuing education and assistance from SANBAG free of charge.

Non-Motorized Facilities

San Bernardino County has a Non-Motorized Transportation Plan that deals primarily with bicycle and pedestrian use by residents for recreational and commuting purposes. This plan was most recently updated in 2001 and is an attempt to develop a more comprehensive approach toward future planning and construction activities in regards to bicycle and pedestrian infrastructure. More details on non-motorized facilities in the County are provided in the Circulation and Infrastructure Background Report.

Trails

Trails are an important part of the non-motorized transportation system that currently exists within San Bernardino County. These facilities provide public access to open space lands and fulfill an increasingly important role as recreational amenities. Within the San Bernardino County government, the Department of Regional Parks is responsible for maintaining all County-designated regional trails. All of the County-designated trail facilities are multi-use trails that allow pedestrian, bicycle and equestrian use. More details on trails in the County are provided in the Circulation and Infrastructure Background Report.

Intelligent Transportation Systems Applications

Intelligent Transportation Systems constitute a wide spectrum of techniques and applications that are currently being applied to existing roadways, highways and transit systems to increase their efficiency, safety and ability to relieve congestion. San Bernardino County is currently employing several types of Intelligent Transportation Systems applications.

- 1-800-COMMUTE telephone line, which provides travel information for highways, transit, rideshare and other commuting alternatives;
- Closed-circuit television cameras to help in identifying and responding to accidents more quickly;
- Electronic sensors placed in freeways that transmit vehicle counts to a traffic management center and can be used for real-time traffic conditions;
- Traffic signal control systems that are synchronized through computer software specifically designed to better monitor and respond to local traffic congestion;
- Changeable message signs that alert drivers to possible delays due to accident or congestion and allow for route diversion;
- Traffic signals, or ramp meters, placed at freeway entrance ramps to provide a more consistent flow of entering traffic onto the freeway, resulting in less congestion and potential accidents due to crowded conditions; and
- Smart call boxes that gather traffic count data and transmit this information to traffic management centers and the CHP.

Measure I/Nexus Study

Measure I is the half-cent sales tax collected throughout San Bernardino County for transportation improvements. San Bernardino County voters approved the measure in November 1989 to ensure that needed transportation projects were implemented countywide.

The San Bernardino Association of Governments (SANBAG) administers Measure I revenue and is responsible for determining which projects receive Measure I funding, and ensuring that transportation projects are implemented. In 2004, Measure I was extended by a vote of the people from 2010 to 2040. It is expected to generate an additional $6 billion in revenue for transportation improvements.

Requirements from Measure I apply to the San Bernardino Valley and Victor Valley cities and sphere areas. Local jurisdictions in these areas must implement development mitigation programs that achieve development contribution requirements are established by the Nexus Study for regional transportation improvements, including freeway interchanges, railroad grade separations, and regional arterial highways on the Nexus Study network.

Implementation of a development mitigation program is required of each local jurisdiction in the Valley and Victor Valley to maintain conformance with the SANBAG Land Use/Transportation Analysis Program of the Congestion Management Program (CMP). In addition, the CMP requires SANBAG to make an annual finding of local jurisdiction conformance to the provisions of the CMP. To support this finding, each jurisdiction must prepare a brief annual report demonstrating its continued compliance with the provisions of the CMP.

1. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Transportation/Traffic, if the project would cause any of the following effects:

- *Cause an increase in traffic which 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 designated roads or highways*
- *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*
- *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).*

3. IMPACT ANALYSIS

The land uses permitted by the Land Use Element of the General Plan will generate additional traffic on the County's roadway network. This traffic has the potential to result in significant impacts if it results in a substantial increase in vehicle trips, volume to capacity ratio on roads, or congestion at intersections, or if it exceeds a level of service standard established by the County congestion management agency.

Impact TR- 1
SANBAG, the County's congestion management agency, has established level of service (LOS) E as the standard for roadway operations within the County. However, SANBAG also permits each jurisdiction to set its own, more stringent standard. The proposed 2006 update to the General Plan establishes LOS D as the standard in the Valley and Mountain Regions and LOS C as the standard in the Desert Region. Therefore, a significant impact would occur if the General Plan were to result in roadway operations at LOS E or F in the Valley or Mountain Regions, or at LOS D, E, or F in the Desert Region.

As is standard practice for General Plan level analyses, roadway segment ADT volumes have been used as the primary performance measure and indicator of level of service (LOS) and operating conditions. The General Plan adopts volume thresholds published in the 2002 *Florida Quality/Level of Service Handbook.* For the analysis of impacts of the General Plan, the volume thresholds for "Major City/County Roadways" have been utilized. Since the General Plan also adopts the LOS standard of D in the Valley and Mountain Regions and C in the Desert region, the relevant volume thresholds are as shown in Table IV-O-8.

Table IV-O-8. Roadway Daily Volume Thresholds

# of Lanes	Valley[1]	Mountain[2]	Desert[3]
2	14,600	13,600	7,000

4	31,100	29,300	16,400
6	46,800	44,100	25,700

[1]Major City/County Roadway, Urbanized Area, LOS D
[2]Major City/County Roadway, Transitioning and Non-Urbanized Area, LOS D
[3] Major City/County Roadway, Areas over 5,000 not in Urbanized Area, LOS C
Source: Meyer, Mohaddes Associates / County of San Bernardino

Table IV-O-9 presents the roadway segments under County jurisdiction that are projected to operate at unsatisfactory levels of service under year 2030 conditions, without mitigation.

Table IV-O-9. Roadway Segments Deficient in 2030 Without Mitigation

Roadway	From	To	General Plan Classification	On Nexus Study Project List	Deficient when Fully Built
Valley					
5th St	Cooley St	Highland City Limits	Major Hwy	Yes	No
Cedar	Bloomington	Riverside County Line	Major Arterial Hwy	Yes	No
Central	Montclair City Limits	Chino City Limits	Major Arterial Hwy	Yes	No
Cherry	I-10	Rosemary	Major Divided Hwy	Yes	No
Citrus	I-10	Valley	Secondary Hwy	No	No
Monte Vista	Mission	Chino City Limits	Secondary Hwy	No	No
Ramona	Montclair City Limits	Chino City Limits	Major Hwy	Yes	No
Desert					
Baldy Mesa Rd	Duncan Rd	Victorville City Limits	Major Arterial Hwy	No	No
Phelan Rd	Caughlin	Baldy Mesa Rd	Major Arterial Hwy	Yes	No
Rock Springs Rd	Hesperia City Limits	Deep Creek Rd	Major Hwy	No	No
Old Hwy 58	Community Bl	Barstow City Limits	Major Hwy	No	No
Mountains					
Except for certain roadway segments of limited length and localized congestion, there are no deficient Roadway Segments projected in the Mountain Region					

To perform the analyses presented below, the land uses permitted by the Land Use Element were converted into socioeconomic data (e.g., population, housing, employment, and income) based on factors approved by SCAG. Socioeconomic data were developed for each traffic analysis zone (TAZ) in SCAG's Regional Transportation Plan (RTP) travel demand model. These data reflect build out of the General Plan Land Use Element for the unincorporated areas of the County. For zones representing the incorporated cities, socioeconomic data approved by SCAG for 2030 conditions was used. Thus, the traffic forecasts in this section represent build out of the unincorporated County areas with 2030 background volumes. These forecasts are referred to as year 2030 traffic volumes.

Before performing the initial year 2030 model runs, the RTP model network was updated to incorporate all projects in the County that are included in the 2004 RTP constrained project list. The RTP model was then used to generate average daily traffic (ADT) volume projections on the County's roadway system. Thus, these initial model runs represent the impact of build out of the County's General Plan land uses on the existing roadway network, including only RTP constrained projects. They do not include implementation of the General Plan circulation system illustrated in the Circulation Map.

Except for certain roadways of limited lengths and localized congestion, no roadway segments under county jurisdiction in the Mountain Region are projected to operate at unsatisfactory levels of service. To assess the extent to which implementation of the General Plan circulation system will mitigate the identified impacts additional model runs were conducted in which the model network was modified to reflect each roadway segment under the County's jurisdiction as constructed to its ultimate General Plan classification. The final column of Table IV-O-9 indicates whether each roadway segment that is projected to be deficient without mitigation will remain deficient with implementation of the General Plan circulation system. As shown, with implementation of the General Plan circulation system, no roadways under County jurisdiction will remain deficient.

In addition to the countywide traffic analysis provided in this EIR, certain roadway segments of limited length in the Mountain Region may experience congestion and deficient levels of service in the future. It is anticipated that congestion from these deficient segments are relatively localized in nature, and as such are not considered significant environmental impacts in the context of the countywide traffic analysis. Furthermore, these localized deficiencies may ultimately be resolved through certain operational solutions such as signalization, lane striping, access control, additional road widening, etc. Overall, the impact is not considered significant on a countywide basis.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in section 4, below.

Impact TR- 2

Implementation of the county's Circulation Map will mitigate the potential traffic impacts that may be created by the buildout of the General Plan land uses on roadways under the jurisdiction of San Bernardino County. However, mobility conditions will be limited and many capacity deficiencies will be apparent on roadways not under the county's jurisdiction, such as freeways and State highways, as well as arterials in incorporated cities within the county as well as in adjacent areas of the southern California region.

It should be emphasized that the projected freeway and arterial deficiencies are as a result of forecast cumulative socioeconomic (housing, population and employment) growth in the

entire southern California region by 2030, which also includes the projected buildout of the land uses in San Bernardino County General Plan. Many of the trips expected to be generated by the growth in unincorporated San Bernardino County also have an origin or a destination in either incorporated cities in the county or adjacent areas in other counties. The deficient highway segments that are described below are as a result of overall growth in southern California, and a large part of the deficiencies are unrelated to trips generated by current or projected land uses in unincorporated San Bernardino County.

The following sections summarize and highlight the projected deficiencies on roadways not under the county's jurisdiction in each of the San Bernardino County subregions.

San Bernardino Valley Planning Area:

- Most of the freeways in the Valley region are expected to operate at LOS F with the exception of the following segments:
  - SR-71 from SR-60 to Central Ave
  - I-15 from Arrow Blvd to I-215
  - I-215 from SR-259 to I-15
  - SR-210 from I-215 to Fifth St
- The west Valley area exhibits significantly more segments with unacceptable LOS than the east Valley.
- The west Valley's congested highway segments are highly continuous and persistent, while in the east Valley the deficient segments are more isolated, discontinuous and sporadic.
- Also, it is apparent that in the west Valley, north-south arterials are more congested than the east-west roadways. One reason for this can be the fact that there are three parallel east-west freeways that share the load of the heavy east-west travel, whereas I-15, as the only one north-south freeway on the west side, carries the bulk of long distance trips.
- In the west Valley, the most notable north-south facilities with long segments of continuous capacity deficiency are as follows:
  - Haven Avenue from Riverside Dr to 8th St
  - Archibald Avenue from Schleisman Rd to Riverside Dr
  - Archibald Avenue from Airport Dr to Foothill Blvd
  - Vineyard Avenue from Holt Ave to Arrow Route
  - Campus Avenue from Mission Blvd to SR-210
  - Euclid Avenue (SR-83) from Eucalyptus Ave to Mission Blvd
- There are also a few east-west arterials with long segments that are expected to be over capacity. These include:
  - Foothill Boulevard from Milliken Ave to Hickory Ave
  - D Street in Ontario from Mountain Ave to Holt Ave
  - Mission Boulevard from Euclid Ave to Archibald Ave
  - Pine Avenue from Butterfield Ranch Rd to Hellman Ave
  - Carbon Canyon Road (SR-142) from Chino Hills Parkway to the Orange County line

- In the east Valley, the most notable capacity deficiencies are also in the north-south direction. Virtually all north-south surface roads connecting San Bernardino and Riverside counties from the I-15 to the I-215 and beyond are expected to operate at LOS F conditions between I-10 and SR-60. These roadways include from west to east:
  - Etiwanda Avenue
  - Sierra Avenue
  - Riverside Drive/Main Street
  - Mount Vernon Avenue/Pigeon Pass Road
  - Reche Canyon Road
  - San Timoteo Canyon Road
- Other north-south streets in the east Valley that are expected to operate at an unacceptable LOS are as follows:
  - Several segments of Rancho Avenue
  - Tippecanoe Avenue and Waterman Avenue in San Bernardino
  - Live Oak Canyon Road and 5th Street in Calimesa and Yucaipa
- Most notable capacity deficiencies on the east Valley's east-west streets are expected to be on the following roadway segments:
  - Base Line Road—from Alder Ave to Cactus Ave
  - Fifth Street—from I-215 to SR-210 (SR-30)

In summary, the heaviest concentration of capacity deficiencies on highways is expected to be in the west Valley, generally in the Chino/Ontario/Upland area, and the north-south arterials south of I-10 serving the San Bernardino/Riverside County connections.

Mountain Planning Area:

In the Mountain region, the most notable capacity deficiencies are expected to occur on the highways connecting the Mountain areas with the San Bernardino east valley. These facilities, which are for the most part comprised of two-lane state highways, are as follows:

- SR-18 from SR-30 to SR-189 near Lake Arrowhead
- SR-138 from SR-18 to Lake Dr
- SR-189 from SR-18 to Grass Valley Rd
- SR-330 from Highland Ave to SR-18
- SR-38 from Bryant Rd to south of Big Bear Lake

Desert Planning Area:

In the Desert Planning area the freeways are generally expected to operate under acceptable conditions with the exception of the following segments:

- I-15 from I-215 to Ranchero Rd in Hesperia
- I-15 north of I-40 in Barstow

Arterial roadway segments in the Desert area that are expected to operate under unacceptable conditions of LOS E and F are mostly concentrated in the central portions of the Victor

Valley and generally the cities of Victorville and Hesperia. East-west and north-south roadways appear to be equally impacted by capacity deficiencies at the buildout of the County General Plan land uses. Specific roadway segments with expected capacity deficiencies are as follows:

- SR-138 from I-15 to the Los Angeles County line
- Palmdale Road (SR-18) from Sheep Canyon Road to I-15
- Bear Valley Road from Bellflower Rd to I-15
- Bear Valley Road from I Avenue to Apple Valley Rd
- SR-247 from Rimrock Rd to I-15
- Rimrock Road from SR-247 to Monterey Ave

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact TR-3
The following sections summarize and highlight the projected deficiencies on roadways in the adjacent counties and surrounding areas. It is important to emphasize that roadway deficiencies in the adjacent counties are largely the result of growth in those counties, and that growth in San Bernardino County contributes only incrementally to these deficiencies, particularly on those roadway segments at a greater distance from the county.

Riverside County:

All freeways in Riverside County are expected to operate at LOS F, with the exception of I-10 east of the SR-111 junction in the Coachella Valley. Other access controlled facilities, which will operate acceptably, include the planned Mid-County Parkway and the Orange County Connection (expected toll facility).

As noted earlier, heavy congestion and capacity deficiencies can be expected on all key north-south surface roads connecting Riverside and San Bernardino counties between I-10 and SR-60. Other notable LOS E and F conditions can be expected on the following:

- The entire length of Van Buren Boulevard, from I-15 to I-215, with the exception of a short segment from Cypress to California in Riverside
- Limonite Avenue from Archibald Ave to Van Buren Blvd
- Arlington Avenue from Tyler St to Magnolia Ave
- Mockingbird Canyon Road and El Sobrante Road from Van Buren to the Mid-County Parkway
- Central Avenue and Alessandro Boulevard, from Van Buren to I-215, with the exception of a few short segments
- Perris Boulevard from SR-60 to Nuevo Road
- Cactus Avenue from I-215 to Perris Blvd
- Gilman Springs Road from Alessandro Blvd to State St

- Lamb Canyon Road from SR-60 to Gilman Springs Rd
- Redlands Boulevard from San Timoteo Canyon Rd to Alessandro Blvd

Los Angeles County:

All freeways in adjacent areas in Los Angeles County are expected to operate at LOS F conditions, with no exceptions.

Much like the western San Bernardino Valley, it appears that capacity deficiencies are more pronounced on north-south arterials than on east-west facilities. Notable surface streets that are expected to operate at LOS E and F in adjacent areas of Los Angeles County are as follows:

- North Grand Avenue from I-210 to SR-60/57, with the exception of one segment from Amar Rd to Valley Blvd
- Temple Avenue/Amar Road from SR-57 to Nogales Ave
- Azusa Avenue (SR-39) from W. San Bernardino Rd to SR-60
- Fullerton Road from Valley Blvd to Orange County line
- Glendora Avenue/Hacienda Boulevard from Merced Ave to Orange County line
- Colima Road from Stimson Ave to Whittier Blvd
- Santa Anita Road from Duarte Rd to Lower Azusa Rd
- Rosemead Boulevard (SR-19) from I-210 to Whittier Blvd, with the exception of one segment between SR-60 and San Gabriel Blvd

Orange County:

All freeways in adjacent areas are projected to operate at LOS F with the exception of the Eastern Corridor Toll Road (SR-241).

In contrast to surface streets in Los Angeles County, the Orange County arterials in the adjacent areas do not exhibit long, sustained segments with unacceptable LOS E and F conditions. Most notable segments expected to be deficient are as follows:

- La Mirada Boulevard from Leffingwell Rd to Beach Blvd
- Beach Boulevard (SR-39) from Rosecrans Ave to Lincoln Ave
- Beach Boulevard (SR-39) from Katella Ave to SR-22
- Knott Avenue from SR-91 to Ball Road
- Valley View Street from SR-91 to SR-22
- Westminster Avenue from Bolsa Chica Rd to Pacific Coast Hwy (SR-1)
- Euclid Avenue from Chapman Ave to Lincoln Ave

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance.

Impact TR-4
Implementation of the General Plan will not 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. The land uses permitted by the Land Use Element of the General Plan will generate additional demand for air travel to and from San Bernardino County. The increased demand for passenger air travel will likely result in increased air traffic levels at Ontario International Airport and, to a lesser extent, at the general aviation airports within the County. The increased demand for air freight services will likely result in increased air traffic levels at Southern California Logistics Airport and San Bernardino International Airport. The major airports each have their own aviation master plans to accommodate anticipated growth. In addition, all of the airports in the County must comply with Federal Aviation Administration regulations governing flight safety. Therefore, the increased traffic levels will not result in substantial safety risks.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in section 4, below.

Impact TR-5
Implementation of the General Plan will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The implementation of the General Plan circulation network will result in an increasing portion of the County's roadway system being constructed in accordance with General Plan roadway standards. These standards require right-of-way adequate for roadway design consistent with Caltrans' Highway Design Manual. In addition, all roadway plans will be reviewed by the County Department of Public Works to ensure that there are no unsafe design features.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in section 4, below.

Impact TR-6
Implementation of the General Plan will not result in inadequate emergency access. All development under the General Plan will be subject to review by the County Department of Public Works and by emergency service agencies to ensure that adequate emergency access is provided.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in section 4, below.

Impact TR-7
Implementation of the General Plan will not result in inadequate parking capacity. All development under the General Plan will be subject to review by the County Department Planning to ensure that adequate parking provided.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in section 4, below.

Impact TR-8
Implementation of the General Plan will not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). The General Plan policies support alternative transportation.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in section 4, below.

4. MITIGATION MEASURES

Implementation of the General Plan circulation system illustrated in the Circulation Map will mitigate some of the traffic impacts of the General Plan land uses. Implementation of the full circulation system will be achieved through a variety of mechanisms, including the following:

- Requirements that developers fully improve their street frontage at the time of development
- Collection of fees through a fee program consistent with SANBAG's "Nexus Study" requirements implementing the Measure I sales tax program
- Measure I sales tax funds that are allocated by SANBAG to supplement fees collected directly by the County.

Table IV-O-9 above indicates which of the deficient segments are included on the Nexus Study project list and are therefore eligible for Measure I funding. This indication is provided for informational purposes and is not meant to suggest that Measure I funding will fully mitigate impacts on these roadway segments.

Mitigation TR-1
The County shall provide a transportation system, including public transit, that is safe, functional and convenient, that meets the public's needs and enhances the lifestyles of County residents.

Mitigation TR-2
The County shall strive to achieve Level of Service "D" on all County roadways in the Valley and Mountain Regions and LOS "C" on all County roadways in the Desert region. Through the review of new development proposals, traffic impacts, including cumulative impacts, will be properly addressed and mitigated to maintain these Level of Service standards on the County's circulation system.

Mitigation TR-3
In the Valley and Mountain Regions, the County shall approve development proposals only when they are consistent with the County's objective of achieving Level of Service "D" on County roadways segments and intersections affected by the development. Development proposals will strive to achieve the LOS "D" objective through incorporating design measures and roadway improvements in the proposed development and/or mitigation fees to the County to offset capital improvements to achieve the LOS "D" objective.

In the Desert Region, the County shall approve development proposals only when they are consistent with the County's objective of achieving Level of Service "C" on County roadways segments and intersections affected by the development. Development proposals will strive to achieve the LOS "C" objective through incorporating design measures and roadway improvements in the proposed development and/or mitigation fees to the County to offset capital improvements to achieve the LOS "C" objective.

Mitigation TR-4
The County shall work with adjacent jurisdictions to minimize inconsistencies in existing and ultimate right-of-way and roadway capacity across jurisdictional boundaries.

Mitigation TR-5
The County shall work with Caltrans and SANBAG on appropriate fair share mitigation for impacts of development on state highways.

Mitigation TR-6
The County shall have a balance between different types of transportation modes, reducing dependency on the automobile and promoting public transit and alternate modes of transportation, in order to minimize the adverse impacts of automobile use on the environment.

Mitigation TR-7
The County shall promote and encourage land use patterns, such as the development of local retail uses near residential uses, consistent with Smart Growth and New Urbanism Concepts in new development that will reduce the number of automobile trips by providing neighborhood shopping facilities and connectivity through pedestrian and bicycle paths.

Mitigation TR-8
The County shall 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.

Mitigation TR-9
The County shall work with regional agencies (i.e., SCAG, Caltrans, SANBAG) to develop ridesharing programs, facilities and various modes of public transit (i.e., local and rapid bus, Metrolink and high-speed trains).

Mitigation TR-10
The County shall work with the cities, Omnitrans and other transit agencies to integrate local transit service routes and schedules into a linked and well-coordinated (through schedules) Valley-wide system throughout the Valley area.

Mitigation TR-11
The County shall extend public transit between residential areas and industrial/urban employment centers, continue and expand transportation services and public transit between Ontario Airport; Orange County Airport; and Los Angeles International Airport; and consider promotion of future high-speed train and Maglev systems for better long-range airport connectivity.

Mitigation TR-12
The County's comprehensive transportation system will be developed according to the Circulation Policy Map (the Circulation Element Map), which outlines the ultimate multi-modal (i.e., non-motorized, highway, and transit) system to accommodate the County's mobility needs and provides the County's objectives to be achieved through coordination and cooperation between the County and the local municipalities in the County.

Mitigation TR-13
The County's comprehensive transportation system shall operate at regional, county-wide, community and neighborhood scales providing connectors between communities, and mobility between jobs, residences and recreational opportunities.

Mitigation TR-14
The County shall ensure that applicants, subdividers and developers dedicate and improve right-of-way per County standards and contribute to their fair share of off site mitigation.

Mitigation TR-15
The County shall use current innovative traffic engineering practices to increase roadway capacity and safety such as:

- A raised median on Major Arterial highways in urban areas;
- Limiting access to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors from intersecting streets; direct access from abutting properties shall be allowed only where no reasonable alternatives exist;
- Obtaining additional right-of-way to accommodate right and left turn lanes at major intersections;
- Developing special urban interchanges utilizing flyovers in areas requiring high-flow arterial highways;
- Providing signal synchronization;
- Maximizing the use of Intelligent Transportation Systems;
- Coordination with SANBAG and local cities the development of traffic management centers (TMC) and traffic operation centers (TOCs);
- Establishing of no-parking zones;
- Limiting peak hour turning movements;
- Blocking or dead-ending of existing access roads to main highways;
- Establishing of one way streets;
- Limiting truck traffic on certain roads and at specified hours;
- Requiring all residential development proposals adjacent to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors to be designed so that direct access from the private property to the roadway will not be needed;
- Controlling lot size frontage to limit access;
- Developing minimum separation distances between access points;
- Accommodating exclusive transit facilities within new roads or those planned for improvement; and
- Developing design standards that will establish a minimum distance from intersections to any curb-cut.

Mitigation TR-16
The County shall limit, where feasible, access along all roads intersecting Major and Secondary Highways for a distance of 600 feet from the centerline of said Highways to the maximum extent possible.

Mitigation TR-17
The County shall 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. Bicycle lanes and sidewalks shall be installed on existing and future roadways, where appropriate and as funding is available

Mitigation TR-18
The County shall 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.

Mitigation TR-19
The County shall adopt a fee program consistent with the requirements of SANBAG's Nexus Study and Measure I. The County shall work with SANBAG to allocate Measure I funds to projects in the County on the Nexus Study project list and the Measure I expenditure plan.

5. SIGNIFICANT UNMITIGATED IMPACTS

Development of the land uses permitted by the General Plan will result in additional traffic volume on roadways not under County jurisdiction. Together with existing traffic and traffic resulting from growth elsewhere in Southern California, this traffic will result in operating conditions that do not meet the standards of the responsible jurisdictions. The County will work with regional agencies to mitigate the traffic impacts of growth, but it is not able to ensure the mitigation of traffic impacts outside its jurisdiction. Therefore, these impacts remain significant and unmitigated.

P. UTILITIES AND SERVICE SYSTEMS

1. SETTING

Water

The county's domestic water sources are supplied through both local and imported water. The county's geographic challenges, which have impacts on elements throughout the updated General Plan, also impact water sourcing and distribution. For the entire county it is estimated that, on average, 85% of the domestic water is supplied by local sources with the balance of 15% is imported purchased water. There are supply percentage differences depending on geographic area.

Imported water is primarily purchased from the Metropolitan Water District of Southern California and the State Water Project (the California Aqueduct) as a supplemental source to local water supplies. While Metropolitan Water District of Southern California distributes their water through local pipelines, there are also three state Water Project contractors and one sub-contractor in the county. They are:

- Crestline – Lake Arrowhead Water Agency;
- Mojave Water Agency;
- San Bernardino Valley Municipal Water District (SBVMWD); and
- Inland Empire Utilities Agency, which is a member agency or subcontractor of Metropolitan Water District of Southern California.

These four agencies are the largest of the water supplier/distribution agencies. Table IV-P-1 shows the sources of these wholesalers. There are also approximately 400 small source providers including County Service Areas and Districts, private mutual water companies and single use water sources. The information from these smaller agencies and districts is especially significant for the Community Plans. Table IV-P-2 lists the major service purveyors by cities and Community Plan areas. It should be noted, however, that this list is not comprehensive in that there are many small private water suppliers throughout the county that are not assessed in this DEIR.

The factors that are used to compare use and supply are not consistent throughout the county. Each of the three regions --- Valley, Mountains and Desert --- has varying uses and supplies that are specific to that portion of the county.

Table IV-P-2 lists San Bernardino County water providers known at the time of this report. The status of Urban Water Management Plans (URMP) are shown for water providers which, at the time of the year 2000 summary report to the legislature, had approved URMPs. Water providers which were not listed in the year 2000 report are shown as "No Status Reported". The most recent URMP summary report for 2005 was not available at the time of this report.

According to the Metropolitan Water District of Southern California, total water consumption by customers in the county increased approximately 15% from 1990 to 2000; during the same period, the county's resident population increased from 1,418,380 to 1,709,434 or 20.5%. For the same period, agriculture water use increased by approximately 28% (switching from dry land farming to specialty irrigated crops), and municipal and industrial use increased by 13%. The service area is primarily the urban portion of the county. Also see the Circulation and Infrastructure Background Report (Appendix D).

There are also three other types of water supplier/distributors in the county: the CSAs and Special Districts and the Southern California Water Company (SCWC). There are eight SCWC systems within San Bernardino County focusing on the Mountain and Desert Regions.

a) Valley Region

The Valley Region is serviced by 35 water purveyors (suppliers and distribution) and approximately 20 small single sources. There are three primary water suppliers for this region including SBVMWD, Inland Empire Utilities Agency, and the Metropolitan Water District. For more details regarding water supply in the Valley Region refer to Circulation and Infrastructure Background Report prepared for this project.

b) Mountain Region

In the Mountain Region, there are approximately 20 water purveyors. This number does not include approximately 60 single use water sources in this region, many of which are resident church and youth camps. The primary water wholesalers include Crestline – Lake Arrowhead Water District and the Big Bear Lake Department of Water and Power. Working in conjunction with these agencies are three large retail supplier/distributors including Crestline Village Water District, Lake Arrowhead Community Services District (CSD) and Running Springs Water District. Each of these agencies has documented a steady growth in water usage and is involved with programs for both water supply and conservation. There are also many other small to moderate sized water companies that provide services for various mountain communities. For more details regarding water supply in the Mountain Region, refer to Circulation and Infrastructure Background Report prepared for the update of the County General Plan.

c) Desert Region

The Desert Region is comprised of 41 water purveyors and approximately 120 privately owned single sources. Most of the single sources in the rural portions of the Desert Region are for commercial businesses or private properties. The Mojave Water Agency is the primary water basin agency, but there are also water districts and CSDs that provide distribution services for water supplies. For more details regarding water supply in the Desert Region, refer to Circulation and Infrastructure Background Report.

Wastewater

Table IV-P-3 provides a list of sewer agencies present in San Bernardino County that offer wastewater treatment for residents.

a) Valley Region

The Valley Region of the County is the location for most of the public wastewater collection/treatment facilities. These facilities are all within the Santa Ana Regional Water Board jurisdiction. These facilities include: Inland Empire Utilities Agency (various locations), Rialto, Colton, San Bernardino, Redlands, Yucaipa Valley Water District facilities, and Lytle Creek.

b) Mountain Region

In the Mountain Region, regional treatment facilities include Crestline Sanitation District, Running Springs County Water District, Lake Arrowhead CSA, Lytle Creek CSA, and the Big Bear Area Regional Wastewater Agency. The sewering agencies that provide the infrastructure to these treatment facilities include: Big Bear Regional Wastewater Agency, Crestline Sanitation District, Lake Arrowhead CSD, Lytle Creek CSA, and CSA 79 (Green Valley Lake).

c) Desert Region

Most residential properties in the Desert Region are on private sewage treatment systems (septic tanks). However, there are limited service sewering agencies in the region including: Victor Valley Regional Wastewater Agency, City of Adelanto, and the City of Barstow.

Solid Waste

The County of San Bernardino Solid Waste Management Division (SWMD) is responsible for the operation and management of the County of San Bernardino's solid waste disposal system, which consists of six regional landfills, eight transfer stations, and five community collection centers. The County contracts with Burrtec Waste Industries for disposal site operations and maintenance. The County is responsible for solid waste management in the unincorporated County areas.

San Bernardino County generated approximately 1.9 million tons (5,200 tons each day) of solid waste in 2002 (see Table IV-P-4). Diversion rates for the 25 jurisdictions within San Bernardino County ranged from 33% to 65% in 2000; the unincorporated San Bernardino County had a diversion rate of 43%. While the diversion rate for the state has consistently increased over the years, diversion rate for the unincorporated San Bernardino County shows a cyclical pattern. The rate was high in the years 1995 and 1996; dropping in 1997 and 1998, and rising back to its original levels in the year 2000. San Bernardino County has nine permitted landfills located in the Valley and the Desert Regions (six of which are County-owned), and 21 transfer stations. All nine landfills and 13 transfer stations owned and operated by the County have drop-off sites for recyclable materials. Permitted disposal capacity is available at the Barstow, California Street, Colton, Fort Irwin, Landers, Marine Corps Air Ground Combat Center, Mid-Valley, San Timoteo, and Victorville Landfills.

The County of San Bernardino Solid Waste Management Division is currently working on the expansion of both the Barstow and Victorville Landfills. These landfill expansion projects will provide the County with an additional 59.7 million tons of solid waste disposal capacity. Also, the City of Redlands is in the process of expanding the California Street Landfill by 4.6 million tons.

The combined effect of the additional disposal capacity from the Barstow and Victorville expansions, plus additional capacity from the expansion the City of Redlands has undertaken at the California Street Landfill, will give the County a minimum of 20 additional years of capacity.

Recycling Market Development Zones

The Recycling Market Development Zone program of California Integrated Waste Management Board combines recycling with economic development to fuel new businesses, expand existing ones, create jobs, and divert waste from landfills. San Bernardino County has four Recycling Market Development Zones: the Agua Mansa Recycling Market Development Zone, the Chino Valley Recycling Market Development Zone, the Mojave Recycling Market Development Zone, and the San Bernardino County/Kaiser Recycling Market Development Zone.

Natural Gas

The Southern California Gas Company (SCG) provides natural gas service to the Valley region, the Morongo Basin, and portions of the Mountains region. According to SCG, the service provider supplied approximately 6% more gas over the past 10 years, mostly from an increase in demand from industrial users within the County. Southwest Gas Corporation (Southwest) provides natural gas service to the High Desert area, Victor Valley, Barstow, portions of the North Desert area, and the Bear Valley communities. Southwest reports natural gas supplied to the County increased by approximately 50% from 1993 to 2002, mostly from an increase in demand from the transportation sector.

Figure 2-26 of the Circulation and Infrastructure Background Report, prepared for this project, shows that SCG, Pacific Gas and Electric (PG&E), Kern River, Mojave, and Kern Mojave are the major natural gas pipelines serving San Bernardino County, although SCG provides the natural gas services to San Bernardino County. The figure also shows the service areas of the major gas pipelines.

Electricity

The major electricity service provider to San Bernardino County is the Southern California Edison (SCE) which is part of the Pacific Intertie system (Figure 2-27 of the Circulation and Infrastructure Background Report). The Pacific Intertie system generates electricity throughout 10 western states and supplies electricity to the County, and distributes electricity generated by the County anywhere throughout the system. SCE provides electricity service to almost all of San Bernardino County, except for a few small pockets of County land. SCE's transmission system includes 500 kilovolts (kV) and 230 kV facilities that operate as a network and have been transferred to the Independent System Operator for operational control. Although a limited number of SCE's 115 kV, 66 kV, and 55 kV submission facilities also operate as a network and have been transferred, most of these facilities are radial in nature and remain outside the Independent System Operator's operational control. Transmission and subtransmission lines feed into the distribution network serving businesses, homes, and other electric power consumers. The distribution facilities encompass lines below 55 kV. The 115-12 kV and 66-12 kV substations provide a source for distribution lines and the smaller 12-4 kV substations. The electric power is distributed from the substations to individual customers through 33 kV and lower voltage distribution lines.

The City of Needles, Bear Valley Electric Service, and the City of Colton are the electricity service providers to the pockets of County land SCE does not service (Figure 2-27 of the Circulation and Infrastructure Background Report). The City of Needles provides electricity service to more than 4,000 customers. The City of Needles provides a total of more than 79,000 megawatts per hour of electricity to its customers. The Bear Valley Electric Service

provides electric power to more than 20,000 customers in the communities surrounding Big Bear Lake. These communities are City of Big Bear Lake, Big Bear City, Fawnskin, Erwin Lake, Moonridge, Sugarloaf, Lake Williams, Baldwin Lake, and Camp Radford.

The City of Colton provides electricity service to more than 17,500 customers. The City of Colton supplied approximately 299,000 megawatts per hour of electricity to its customers in the year 2001. Other electricity utilities for the County of San Bernardino include Southern California Water and Electric and the Los Angeles Department of Water and Power.

Electricity Consumption and Customers

Rapid growth in the County of San Bernardino has resulted in an increase in the demand for and development of energy services. Table IV-P-5 shows the electricity consumption for San Bernardino County in the year 2000. Residential customer accounts form approximately 90% of the customer base, while non-residential customers form the remaining 10%. However, non-residential customers consume 70% of the total supplied electricity and residential customers consume 30% of electricity.

Renewable Energy Sources

There are many power resources available to San Bernardino County including Wind, Geothermal, Biomass, Solar and Landfill Gas. Wind and solar are the two renewable energy resources identified by the California Energy Commission for San Bernardino County.

San Bernardino County is home to most of the concentrating solar power plants currently installed in California. These plants are located in one general area — the Southeast desert. The proposed concentrating solar power projects are also located in San Bernardino County. There are few other existing renewable sources of power in the County at this time, but there are many proposed projects. Table IV-P-6 provides a list of the installed renewable capacity locations in San Bernardino County.

The Hydroelectric Sites located in San Bernardino County include:

- WFA Station 1;
- Ontario 2;
- Sierra;
- Lytle Creek;
- Ontario 1;
- Mill Creek 1;
- Monte Vista WD;
- Fontana;
- Mill Creek 3;
- Santa Ana 3; and
- Santa Ana 1 Etiwanda.
- Solar
- SEGS I, II, IX, and VIII (Sunray Energy Inc and Luz Solar Partners Ltd.).
- San Bernardino Metropolitan Water District Sites 2100, 1913, and 1720;

Telecommunications

San Bernardino County has oversight for landline telephone service providers through an application process that is required prior to approval. Based on information from the San Bernardino County Planning Department, major telecommunication facilities currently serving San Bernardino County include the following (personal communication 2003):

- Air Touch Cellular;
- American Tower Corp.;
- AT&T;
- Cingular Wireless;
- Cox Communications;
- MCI;
- Nextel Communications;
- Sprint Wireless; and
- Verizon Wireless.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Utility/Service System, if the project would cause any of the following effects:

- *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board*
- *Require or result in the construction of new water or 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*
- *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed*
- *Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments*
- *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs*
- *Comply with federal, state, and local statutes and regulations related to solid waste*

3. IMPACT ANALYSIS

Water

The critical water resource issues facing the County of San Bernardino, as a whole, are a reflection of those facing each individual water agency, albeit in varying degrees. These issues will only intensify as the County's population increases.

a) Valley Region

Impact UT-1
Direct use water supply sources include groundwater, imported water, surface water and recycled water. In general, the water supply under the Metropolitan Water District's apportionment of Colorado River has been available in every year since 1939, and can reasonably be expected to be available over the next 20 years. By the year 2050, reclaimed water is expected to surpass surface water and represent the most significant water source for recharge purposes.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in section 4, below.

b) Mountain Region

Impact UT-2
Both the Crestline – Lake Arrowhead Water District and the Big Bear Lake Department of Water and Power have documented a steady growth in water usage and are involved with programs for both supply and conservation. The two primary challenges for this region are periodic drought and the population growth due to the shift from a higher percentage of part-time residents to full-time residents. The Lake Arrowhead Community Services District currently has a capital improvement program of $7.5 million planned in the next five years for water treatment and supply facilities.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in section 4, below.

c) Desert Region

Impact UT-3
With an increase in municipal consumption, golf courses, and industrial consumption, water demands will increase in the Desert Region. Agricultural consumptive use in the Mojave Basin can either stay consistent, or, under the Mojave Basin Area Judgment, decrease by 5% each year until balance is achieved between production rights and available supply as required by the Judgment.

This impact can be fully mitigated by the adoption of certain mitigation measures presented in Section 4, below.

Wastewater

a) Valley Region

Impact UT-4
With most of the population centralized in the Valley Region, sewer mainlines will continually need to be installed and dedicated to the District as the population increases.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

b) Mountain Region

Impact UT-5
Capacity for the Mountain Region varies. Lytle Creek and Lake Arrowhead CSD's treatment plants have capacity for growth. With the change in population due to part-time residents becoming full-time residents, other sewering agencies will need to move forward with improvement projects for increased capacity.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

c) Desert Region

Impact UT-6
A large percentage of the homes in the Desert Region rely heavily on private sewage treatment systems (i.e., septic tanks). These septic systems can pollute groundwater or surface waters with pathogens and nitrates, particularly if improperly maintained or operated. Also, the Water Quality Control Boards prohibit the installation of new septic tanks and leach fields in some areas of the County.

Proceeds from the sale of recycled water will be used to offset the monthly cost of wastewater treatment. By 2020, the flow of wastewater from the area is expected to more than double from today's 9.1 million gallons per day to a total of 18.6 million gallons per day. The development of subregional reclamation facilities will also significantly reduce the need to expand the main sewer system connecting Victor Valley Water Reclamation Agency (VVWRA) with the Victor Valley. The Hi-Desert Water District also has plans to build a wastewater treatment plant with related transport infrastructure.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Solid Waste

Impact UT-7
Development will increase the amount of waste requiring disposal at landfills. Estimates show that San Bernardino County has sufficient disposal capacity for the next 29 years. The County can further optimize on this capacity by increasing its diversion rate and reducing the per capita waste generation. Solid waste management is essential for the County because, if mismanaged, it can have damaging environmental effects on ground water, air quality, and public health.

This impact can be fully mitigated though the adoption of certain mitigation measures presented in Section 4, below.

Natural Gas

Impact UT-8
With the forecasted rise in population in the County of San Bernardino, the need for additional or extended natural gas providers will increase.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Electricity

Impact UT-9
With the forecasted rise in population in the County of San Bernardino, the need for additional or extended electricity service providers will increase.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

Telecommunications

Impact UT-10
With the forecasted rise in population in the County of San Bernardino, the need for additional telecommunication infrastructures will increase.

This impact can be fully mitigated through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

The following goals, policies, and programs are provided in the update to the County General Plan to reduce the impact of future growth of the County on utility and service systems.

Mitigation UT-1
The County shall ensure the quality of life by pacing future growth with the availability of public infrastructure.

Mitigation UT-2
The County shall ensure that new development pay a proportional 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 may be used.

Mitigation UT-3
The County shall utilize Fiscal Impact Analysis to determine the County's ability to provide adequate services and facilities through the imposition of conditions of approval, fees, special taxes, financing mechanisms, etc., on new development. The Fiscal Impact Analysis will provide guidance to County staff and County decision-makers on the project-specific requirements that may be placed on that individual development project.

Mitigation UT-4
The County shall ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of existing and future County residents.

Mitigation UT-5
The County shall ensure that adequate facility and service standards are achieved and maintained through the use of equitable funding methods.

Mitigation UT-6
The County shall equitably distribute throughout the County new public facilities and services that increase and enhance community quality of life.

Water

Mitigation UT-7
The County shall 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.

Mitigation UT-8
The County shall apply federal and state water quality standards and wastewater discharge requirements in the review of development proposals that relate to type, location and size of the proposed project, for surface and groundwater to safeguard public health.

Mitigation UT-9
The County shall assist in the development of additional conveyance facilities and use of groundwater basins to store surplus of imported water.

Mitigation UT-10
The County shall approval of new development will be contingent on the availability of adequate and reliable water supplies and conveyance systems, consistent with coordination between land use planning and water system planning.

Mitigation UT-11
The County shall monitor future development to ensure that sufficient local water supply or alternative imported water supplies can be provided.

Wastewater

Mitigation UT-12
The County shall ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.

Mitigation UT-13
The County shall support the local wastewater/sewering authorities in implementing wastewater collection and treatment facilities when and where required by the appropriate RWQCB and County Department of Environmental Health and Safety.

Mitigation UT-14
In the Inland Valley Development Agency Redevelopment Area, the County shall permit the construction of a new water treatment plans or connection to existing and/or proposed wastewater collection and treatment facilities rather than connection to nearby city wastewater collection and treatment facilities.

Mitigation UT-15
Because public health and safety are endangered through the establishment of urban uses without adequate sewer service, the County shall seek to direct urban development in areas that are served by domestic sewer systems and away from areas in which soils cannot adequately support septic tank/leach field systems.

Solid Waste

Mitigation UT-17
The County shall ensure a safe, efficient, economical and integrated solid waste management system that considers all waste generated within the County, including, agriculture, residential, commercial and industrial wastes, while recognizing the relationship between disposal issues and the conservation of natural resources.

Mitigation UT-18
The County shall utilize a variety of feasible processes, including source reduction, transfer, recycling, landfilling, composting and resource recovery to achieve an integrated and balanced approach to solid waste management.

Mitigation UT-19
The County shall seek federal and state funds for projects utilizing resource and material recovery processes.

Mitigation UT-20
The County shall continue recycling operations at County landfills; expand recycling operations to other landfills or resource recovery facilities.

Mitigation UT-21
Where feasible, the County shall explore the feasibility and environmental impacts of reopening inactive landfills where there is useful capability remaining.

Mitigation UT-22
The County shall assist the private sector wherever possible in developing methods for the reuse of inert materials (concrete, asphalt and other building wastes) that currently use valuable landfill space.

Mitigation UT-23
The County shall continue to map the precise location of all waste sites (existing, inactive and closed) on the County's automated mapping system and create a database with information on air, soil and water contamination and the type of wastes disposed of at each site.

Mitigation UT-24
The County shall carefully plan and oversee the siting of solid waste disposal facilities to ensure equitable distribution of these facilities throughout the County, and protect the viability of waste disposal sites from encroaching on incompatible land uses.

Natural Gas

Mitigation UT-25
The County shall provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas.

Electricity

Mitigation UT-26
The County shall provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas.

Telecommunications

Mitigation UT-27
The County shall improve its telecommunications infrastructure and expand access to communications technology and network resources to improve personal convenience, reduce dependency on non-renewable resources, take advantage of the ecological and financial efficiencies of new technologies, maintain the County's economic competitiveness, and develop a better-informed citizenry.

Mitigation UT-28
The County shall work with telecommunications industries to provide a reliable and effective network of facilities that is commensurate with open space aesthetics and human health and safety concerns.

5. SIGNIFICANT UNMITIGATED IMPACTS

All utility and service system impacts are fully mitigated.

Table IV-P-1. Primary Water Wholesalers in San Bernardino County

Agency	Source of Water	% of Total Water Supply
Metropolitan Water District of Southern California (MWDSC)	Colorado River State Water Project	50% 50%
Crestline – Lake Arrowhead Water Agency	State Water Project	100%
San Bernardino Valley Municipal Water District	State Water Project Surface Water Local Wells	19% 23% 58%
Inland Empire Utility Agency	MWDSC Local Wells Recycled / Treated Water	30% 65% 5%

Table IV-P-2 San Bernardino County Water Providers

City/Community	Water District	Approved UWMP
Adelanto	City of Adelanto	Approved
Apple Valley	Apple Valley Ranchos Water District	Approved
	Juniper Riveria Water District	No Status Reported
	Southern California Water Company	No Status Reported
	Apple Valley Foothill County Water District	No Status Reported
	Apple Valley Heights County Water District	No Status Reported
	Mariana Ranchos County Water District	No Status Reported
	Thunderbird County Water District	No Status Reported
Arrowbear	Arrowbear Park County Water District	No Status Reported
Baldy Mesa	Baldy Mesa Water District	Approved
Baker	Community Services District	No Status Reported
Barstow	Southern California Water Company	Approved
City of Big Bear Lake	City of Big Bear Lake DWP	Approved
	Big Bear City Community Services District	Approved
Big River	West Valley Water District	No Status Reported
Bloomington	Fontana Water Company	No Status Reported
	Marigold Mutual Water Company	No Status Reported
	West Valley Water District	No Status Reported
Cedar Glen	Cedar Pines Park Mutual Water Company	No Status Reported
Cedar Pines	City of Chino Water Department	Approved
Chino	Chino Basin Water Conservation District	No Status Reported
	City Utilities Department	No Status Reported
Chino Hills	City of Chino Hills	Approved
Colton	Terrace Water Company	No Status Reported
	City of Colton Water	Approved
Crestline	Crestline Village Water District	Approved
	Valley of Enchantment Mutual Water District	No Status Reported
	Crestline – Lake Arrowhead Water District	No Status Reported
	Cedar Pines Park Mutual Water Company	No Status Reported
Daggett	Daggett Comm. Service District Water Service	No Status Reported
Fontana	Fontana Water Company	No Status Reported
	Crawford Canyon Water	No Status Reported
Forest Falls	Fallsvale Service Company	No Status Reported
Grand Terrace	Riverside Highland Water Company	Approved
Green Valley	Green Valley Mutual Water Company	No Status Reported
Hesperia	Hesperia Water District	Approved
Highland	East Valley Water District	Approved
	Southern California Water	No Status Reported
Homestead Valley	Hi- Desert Water District	Approved
	Bighorn-Desert View Water Agency	No Status Reported
Joshua Tree	Joshua Basin Water District	Yes
	Joshua Tree Lake RV and Campground	No Status Reported
Landers	Bighorn Desert View Water Agency	No Status Reported
Lake Arrowhead	Lake Arrowhead Community Services District	Approved
	Arrowhead Villas Mutual Water Company	No Status Reported
	Alpine Water Users Association	No Status Reported
	Sky Forest Municipal Water District	No Status Reported
	Strawberry Lodge Mutual Water	No Status Reported
	City of Big Bear – Rim Forest	No Status Reported
Loma Linda	City of Loma Linda	Approved

City/Community	Water District	Approved UWMP
Lucerne Valley	Community Service Area 29	No Status Reported
	Stewart Water Company, Inc.	No Status Reported
Lytle Creek	Lytle Creek Water Company	No Status Reported
	West Valley Water District	No Status Reported
Montclair	Monte Vista Water District	Approved
Morongo Valley	Morongo Valley Community Service District	No Status Reported
	CSA 70 W-3, 70-4, 70F	No Status Reported
Needles	City of Needles	No Status Reported
Muscoy	Muscoy Mutual Water Company	No Status Reported
Newberry Springs	Newberry Springs CSD	No Status Reported
Ontario	City of Ontario Power and Water	Approved
Oak Glen	Oak Glen Domestic Water Company	No Status Reported
Oak Hills	County Service Area 70L	No Status Reported
Phelan	Sheep Creek Water	No Status Reported
	County Service Area 70L	No Status Reported
Pinon Hills	County Service Area 70L	No Status Reported
Rancho Cucamonga	Cucamonga County Water District	Approved
Redlands	Redlands Municipal Water	Approved
Rialto	City of Rialto	No Status Reported
	West San Bernardino County Water District	Approved
Running Springs	Running Springs Water District	No Status Reported
	Rim Forest Water	No Status Reported
San Bernardino	San Bernardino City Municipal Water	Approved
	San Bernardino Valley Conservation District	No Status Reported
Trona	Searles Domestic Water Company	No Status Reported
	Indian Wells Valley Conservation Water District	Approved
Twentynine Palms	Twentynine Palms Water District	Approved
Twin Peaks	Alpine Water Users Association	No Status Reported
	Strawberry Lodge Mutual Water Company	No Status Reported
Upland	City Water Department	Approved
Victorville	Victor Valley County Water District	Approved
	Victorville Water District	No Status Reported
Yermo	Yermo Water Company	No Status Reported
Yucaipa	Yucaipa Valley Water District	Approved
	Western Heights Water Company	No Status Reported
	South Mesa Water Company	No Status Reported
Other Purveyors		
Crestline Lake Arrowhead Water Agency	Water Wholesaler (limited retail sale)	No Status Reported
Inland Empire Utilities District	Water Wholesaler	Approved
Metropolitan Water District of Southern California	Water Wholesaler	Approved
San Bernardino Valley Municipal Water District	Water Wholesaler	No Status Reported

Table IV-P-3. San Bernardino County Sewer Service Providers

City/Community	Sewer District
Adelanto	Victor Valley Water Reclamation Agency
Apple Valley	Victor Valley Water Reclamation Agency
Arrowbear	Lake Arrowhead Community Services District
Barstow	City of Barstow - sewer Barstow Heights CSD
Big River	Big River CSD
Chino	Inland Empire Utilities - sewer
Chino Hills	Inland Empire Utilities - sewer
City of Big Bear Lake	Big Bear Area Regional Wastewater Agency
City of Big Bear Valley	Big Bear Area Regional Wastewater Agency
Colton	City of Colton
Crestline	Crestline Sanitation District
Fontana	City of Fontana - sewer Inland Empire Utilities - sewer
Grand Terrace	City of Grand Terrace - sewer
Green Valley	Green Valley Service Area 79 -sewer
Hesperia	City of Hesperia
Highland	East Valley Water District
Lake Arrowhead	Lake Arrowhead Community Services District
Loma Linda	City of Loma Linda
Lytle Creek	Lytle Creek CSA
Montclair	Inland Empire Utilities - sewer
Newberry	Newberry Springs CSD
Ontario	Inland Empire Utilities - sewer
Rancho Cucamonga	City of Rancho Cucamonga
Redlands	City of Redlands Municipal Utilities
Rialto	City of Rialto - sewer
Running Springs	Running Springs Water District
San Bernardino	SB City Water Reclamation - sewer East Valley Water District - SD
Upland	Chino Basin Water District - sewer Inland Empire Utilities - sewer
Valley of Enchantment	Crestline Sanitation District
Victorville	Victor Valley Sanitation District - sewer Baldy Mesa Water District - SD
Yucaipa	Yucaipa Valley Water District -sewer

Source: Circulation and Infrastructure Background Report prepared for the update of the County General Plan.

Table IV-P-4. Solid Waste Disposal Trend 1995-2002, San Bernardino County

Year	Total Waste Produced	Total Waste Disposed	%	In-State Disposal	Exported Out-of-State	%
1995	1,634,484	1,406,397	86.05	1,628,696	5,788	0.4
1996	1,662,884	1,373,608	82.60	1,657,569	5,316	0.3
1997	1,614,192	1,362,641	84.42	1,607,678	6,514	0.4
1998	1,691,378	1,230,977	72.78	1,684,567	6,810	0.4
1999	1,688,062	1,033,066	61.20	1,682,080	5,981	0.4
2000	1,768,527	1,099,425	62.17	1,762,422	6,104	0.3
2001	1,895,484	1,188,700	62.71	1,888,590	6,894	0.4
2002	1,937,805	1,412,050	72.87	1,931,579	6,226	0.3

Source: California Integrated Waste Management Board (www.ciwmb.ca.gov)

Table IV-P-5. 2000 Electricity Consumption, San Bernardino County

Customer Type	Number of Accounts	%	Annual Average Kilowatt Hours (million)	%
Residential	547,654	89.1	3,774	31.8
Non-Residential	67,131	10.9	8,093	68.2
Total	614,785	100.0	11,867	100.0

Source: California Energy Commission, www.energy.ca.gov

Table IV-P-6. Renewable Capacity in San Bernardino County in Megawatts (MW)

	Biomass	Digester gas	Geothermal	Hydro	Landfill gas	MSW	Solar	Wind	Total
San Bernardino County	-	-	-	40	-	-	204	-	244

Source: URS Corporation

CHAPTER V.
ALTERNATIVES TO THE PROPOSED PROJECT

SAN BERNARDINO COUNTY
2006 GENERAL PLAN PROGRAM
SCH# 2005101038

Section 15126.6 of the CEQA Guidelines states that "an EIR shall describe a range of reasonable alternatives to 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...there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."

This Chapter presents the comparative evaluation required by CEQA. Following is a qualitative comparison of environmental impacts between each alternative, as compared to the Preferred Project that is analyzed in Section IV of this EIR.

A. ALTERNATIVE NO. 1 – NO PROJECT ALTERNATIVE (1989 GENERAL PLAN AS AMENDED)

This Alternative would retain the 1989 General Plan, as amended but would not include the Community Plans developed as part of the proposed project, nor would the County Development Code be updated. This Alternative would allow for a population of about 415,000 people in County unincorporated territory.

While the current 1989 County General Plan is not projected to 2030 as the Proposed General Plan Update is, the assumption is made that the SCAG Trend Projection represents the local city general plans, including the County's General Plan. The overall San Bernardino County projections have been provided by Meyer Mohaddes Associates at a Traffic Analysis Zone (TAZ) level that includes both the incorporated and unincorporated areas of the County. While it makes only a small difference in the overall projections, it should be noted that the SCAG TAZ projections do not include the outlying Desert Planning Area that encompasses the City of Needles. Further, the projections based on the city general plans were provided by SANBAG and these projections were used to guide the development of the Congestion Management Program (CMP) for the region.

In summary, the No-Project Alternative would delay the significant physical environmental effect of the propose update of the County General Plan, but the anticipated significant effect on air quality, noise and circulation and traffic would likely occur at a greater pace with about the same magnitude as the County continues to grow under the 1989 General Plan. For this reason, the No Project Alternative is not superior to the proposed project from an environmental perspective.

B. ALTERNATIVE NO. 2 – REDUCED DEVELOPMENT ALTERNATIVE

Under Alternative No. 2 the County General Plan would only be updated to provide for the growth of the County by 200,000 people, not the approximately 415,000 people that would be accommodated by the proposed update of the General Plan. General Plan goals and policies would also be updated as they would as part of the proposed project. For example, the land use intensities (densities and floor area ratios) of the Land Use/Zoning Districts would be reduced, with a corresponding reduction in the Maximum Population Density Averages. This Alternative would also include the adoption of the 13 Community Plans prepared as part of the update to the General Plan. The County's Development Code would also be updated as part of this Alternative to implement the updated General Plan.

Generally, the impacts created by this Alternative would be less than the proposed update of the General Plan since only half the future population would be accommodated within the County by the Alternative.

In summary, when comparing the significant effects of the proposed project to Alternative No. 2, impacts to agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, mineral resources, noise, population and

housing services and utilities, recreation, and traffic and circulation are expected to be reduced given the overall reduction in the scale of the growth provided by the updated General Plan. Traffic and related impacts would be approximately half of those under the proposed update of the General Plan. Although these impacts would be less than the impacts from the proposed project, the traffic increase that would occur with this Alternative would still require the installation of traffic improvements throughout the County. Also, the vehicle emissions would still surpass the threshold set by the SCAQMD and would still be considered a significant air quality impact, although to a lesser degree than the proposed project. For the above reasons, the Reduced Intensity Alternative is superior to the proposed project from an environmental perspective.

C. ALTERNATIVE NO. 3 – FUTURE GROWTH IN CITIES SPHERE-OF-INFLUENCE ALTERNATIVE

Under Alternative No. 3 the County General Plan would be updated to accommodate the growth in the County by approximately 409,000 people. However, all the new growth in the County would only occur within the adopted spheres-of-influence of the cities within the County. This Alternative includes the revision to the General Plan goals and policies, although the goals and policies would be somewhat different than the goals and policies included as part of the proposed update to the General Plan since all new growth in the County would only occur within city spheres-of-influence. For example, Goals LU-6 and LU-9 and their implementing policies would probably be strengthened to direct virtually all new urban growth into the Spheres of Influence of existing cities. Similarly, many of the Land Use Goals and Policies would need to be rewritten to discourage most, if not all, new urban growth from occurring in the Mountain and Desert Regions, unless they were located within existing Spheres of Influence. This Alternative would also include the Community Plans developed as part of the proposed update of the County General Plan. This Alternative also includes the update of the County Development Code, as would the proposed update of the General Plan.

Generally, the impacts created by this Alternative would be different that all the other proposed alternatives to the General Plan, since accommodating an additional 414,000 people in the County would only occur within the sphere-of-influence in the cities in the County, which would greatly increase the building densities in these areas with attendant impacts that would be created by increasing density in an area. This alternative would create greater aesthetic, biological resource, land use, noise services and utility, recreation and transportation and traffic impacts than the proposed update of the General Plan would. For these reasons, the Future Growth in Cities Sphere-of-Influence Alternative is not superior to the proposed update of the General Plan.

D. COMPARISON OF THE ALTERNATIVES

Table V-1 compares, in a qualitative relative manner, the environmental impacts of each of the three alternatives to the preferred project, which is the 2006 General Plan.

The coding is as follows:

+	Impacts are more adverse compared to the proposed General Plan Update Project.
—	Impacts are less adverse compared to the proposed General Plan Update Project.
O	Impacts are the same as the proposed General Plan Update Project.

Table V-1. Relative Comparison of Environmental Impacts Among General Plan Alternatives

IMPACTS	ALT #1 EXISTING GENERAL PLAN	ALT #2 REDUCED POPULATION PROJECT	ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE	COMMENTS
Potential Aesthetic Impacts	+	—	+	Alternatives No. 1 and 3 would create greater impacts on aesthetics than the proposed project or Alternative 2 would since these Alternatives would provide for more development in the unincorporated County area, impacting more scenic highways and vistas. Alternative No. 2 could create fewer aesthetic impacts since slightly less than half the development would be allowed by this Alternative which would only occur within city sphere–of-influence areas, adjacent to exiting land uses in these areas.
Loss of Agricultural Resources	+	—	O	Alternatives No. 1 and 3 would create similar impacts on agricultural resources since these Alternatives would allow for similar amounts of development as the proposed project. Alternative No. 2 would create less of an impact on these resources since less than half of the amount of development would occur than would if the proposed General Plan update were approved. Also, new land uses would only be developed in city's sphere-of-influence areas that are generally located close to existing cities in the County and away from areas used for agricultural production.
Degradation of Air Quality	+	—	+	Alternative No. 1 and 3 would create emissions that would degrade the air quality in the County by about the same amount as the proposed project would since these alternatives would allow similar amounts of new development as the proposed project. Alternative No. 2 would degrade the air quality of the County less than Alternatives No. 1 and 3 since less than half the new development would be allowed by this Alternative, reducing the amount of air emissions created by development allowed under this Alternative. Development allowed by Alternative No. 2 would still exceed state and federal air standards since the County is in currently in non-compliance for ozone and PM10 and any new development would make compliance with these standards more difficult.
Loss of Biological Resources	+	—	+	Alternative No. 1 would create the greatest impact on biological resources since this Alternative allows for more development in the County than the proposed project would. Alternative No. 3 would allow slightly less development than Alternative No. 1 so fewer biological resources would be impacted by new development allowed by this Alternative. Alternative No. 2 would create the least amount of impact on these resources since less than half the development would occur under this Alternative. Also, development that would occur as part of Alternative 2 would occur in city's sphere-of-influence areas that are close to existing cities where biological resources are not as abundant as they would be if development were to occur throughout the County
Potential Disturbance of Cultural Resources	+	—	—	Alternative No. 1 would result in disturbing more cultural resources (archeological, historic and paleontological resources) since more development would occur under this Alternative that potentially could disturb these resources than would under the proposed project. Development allowed by Alternative No. 3 would disturb slightly less land than the development allowed by Alternative 1 so there is a potential that fewer cultural resources being disturbed by Alternative 3. Alternative No. 2 would disturb the fewest cultural resources since less than half the development would occur than allowed by the proposed project.

IMPACTS	ALT #1 EXISTING GENERAL PLAN	ALT #2 REDUCED POPULATION PROJECT	ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE	COMMENTS
				Also, new development allowed by Alternative 3 would only occur within city's spheres-of-influence closer to existing cities where it is anticipated that there would be fewer undiscovered cultural resources.
Geology and Soil Concerns	+	—	O	Alternative No. 1 would result in more development than the proposed project would and would expose more new development and residents to exiting geology and soil conditions in the County. Alternative No. 3 would expose the same amount of new development to existing geology and soils conditions as the proposed project would since this Alternative would provide for the same amount of new development as the proposed project. Alternative No. 2 would result in the least amount of new development so it would expose the least amount of development and new residents to existing County geology and soil conditions.
Hazards and the potential Generation of Hazardous Materials	+	—	—	Alternatives 1 and 3 would expose the most new development allowed by these Alternatives to existing hazards since they would both allow almost the same amount of development as the proposed project. Alternatives No. 1 would also result in the transport, use and storage of more hazardous materials as this Alternative would allow more new development than the propose project. Alternative No. 2 would expose the least amount of new development to existing hazards in the County and generate the least amount of hazardous materials since less than half of the amount of new development would be allowed by this Alternative than by the proposed project.
Hydrology and Water Quality Concerns	+	—	+	Alternative No.1 would expose the greatest amount of new development to existing hydrology concerns in the County since this Alternative would allow more new development than the proposed project would. Alternative No. 3 would allow the same amount of new development as the proposed project would, although this development would be limited to city's spheres of influence where hydrology conditions may not be as significant as in other areas of the County. Alternatives No 1 and 3 would generate the most water quality concerns since they would allow as much new development as the proposed project would. Alternative No 2 would generate the fewest hydrology and water quality concerns because less than half of the new development would be allowed as would be by the proposed project.
Potential Changes in Land Use	O	—	O	Alternative No. 1 and 3 will create the same impacts on land uses as they would provide for about the same amount of new land use development as the proposed project would. Since Alternative No. 3 would require that new land uses be built only in city's sphere-of- influence areas, new development would have to be denser to fit in these areas than if these uses could be built throughout the County as would be the case with Alternative 1 and the proposed project. Alternative No. 2 would create the least amount of change in County land uses as this Alternative would allow less than half the new development as the proposed project would.
Loss of Mineral Resources	+	—	—	Alternative No. 1 has the greatest potential to result in impacts on mineral resources as it would allow the most new development in the County that could impact these resources. Alternative No. 3 would also impact mineral resources, although the impact would be less since new development would only occur within city's sphere-of-influence areas where it is anticipated that there would be fewer mineral resources

IMPACTS	ALT #1 EXISTING GENERAL PLAN	ALT #2 REDUCED POPULATION PROJECT	ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE	COMMENTS
				since most mineral resources are located in the Desert Planning Area and there are few cities in the desert areas where new development could occur. Alternative No. 2 would have the least impact on mineral resources since less than half the new development could take place under this Alternative as would take place as allowed by the proposed project. Since fewer areas would be developed there would be fewer impact on existing mineral resources.
Generation of Noise	O	—	O	Alternative No. 1 would generate about the same amount of noise as the proposed project since it would allow slightly more new development in the County. Alternative No. 3 would generate more noise than Alternative No.1 or the proposed project would since new land uses would be built in city's sphere-of-influence areas where development would be more dense and located closer to existing development. Alternative No. 2 would create about half the amount of noise as the proposed project since slightly less than half the new development could be built under this Alternative than would be by the proposed project.
Increase in Population and Housing	+	—	O	Alternative No. 1 would allow the County to grow by approximately 415,000 new residents, with the attendant increase in housing. This is more than would be allowed by the proposed project which would allow the County to grow by approximately 409,000 new residents and housing. Alternative No. 3 would also allow the County to grow by 409,000 new residents, but this growth would be restricted to existing city's sphere-of-influence areas, creating denser population and housing in these areas. Alternative No. 2 would create the smallest increase in new population and housing in the County since this Alternative would allow an increase of 200,000 new residents and attendant housing.
Increased Need for Public Services	+	—	O	Alternative No. 1 would result in the greatest need for new public services in the County as it would allow for the greatest amount of new development which will require more public services than are currently being provided in the County. Alternative No. 3 would create a similar need for new public services as it would allow for the same amount of new growth as the proposed project would. However, under this Alternative, new development would only be developed in city's sphere-of-influence areas that would concentrate where new services are needed. Alternative No. 2 would create the need for half the amount of new services in the County because this Alternative would only allow for half the growth in the County as the proposed project would.
Increased Demand for New Recreational Facilities	+	—	O	Alternative No. 1 would create the greatest demand on existing recreational facilities and for new recreational facilities since it would allow for the most growth in the County. Alternative No. 3 would create the same demand on existing recreational facilities and for new recreational facilities as the proposed project would, except new development would occur in city's sphere-of-influence areas, concentrating demand on existing facilities in the cities next to these areas and requiring that new recreational facilities be developed near these sphere areas. Alternative No. 2 would create the least demand on existing and new recreational facilities since this Alternative would only provide for the slightly less than half the new development in the County as the proposed project would.

IMPACTS	ALT #1 EXISTING GENERAL PLAN	ALT #2 REDUCED POPULATION PROJECT	ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE	COMMENTS
Increased Transportation & Traffic Impacts	+	—	O	Alternative No. 1 would create the biggest impacts on transportation systems and traffic within the County as this Alternative would allow for more growth in the County than the proposed project. Alternative No. 3 would also impact County transportation systems and traffic in the County at about the same extent as the proposed project would, although new growth would be concentrated in city sphere-of-influence areas which would make traffic worse in these areas of the County. Alternative No.2 would create the least amount of impact on County transportation systems and traffic since this Alternative would allow about half the growth in the County as the proposed project would. This Alternative would also require traffic improvements though out the County, but there would only be a need for about half the improvements as would be required for the proposed project.
Increased Need for Utilities & Service Systems	+	—	O	Alternative No. 1 would create a greatest need for new utility and service systems as it would allow for more growth in the County than the proposed project would. Alternative No. 3 would create about the same amount of need for new utility and services systems as the proposed project would, although the need for these utilities and services would be concentrated in existing city sphere-of-influence areas that could put more of a strain on utility and service providers to provide needed additional capacity/treatment services in these areas. Alternative No. 2 would create the least need for new utilities and service systems as the County would only grow by half as much as it would if the proposed project were selected by the County.

Source: URS Corporation

+ Impacts are relatively more adverse compared to the proposed 2006 General Plan Update Project.

— Impacts are relatively less adverse compared to the proposed 2006 General Plan Update Project.

O Impacts are relatively the same as the proposed 2006 General Plan Update Project.

CHAPTER VI.
CUMULATIVE IMPACTS

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According to Section 15130(a) of the CEQA Guidelines, "An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(c). Where a lead agency is examining a project with an incremental effect that is not 'cumulatively considerable,' a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable." In addition, "The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as provided for the effects attributable to the project alone" (Section 15130(b) of the CEQA Guidelines). The following is a summary of the proposed Project's Cumulative Impacts. Included in this discussion is a conclusion of the impact, and the basis or rationale for that conclusion.

A. POTENTIAL AESTHETIC IMPACTS

Conclusion: Cumulative Impact is not considerable.

Rationale: It is the County's standard practice to evaluate projects, as required by CEQA, for their environmental effects, including light and glare. In addition, the update to the San Bernardino County's General Plan includes policies related to designating certain streets as scenic corridors and boulevards.

B. LOSS OF PRODUCTIVE AGRICULTURAL RESOURCES

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: Implementation of the County General Plan will result in a loss of agricultural land currently producing food and fiber. The loss of agricultural land caused by the update to the San Bernardino County's General Plan and has concluded that such a loss of agricultural lands will be significant and unavoidable.

C. DEGRADATION OF AIR QUALITY

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: The update to the San Bernardino County's General Plan contains goals, policies, and programs to moderate effects to air quality. The update to the San Bernardino County's General Plan also calls for an increase in the densities of certain parcels, mixed land uses, and a refocus on existing neighborhoods. These policies work to reduce dependence on the private automobile and to reduce vehicle miles traveled through supporting multiple centers. Although these measures will result in positive air quality effects, they will not offset the effects caused by increased population in the County.

D. LOSS OF BIOLOGICAL RESOURCES

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: The expected increase in population addressed in the General Plan is considered cause a significant unmitigated irreversible impact to biological resources. Land and habitat resources within the County are finite. The addition of population will require the loss of native habitat, additional resource acquisition, and indirect effects based on residential and commercial actions. While the County cannot control population growth, efforts should be made to restrict residential and commercial land use conversion of natural

areas. Unrestricted growth and urban sprawl will result in a significant adverse impact that cannot be mitigated. The increase in population will require the loss of resources and habitat that currently support native plants, animals, and habitat within the County and in areas that provide the County with resources such as electricity, water, and fuel.

E. POTENTIAL DISTURBANCE OF CULTURAL RESOURCES

Conclusion: Cumulative Impact is not considerable.

Rationale: Development in the update to the San Bernardino County's General Plan area has the potential to affect historic buildings and cultural resources. However, the goals, objectives and programs proposed in the update to the San Bernardino County's General Plan work to strengthen historic resource protection and conservation.

F. GEOLOGY AND SOILS IMPACTS

Conclusion: Cumulative Impact is not considerable.

Rationale: The 2006 General Plan carries forward policies from the 1989 General Plan which minimize Geology and Soils impacts.

G. HAZARDS AND POTENTIAL GENERATION OF HAZARDOUS MATERIALS

Conclusion: Cumulative Impact is not considerable.

Rationale: All generation, transport, and treatment of hazardous materials shall be in full compliance with federal, state, and local requirements.

H. IMPACTS TO HYDROLOGY AND WATER QUALITY

Conclusion: Cumulative Impact is not considerable.

Rationale: The proposed goals, policies and programs in the update to the San Bernardino County's General Plan adequately address hydrology, water quality, and water supply issues. The County continues to cooperate with the San Bernardino County Flood Control District in reviewing projects to conform with NPDES permit requirements, as well as the District's Stormwater Management Plan.

I. IMPACTS TO LAND USE AND PLANNING

Conclusion: Cumulative Impact is not considerable.

Rationale: The 2006 general Plan does not divide existing communities nor does it conflict with policies of the 1989 General Plan, As Amended.

J. POTENTIAL LOSS OF MINERAL RESOURCES

Conclusion: Cumulative Impact is not considerable.

Rationale: The 2006 General Plan carries forward policies from the 1989 General Plan that protect Mineral Resources.

K. GENERATION OF NOISE

Conclusion: Cumulative Impact is not considerable.

Rationale: Noise impacts from increased traffic levels will be contained within the boundaries of the update to the San Bernardino County's General Plan area.

L. POPULATION AND HOUSING

Conclusion: Cumulative Impact is not considerable.

Rationale: The update to the San Bernardino County's General Plan was developed to accommodate the County's fair share of the region's growth forecast.

M. INCREASED DEMAND FOR PUBLIC SERVICES

Conclusion: Cumulative Impact is not considerable.

Rationale: Growth and development called for by the update to the San Bernardino County's General Plan will increase the demand for police, fire protection, and other services. However, these services for the most part will be adequate to serve the development proposed under the update to the San Bernardino County's General Plan.

N. INCREASED DEMAND FOR RECREATIONAL OPPORTUNITIES

Conclusion: Cumulative Impact is not considerable.

Rationale: Growth and development called for by the update to the San Bernardino County's General Plan will increase the demand for recreational opportunities. However, these opportunities for the most part will be adequate to serve the development proposed under the update to the San Bernardino County's General Plan.

O. INCREASED TRANSPORTATION AND TRAFFIC

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: Future development in accordance with the update to the San Bernardino County's General Plan will contribute to the present and projected adverse traffic congestion on urban and arterial streets under the jurisdiction of the County. There are no mitigation measures available to reduce these impacts below a level of significance.

P. INCREASED DEMAND FOR UTILITIES AND SERVICE SYSTEMS

Conclusion: Cumulative Impact is not considerable.

Rationale: Adequate capacity can be provided for all utility and service systems within the County, upon development.

CHAPTER VII.
GROWTH-INDUCING IMPACTS

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A. BACKGROUND

In accordance with Section 15126.2(d) of the CEQA Guidelines, "an EIR must discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." In addition, when discussing growth-inducing impacts of a proposed project, "it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment" (Section 15126.2(d) of the CEQA Guidelines). Two issues must be considered when assessing the growth-inducing impacts of a project:

- **Elimination of Obstacles to Population Growth:** The extent to which additional infrastructure capacity or a change in regulatory structure will allow additional development in the County and region.
- **Promotion of Economic Growth:** The extent to which the San Bernardino County General Plan and 13 Community Plans can cause managed activity in the local or regional economy. Economic impacts can include direct effects, such as the direction and strategies implemented within the County's redevelopment area, and indirect or secondary impacts, such as increased commercial activity needed to serve the SCAG's population growth forecast for the County or transportation need forecast for the County by the San Bernardino Council of Governments.

B. ELIMINATION OF OBSTACLES TO POPULATION GROWTH

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing impact. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services is expected to support new development. Similarly, the elimination of change in a regulatory obstacle, including existing growth and development policies, can result in new population growth.

The San Bernardino County General Plan and Community Plan policies provide for the expansion of infrastructure to accommodate new growth within the County and SOI within the cities within the County. To the extent that new infrastructure will be sized to serve only existing and planned development (including growth related to the updated San Bernardino County General Plan), growth inducement will not be considered detrimental to the environment.

C. PROMOTION OF ECONOMIC GROWTH

Increased industrial, commercial, and residential development typically generates a secondary or indirect demand for other services. The County's growing population will require additional goods and services, such as groceries, entertainment, and medical services that will stimulate economic activity.

Because the update to the San Bernardino County General Plan will not alter SCAG's population projections, the secondary effects of increased residential demand for goods and services is independent of the project. The update to the San Bernardino County General Plan will result in greater employment-generating uses that could generate a secondary demand for goods and services to support new and expanding business.

D. SUMMARY/CONCLUSIONS

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. The environmental impacts of growth resulting from the update to the San Bernardino County General Plan are discussed in Chapter IV of this DEIR.

CHAPTER VIII.
MITIGATION MONITORING PROGRAM

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Section 21081.6 of the California Public Resources Code (CEQA) requires a Lead Agency to: "adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation." One of the methods allowed by the Public Resources Code to implement this requirement is to: "provide that measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other public project, by incorporating the mitigation measures into the plan, policy, regulation, or project design." [Section 21081.6(b), with emphasis added]

The County of San Bernardino, as Lead Agency, has elected to implement the mitigation monitoring requirements of CEQA by incorporating all mitigation measures presented in this DEIR directly into the San Bernardino General Plan, as General Plan policies. The following table presents the relationship between each Mitigation Measure identified within this DEIR, and the corresponding Policies within the proposed San Bernardino General Plan.

Table VIII-1. General Plan Policies Corresponding to the Mitigation Measures Identified in the EIR

EIR MITIGATION MEASURES REFERENCES	MITIGATION MEASURE	GENERAL PLAN POLICY REFERENCES

Sample For Illustration Purposes Only

CHAPTER IX.
PREPARERS OF THE DEIR, PERSONS AND AGENCIES CONTACTED, REFERENCE DOCUMENTS

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B. REFERENCE DOCUMENTS/PERSONS AND AGENCIES CONSULTED

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C. LIST OF ACRONYMS

AAQS	Ambient Air Quality Standards
ACEC	Area of Critical Environmental Concern
ACLUP	Airport Comprehensive Land Use Plan
ASBI	Area of Special Biological Importance
BLM	Bureau of Land Management
BMP	Best Management Practice
CAA	1970 Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	1988 California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
CNPS	California Native Plant Society
CO	carbon monoxide
CSA	County Service Area
CSD	Community Service District
CUPA	Certified Unified Program Agency
dB	Decibel
DEIR	Draft Environmental Impact Report
DOT	U.S. Department of Transportation
DWMA	Desert Wildlife Management Area
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
K-12	Kindergarten – 12th grade
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
mi	miles
NAAQS	National Ambient Air Quality Standards
NFIP	Natural Flood Insurance Program
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OES	Office of Emergency Services
ONT	Ontario International Airport
PCT	Pacific Crest Trail
PG&E	Pacific Gas and Electric

PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
ppm	parts per million parts, by volume
RCRA	Resource Conservation and Recovery Act
ROG	Reactive Organic Gases
RSA	Regional Statistical Area
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANBAG	San Bernardino Associated Governments
SBNHM	San Bernardino Natural History Museum
SBVMWD	San Bernardino Valley Municipal Water District
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAQMP	South Coast Air Quality Management Plan
SCRRA	Southern California Regional Rail Authority
SCWC	Southern California Water Company
SMARA	Surface Mining and Reclamation Act
SO_2	sulfur dioxide
SOCs	Statement of Overriding Considerations
SOI	Sphere of Influence
SOx	oxides of sulfur
SPCC	Spill Prevention Control and Countermeasure
SR	State Route
SRAs	state responsibility areas
SWMD	Solid Waste Management Division
SWRCB	State Water Resources Control Board
TAZ	Traffic Analysis Zone
TCPs	traditional cultural properties
TMC	traffic management centers
TOCs	traffic operations centers
TODs	Transit-oriented development
UBC	Uniform Building Code
UP	Union Pacific Railroad
UPS	United Parcel Service
USACOE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
USTs	Underground Storage Tanks
VOCs	volatile organic compounds
VVWRA	Victor Valley Water Reclamation Agency

APPENDIX A

INITIAL STUDY / NOTICE OF PREPARATION AND EIR SCOPING PROCESS

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APPENDIX B

COMMENT LETTERS ON THE NOTICE OF PREPARATION

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APPENDIX C

2030 GROWTH PROJECTIONS- BACKGROUND INFORMATION, PREPARED BY STANLEY R. HOFFMAN ASSOCIATES, MARCH 20, 2006

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APPENDIX D

TRAFFIC ANALYSIS REPORT/CIRCULATION BACKGROUND REPORT

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APPENDIX E
LAND USE BACKGROUND REPORT

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APPENDIX F
HOUSING BACKGROUND REPORT

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OPEN SPACE BACKGROUND REPORT

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APPENDIX H
CONSERVATION BACKGROUND REPORT

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NOISE BACKGROUND REPORT

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SAFETY BACKGROUND REPORT

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APPENDIX K
ECONOMIC DEVELOPMENT BACKGROUND REPORT

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